# Appendix A
# CT/HRSG Normal Operating Condition Emission Estimates

## 1 HOUR EMISSIONS - GE

**HRSG EXHAUST GAS EMISSIONS PER GT/HRSG (LB/HR)**

| Operating Load Case | Duct Burner | Ambient Conditions | CT Load (%) | NOx | CO | VOC | PM10/PM2.5 | SO2 |
|---|---|---|---|---|---|---|---|---|
| Sevier Case # 1/GE Case # 1 | Fired | 104F/41% RH | 2 x 100% | 13 | 12 | 7 | 14 | 2.9 |
| Sevier Case # 3a/GE Case # 4 | Unfired | 104F/41% RH | 2 x 52% | 8 | 7 | 4 | 11 | 1.8 |
| Sevier Case # 3b/GE Case # 5 | Unfired | 104F/41% RH | 2 x 36% | 6 | 6 | 3 | 11 | 1.4 |
| Sevier Case # 4/GE Case # 6 | Fired | 48F/61%RH | 2 x 100% | 14 | 13 | 7 | 14 | 3.1 |
| Sevier Case # 5/GE Case # 8 | Unfired | 48F/61%RH | 2 x 100% | 13 | 12 | 7 | 12 | 2.9 |
| Sevier Case # 6a/GE Case # 9 | Unfired | 48F/61%RH | 2 x 49% | 8 | 8 | 4 | 11 | 1.8 |
| Sevier Case # 6b/GE Case # 10 | Unfired | 48F/61%RH | 2 x 36% | 7 | 6 | 4 | 11 | 1.6 |
| Sevier Case # 10/GE Case # 7 | Fired | 48F/61%RH | 2 x 100% | 14 | 12 | 7 | 13 | 3.0 |
| Sevier Case # 11/GE Case # 14 | Fired | -17F/100%RH | 2 x 100% | 15 | 14 | 8 | 14 | 3.3 |
| Sevier Case # 13a/GE Case # 16 | Unfired | -17F/100%RH | 2 x 56% | 10 | 9 | 5 | 11 | 2.1 |
| Sevier Case # 13b/GE Case # 17 | Unfired | -17F/100%RH | 2 x 39% | 8 | 7 | 4 | 11 | 1.7 |
| Sevier Case # 14/GE Case # 18 | Unfired | 65F/51%RH | 2 x 100% | 13 | 12 | 7 | 12 | 2.8 |
| Sevier Case N/A/GE Case # 2 | Fired | 104F/41% RH | 2 x 100% | 13 | 12 | 7 | 14 | 2.8 |

**COMBINDED STARTUP/SHUTDOWN EMISSIONS FOR BOTH GT's/HRSG's**

| Event | Qty | Duration per Event (hours) | Total Event Time (hours) | NOx Emission per event (lbs) | NOx Emission All Events (tons/yr) | CO Emission per event (lbs) | CO Emissions All Events (tons/yr) | VOC Emission per event (lbs) | VOC Emission All Events (tons/yr) | PM10/PM2.5 Emission per event (lbs) | PM10/PM2.5 Emission All Events (tons/yr) | SO2 Emission per event (lbs) | SO2 Emission All Events (tons/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cold Starts | 0 | 4.03 | 0.00 | 951 | 0.00 | 2270 | 0.00 | 265 | 0.00 | 87 | 0.00 | 15 | 0.00 |
| Warm Starts | 1 | 2.23 | 2.23 | 391 | 0.20 | 766 | 0.38 | 62 | 0.03 | 43 | 0.02 | 10 | 0.01 |
| Hot Starts | 0 | 1.45 | 0.00 | 213 | 0.00 | 590 | 0.00 | 47 | 0.00 | 24 | 0.00 | 8 | 0.00 |
| Shutdown | 1 | 0.40 | 0.40 | 46 | 0.02 | 180 | 0.09 | 22 | 0.01 | 11 | 0.01 | 4 | 0.00 |
| | | | 2.63 | | 0.22 | | 0.47 | | 0.04 | | 0.03 | | 0.01 |
| Downtime | | | 0.00 | | | | | | | | | | |

**COMBINED 1 HOUR EMISSIONS FOR BOTH GT's/HRSG's (Operation + SU/SD Events)**

| Operating Load Case | Duct Burner | Ambient Conditions | CT Load (%) | HRSG Exhaust NOx Emission (lb/hr) | Total NOx (t/yr) | HRSG Exhaust CO Emission (lb/hr) | Total CO (t/yr) | HRSG Exhaust VOC Emission (lb/hr) | Total VOC (t/yr) | HRSG Exhaust PM10/PM2.5 Emission (lb/hr) | Total PM10/PM2.5 (t/yr) | HRSG Exhaust SO2 Emission (lb/hr) | Total SO2 (t/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sevier Case # 1/GE Case # 1 | Fired | 104F/41% RH | 2 x 100% | 13 | 0.22 | 12 | 0.47 | 7 | 0.04 | 14 | 0.03 | 2.9 | 0.01 |
| Sevier Case # 3a/GE Case # 4 | Unfired | 104F/41% RH | 2 x 52% | 8 | 0.22 | 7 | 0.47 | 4 | 0.04 | 11 | 0.03 | 1.8 | 0.01 |
| Sevier Case # 3b/GE Case # 5 | Unfired | 104F/41% RH | 2 x 36% | 6 | 0.22 | 6 | 0.47 | 3 | 0.04 | 11 | 0.03 | 1.4 | 0.01 |
| Sevier Case # 4/GE Case # 6 | Fired | 48F/61%RH | 2 x 100% | 14 | 0.22 | 13 | 0.47 | 7 | 0.04 | 14 | 0.03 | 3.1 | 0.01 |
| Sevier Case # 5/GE Case # 8 | Unfired | 48F/61%RH | 2 x 100% | 13 | 0.22 | 12 | 0.47 | 7 | 0.04 | 12 | 0.03 | 2.9 | 0.01 |
| Sevier Case # 6a/GE Case # 9 | Unfired | 48F/61%RH | 2 x 49% | 8 | 0.22 | 8 | 0.47 | 4 | 0.04 | 11 | 0.03 | 1.8 | 0.01 |
| Sevier Case # 6b/GE Case # 10 | Unfired | 48F/61%RH | 2 x 36% | 7 | 0.22 | 6 | 0.47 | 4 | 0.04 | 11 | 0.03 | 1.6 | 0.01 |
| Sevier Case # 10/GE Case # 7 | Fired | 48F/61%RH | 2 x 100% | 14 | 0.22 | 12 | 0.47 | 7 | 0.04 | 13 | 0.03 | 3 | 0.01 |
| Sevier Case # 11/GE Case # 14 | Fired | -17F/100%RH | 2 x 100% | 15 | 0.22 | 14 | 0.47 | 8 | 0.04 | 14 | 0.03 | 3.3 | 0.01 |
| Sevier Case # 13a/GE Case # 16 | Unfired | -17F/100%RH | 2 x 56% | 10 | 0.22 | 9 | 0.47 | 5 | 0.04 | 11 | 0.03 | 2.1 | 0.01 |
| Sevier Case # 13b/GE Case # 17 | Unfired | -17F/100%RH | 2 x 39% | 8 | 0.22 | 7 | 0.47 | 4 | 0.04 | 11 | 0.03 | 1.7 | 0.01 |
| Sevier Case # 14/GE Case # 18 | Unfired | 65F/51%RH | 2 x 100% | 13 | 0.22 | 12 | 0.47 | 7 | 0.04 | 12 | 0.03 | 2.8 | 0.01 |
| Sevier Case N/A/GE Case # 2 | Fired | 104F/41% RH | 2 x 100% | 13 | 0.22 | 12 | 0.47 | 7 | 0.04 | 14 | 0.03 | 2.8 | 0.01 |

## ANNUAL EMISSIONS - GE

| | |
|---|---|
| Assumed Hours of Duct Burner Firing: | 5,000 |
| Assumed Hours of Non-Duct Burner Firing: | 3,760 |
| | 8,760 |

Annual Emissions Based on GE Cases 6 & 8

**HRSG EXHAUST GAS EMISSIONS PER GT/HRSG (LB/HR)**

| Operating Load Case | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 |
|---|---|---|---|---|---|---|
| Sevier Case # 4/GE Case # 6 (fired) | 14 | 13 | 7 | 14 | 3.1 | 2.3 |
| Sevier Case # 5/GE Case # 8 (unfired) | 13 | 12 | 7 | 12 | 2.9 | 2.1 |
| Weighted Average (lb/hr) | 13.6 | 12.6 | 7.0 | 13.1 | 3.0 | 2.2 |

**COMBINDED STARTUP/SHUTDOWN EMISSIONS FOR BOTH GT's/HRSG's**

| Event | Qty | Duration per Event (hours) | Total Event Time (hours) | NOx Emission per event (lbs) | NOx Emission All Events (tons/yr) | CO Emission per event (lbs) | CO Emissions All Events (tons/yr) | VOC Emission per event (lbs) | VOC Emission All Events (tons/yr) | PM10/PM2.5 Emission per event (lbs) | PM10/PM2.5 Emission All Events (tons/yr) | SO2 Emission per event (lbs) | SO2 Emission All Events (tons/yr) | SO3 Emission per event (lbs) | SO3 Emission All Events (tons/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cold Starts | 12 | 4.03 | 48.40 | 951 | 5.71 | 2270 | 13.62 | 265 | 1.59 | 87 | 0.52 | 15 | 0.09 | 2 | 0.01 |
| Warm Starts | 50 | 2.23 | 111.67 | 391 | 9.78 | 766 | 19.15 | 62 | 1.55 | 43 | 1.08 | 10 | 0.26 | 2 | 0.05 |
| Hot Starts | 230 | 1.45 | 333.50 | 213 | 24.44 | 590 | 67.80 | 47 | 5.45 | 24 | 2.73 | 8 | 0.89 | 1 | 0.17 |
| Shutdown | 292 | 0.40 | 116.80 | 46 | 6.76 | 180 | 26.31 | 22 | 3.15 | 11 | 1.55 | 4 | 0.54 | 1 | 0.09 |
| | | | 610.37 | | 46.68 | | 126.88 | | 11.74 | | 5.89 | | 1.78 | | 0.32 |
| Downtime | | | 976.00 | | | | | | | | | | | | |

**ANNUAL EMISSIONS**

| | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 |
|---|---|---|---|---|---|---|
| Total GT/HRSG Annual Emissions (t/yr) | 144.03 | 217.06 | 61.95 | 100.16 | 23.41 | 16.20 |
| Avg. Annual Emissions per GT/HRSG (t/yr) | 72.02 | 108.53 | 30.98 | 50.08 | 11.70 | 8.10 |

**Notes:**

1. Annual emissions based on using load cases for annual average ambient temperature, fired & unfired

## 1 HOUR EMISSIONS - Siemens

| Operating Load Case | Duct Burner | Ambient Conditions | CT Load (%) | HRSG EXHAUST GAS EMISSIONS PER GT/HRSG (LB/HR) NOx | CO | VOC | PM10/PM2.5 | SO2 |
|---|---|---|---|---|---|---|---|---|
| Sevier Case # 1/Siemens Case # 1 | Fired | 104F/41% RH | 2 x 100% | 14 | 9 | 5 | 11 | 3.2 |
| Sevier Case # 2/Siemens Case # 2 | Unfired | 104F/41% RH | 2 x 100% | 12 | 7 | 2 | 8 | 2.7 |
| Sevier Case # 3/Siemens Case # 3 | Unfired | 104F/41% RH | 2 x 50% | 7 | 5 | 2 | 8 | 1.7 |
| Sevier Case # 4/Siemens Case # 4 | Fired | 48F/61%RH | 2 x 100% | 15 | 9 | 5 | 12 | 3.4 |
| Sevier Case # 5/Siemens Case # 5 | Unfired | 48F/61%RH | 2 x 100% | 13 | 8 | 2 | 9 | 3.0 |
| Sevier Case # 6/Siemens Case # 6 | Unfired | 48F/61%RH | 2 x 50% | 8 | 5 | 2 | 8 | 1.9 |
| Sevier Case # 7/Siemens Case # 7 | Unfired | 48F/61%RH | 1 x 100% | 13 | 8 | 2 | 9 | 3.0 |
| Sevier Case # 9/Siemens Case # 8 | Unfired | 48F/61%RH | 1 x 50% | 8 | 5 | 2 | 8 | 1.9 |
| Sevier Case # 10/Siemens Case # 9 | Fired | 48F/61%RH | 2 x 100% | 13 | 8 | 2 | 9 | 3.0 |
| Sevier Case # 12/Siemens Case # 10 | Unfired | -17F/100%RH | 2 x 100% | 15 | 9 | 3 | 10 | 3.4 |
| Sevier Case # 13/Siemens Case # 11 | Unfired | -17F/100%RH | 2 x 50% | 10 | 6 | 2 | 8 | 2.1 |
| Sevier Case # 14/Siemens Case # 12 | Unfired | 65F/51%RH | 2 x 100% | 13 | 8 | 2 | 9 | 2.9 |

**COMBINDED STARTUP/SHUTDOWN EMISSIONS FOR BOTH GT's/HRSG's**

| Event | Qty | Duration per Event (hours) | Total Event Time (hours) | NOx Emission per event (lbs) | NOx Emission All Events (tons/yr) | CO Emission per event (lbs) | CO Emissions All Events (tons/yr) | VOC Emission per event (lbs) | VOC Emission All Events (tons/yr) | PM10/PM2.5 Emission per event (lbs) | PM10/PM2.5 Emission All Events (tons/yr) | SO2 Emission per event (lbs) | SO2 Emission All Events (tons/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cold Starts | 0 | 4.17 | 0.00 | 876 | 0.00 | 4998 | 0.00 | 913 | 0.00 | 71 | 0.00 | 13 | 0.00 |
| Warm Starts | 1 | 2.08 | 2.08 | 388 | 0.19 | 1088 | 0.54 | 410 | 0.21 | 37 | 0.02 | 12 | 0.01 |
| Hot Starts | 0 | 1.45 | 0.00 | 196 | 0.00 | 776 | 0.00 | 267 | 0.00 | 23 | 0.00 | 4 | 0.00 |
| Shutdown | 1 | 0.45 | 0.45 | 69 | 0.03 | 218 | 0.11 | 87 | 0.04 | 8 | 0.00 | 2 | 0.00 |
| | | | 2.53 | | 0.23 | | 0.65 | | 0.25 | | 0.02 | | 0.01 |
| Downtime | | | 0.00 | | | | | | | | | | |

**COMBINED 1 HOUR EMISSIONS FOR BOTH GT's/HRSG's (Operation + SU/SD Events)**

| Operating Load Case | Duct Burner | Ambient Conditions | CT Load (%) | HRSG Exhaust NOx Emission (lb/hr) | Total NOx (t/yr) | HRSG Exhaust CO Emission (lb/hr) | Total CO (t/yr) | HRSG Exhaust VOC Emission (lb/hr) | Total VOC (t/yr) | HRSG Exhaust PM10/PM2.5 Emission (lb/hr) | Total PM10/PM2.5 (t/yr) | HRSG Exhaust SO2 Emission (lb/hr) | Total SO2 (t/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sevier Case # 1/Siemens Case # 1 | Fired | 104F/41% RH | 2 x 100% | 14 | 0.23 | 9 | 0.65 | 5 | 0.25 | 11 | 0.02 | 3.2 | 0.01 |

## ANNUAL EMISSIONS - Siemens

| | |
|---|---|
| Assumed Hours of Duct Burner Firing: | 5,000 |
| Assumed Hours of Non-Duct Burner Firing: | 3,760 |
| | 8,760 |

Annual Emissions Based on GE Cases 6 & 8

**HRSG EXHAUST GAS EMISSIONS PER GT/HRSG (LB/HR)**

| Operating Load Case | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 |
|---|---|---|---|---|---|---|
| Sevier Case # 4/Siemens Case # 4 (fired) | 15 | 9 | 5 | 12 | 3.4 | 0.85 |
| Sevier Case # 5/Siemens Case # 5 (unfired) | 13 | 8 | 2 | 9 | 3 | 0.75 |
| Weighted Average (lb/hr) | 14.1 | 8.7 | 4.0 | 10.7 | 3.2 | 0.8 |

**COMBINDED STARTUP/SHUTDOWN EMISSIONS FOR BOTH GT's/HRSG's**

| Event | Qty | Duration per Event (hours) | Total Event Time (hours) | NOx Emission per event (lbs) | NOx Emission All Events (tons/yr) | CO Emission per event (lbs) | CO Emissions All Events (tons/yr) | VOC Emission per event (lbs) | VOC Emission All Events (tons/yr) | PM10/PM2.5 Emission per event (lbs) | PM10/PM2.5 Emission All Events (tons/yr) | SO2 Emission per event (lbs) | SO2 Emission All Events (tons/yr) | SO3 Emission per event (lbs) | SO3 Emission All Events (tons/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cold Starts | 12 | 4.17 | 50.00 | 876 | 5.25 | 4998 | 29.99 | 913 | 5.48 | 71 | 0.43 | 13 | 0.08 | 3 | 0.02 |
| Warm Starts | 50 | 2.08 | 104.17 | 388 | 9.70 | 1088 | 27.20 | 410 | 10.26 | 37 | 0.93 | 12 | 0.30 | 2 | 0.04 |
| Hot Starts | 230 | 1.45 | 333.50 | 196 | 22.59 | 776 | 89.26 | 267 | 30.75 | 23 | 2.63 | 4 | 0.49 | 1 | 0.13 |
| Shutdown | 292 | 0.45 | 131.40 | 69 | 10.10 | 218 | 31.81 | 87 | 12.70 | 8 | 1.17 | 2 | 0.24 | 1 | 0.16 |
| | | | 619.07 | | 47.64 | | 178.25 | | 59.19 | | 5.16 | | 1.11 | | 0.36 |
| Downtime | | | 976.00 | | | | | | | | | | | | |

**ANNUAL EMISSIONS**

| | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 |
|---|---|---|---|---|---|---|
| Total GT/HRSG Annual Emissions (t/yr) | 148.96 | 240.48 | 87.94 | 81.91 | 24.24 | 6.14 |
| Avg. Annual Emissions per GT/HRSG (t/yr) | 74.48 | 120.24 | 43.97 | 40.96 | 12.12 | 3.07 |

**Notes:**

1. Annual emissions based on using load cases for annual average ambient temperature, fired & unfired

# Appendix B
# CT/HRSG Startup/Shutdown Emission Estimates

# PROPOSED STARTUP & SHUTDOWN SCHEDULE - GE

| Averaging Period | Number of Starts | | | Non-Operating Hours Before Startup (Downtime) | | |
|---|---|---|---|---|---|---|
| | Cold | Warm | Hot | Cold | Warm | Hot |
| 1 Hour | 0 | 1 | 0 | 0 | 0 | 0 |
| 3 Hour | 1 | 0 | 0 | 0 | 0 | 0 |
| 8 Hour | 1 | 0 | 4 | 0 | 0 | 0 |
| 24 Hour | 1 | 0 | 20 | 0 | 0 | 0 |
| Annual | 12 | 50 | 230 | 48 | 8 | 0 |

**Combined Emissions During Startup or Shutdown for Both GT's/HRSG's (lb/hr)**

| Start Type | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 | Duration (Minutes) | Duration (Hours) |
|---|---|---|---|---|---|---|---|---|
| Cold | 236 | 563 | 66 | 22 | 4 | 0.5 | 242.00 | 4.03 |
| Warm | 175 | 343 | 28 | 19 | 5 | 0.9 | 134.00 | 2.23 |
| Hot | 147 | 407 | 33 | 16 | 5 | 1.0 | 87.00 | 1.45 |
| Shutdown | 116 | 450 | 54 | 26 | 9 | 1.5 | 24.00 | 0.40 |

**Average Emissions During Startup or Shutdown per GT/HRSG (lb/hr)**

| Start Type | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 | Duration (Minutes) | Duration (Hours) |
|---|---|---|---|---|---|---|---|---|
| Cold | 118 | 281 | 33 | 11 | 2 | 0.3 | 242.00 | 4.03 |
| Warm | 88 | 172 | 14 | 10 | 2 | 0.4 | 134.00 | 2.23 |
| Hot | 73 | 203 | 16 | 8 | 3 | 0.5 | 87.00 | 1.45 |
| Shutdown | 58 | 225 | 27 | 13 | 5 | 0.7 | 24.00 | 0.40 |

# PROPOSED STARTUP & SHUTDOWN SCHEDULE - Siemens

| Averaging Period | Number of Starts | | | Non-Operating Hours Before Startup (Downtime) | | |
|---|---|---|---|---|---|---|
| | Cold | Warm | Hot | Cold | Warm | Hot |
| 1 Hour | 0 | 1 | 0 | 0 | 0 | 0 |
| 3 Hour | 1 | 0 | 0 | 0 | 0 | 0 |
| 8 Hour | 1 | 0 | 4 | 0 | 0 | 0 |
| 24 Hour | 1 | 0 | 20 | 0 | 0 | 0 |
| Annual | 12 | 50 | 230 | 48 | 8 | 0 |

**Combined Emissions During Startup or Shutdown for Both GT's/HRSG's (lb/hr)**

| Start Type | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 | Duration (Minutes) | Duration (Hours) |
|---|---|---|---|---|---|---|---|---|
| Cold | 210 | 1199 | 219 | 17 | 3 | 0.8 | 250.00 | 4.17 |
| Warm | 186 | 522 | 197 | 18 | 6 | 0.9 | 125.00 | 2.08 |
| Hot | 135 | 535 | 184 | 16 | 3 | 0.8 | 87.00 | 1.45 |
| Shutdown | 154 | 484 | 193 | 18 | 4 | 2.4 | 27.00 | 0.45 |

**Average Emissions During Startup or Shutdown per GT/HRSG (lb/hr)**

| Start Type | NOx | CO | VOC | PM10/PM2.5 | SO2 | SO3 | Duration (Minutes) | Duration (Hours) |
|---|---|---|---|---|---|---|---|---|
| Cold | 105 | 600 | 110 | 9 | 2 | 0.4 | 250.00 | 4.17 |
| Warm | 93 | 261 | 98 | 9 | 3 | 0.4 | 125.00 | 2.08 |
| Hot | 68 | 268 | 92 | 8 | 1 | 0.4 | 87.00 | 1.45 |
| Shutdown | 77 | 242 | 97 | 9 | 2 | 1.2 | 27.00 | 0.45 |

# Appendix C
# CT/HRSG Hazardous Air Pollutant Emission Estimates

**Greenhouse Gas Emissions for CT/HRSG - Steady State - HHV**
**General Electric Combined Cycle Emission Estimates**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

| | | | | $CO_2$ | | | | $N_2O$ | | | | $CH_4$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case No. | Sevier Case No. | Total GT & HRSG Fuel Flow Mlb/hr | HHV (Btu/lb) | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr |
| GE Case # 1 | 1 | 157.28 | 23221 | 117 | 4.27E+05 | 1871605.8 | 1697883.4 | 0.006 | 22.50 | 98.54 | 89.39 | 0.002 | 7231.4 | 31673.3 | 28733.4 |
| GE Case # 2 | NA | 150.47 | 23221 | 117 | 4.09E+05 | 1790568.0 | 1624367.5 | 0.006 | 21.52 | 94.27 | 85.52 | 0.002 | 6918.2 | 30301.9 | 27489.3 |
| GE Case # 3 | 2 | 144.24 | 23221 | 117 | 3.92E+05 | 1716432.0 | 1557112.8 | 0.006 | 20.63 | 90.37 | 81.98 | 0.002 | 6631.8 | 29047.3 | 26351.1 |
| GE Case # 4 | 3a | 93.40 | 23221 | 117 | 2.54E+05 | 1111444.5 | 1008280.2 | 0.006 | 13.36 | 58.52 | 53.09 | 0.002 | 4294.3 | 18809.1 | 17063.2 |
| GE Case # 5 | 3b | 74.98 | 23221 | 117 | 2.04E+05 | 892249.5 | 809430.9 | 0.006 | 10.73 | 46.98 | 42.62 | 0.002 | 3447.4 | 15099.6 | 13698.1 |
| GE Case # 6 | 4 | 165.29 | 23221 | 117 | 4.49E+05 | 1966923.5 | 1784353.7 | 0.006 | 23.64 | 103.56 | 93.95 | 0.002 | 7599.6 | 33286.4 | 30196.8 |
| GE Case # 7 | 10 | 160.96 | 23221 | 117 | 4.37E+05 | 1915397.2 | 1737610.1 | 0.006 | 23.02 | 100.84 | 91.48 | 0.002 | 7400.6 | 32414.4 | 29405.7 |
| GE Case # 8 | 5 | 153.46 | 23221 | 117 | 4.17E+05 | 1826148.5 | 1656645.4 | 0.006 | 21.95 | 96.15 | 87.22 | 0.002 | 7055.7 | 30904.1 | 28035.5 |
| GE Case # 9 | 6a | 97.46 | 23221 | 117 | 2.65E+05 | 1159757.8 | 1052109.1 | 0.006 | 13.94 | 61.06 | 55.39 | 0.002 | 4481.0 | 19626.7 | 17804.9 |
| GE Case # 10 | 6b | 81.82 | 23221 | 117 | 2.22E+05 | 973644.4 | 883270.7 | 0.006 | 11.70 | 51.26 | 46.50 | 0.002 | 3761.9 | 16477.1 | 14947.7 |
| GE Case # 11 | 7 | 76.73 | 23221 | 117 | 2.08E+05 | 913074.2 | 828322.7 | 0.006 | 10.98 | 48.07 | 43.61 | 0.002 | 3527.9 | 15452.0 | 14017.8 |
| GE Case # 12 | 9a | 48.73 | 23221 | 117 | 1.32E+05 | 579878.9 | 526054.5 | 0.006 | 6.97 | 30.53 | 27.70 | 0.002 | 2240.5 | 9813.3 | 8902.5 |
| GE Case # 13 | 9b | 40.91 | 23221 | 117 | 1.11E+05 | 486822.2 | 441635.4 | 0.006 | 5.85 | 25.63 | 23.25 | 0.002 | 1880.9 | 8238.5 | 7473.8 |
| GE Case # 14 | 11 | 178.45 | 23221 | 117 | 4.85E+05 | 2123525.3 | 1926419.7 | 0.006 | 25.53 | 111.80 | 101.43 | 0.002 | 8204.7 | 35936.6 | 32600.9 |
| GE Case # 15 | 12 | 165.06 | 23221 | 117 | 4.48E+05 | 1964186.5 | 1781870.7 | 0.006 | 23.61 | 103.41 | 93.81 | 0.002 | 7589.1 | 33240.1 | 30154.7 |
| GE Case # 16 | 13a | 112.16 | 23221 | 117 | 3.05E+05 | 1334685.3 | 1210799.8 | 0.006 | 16.04 | 70.27 | 63.75 | 0.002 | 5156.8 | 22587.0 | 20490.5 |
| GE Case # 17 | 13b | 90.58 | 23221 | 117 | 2.46E+05 | 1077886.9 | 977837.5 | 0.006 | 12.96 | 56.75 | 51.48 | 0.002 | 4164.6 | 18241.2 | 16548.0 |
| GE Case # 18 | 14 | 151.22 | 23221 | 117 | 4.11E+05 | 1799492.8 | 1632463.9 | 0.006 | 21.63 | 94.74 | 85.95 | 0.002 | 6952.7 | 30453.0 | 27626.3 |
| GE Case # 19 | NA | 158.05 | 23221 | 117 | 4.29E+05 | 1880768.7 | 1706195.8 | 0.006 | 22.61 | 99.02 | 89.83 | 0.002 | 7266.8 | 31828.4 | 28874.1 |
| GE Case # 20 | NA | 159.51 | 23221 | 117 | 4.33E+05 | 1898142.5 | 1721956.9 | 0.006 | 22.82 | 99.94 | 90.66 | 0.002 | 7333.9 | 32122.4 | 29140.8 |

**Notes:**

1. Standard Conditions for scf are based on GE's standards, namely 68F & 14.6959 psi
2. M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr)
3. Mlb/hr obtained from selected performance data for SPC spreadsheet
4. $CH_4$ emissions based on vendor supplied data.

Comparison of Emission Factors:
Climate Registry default GHG Emission Factors: 53.06 kg CO2/MMBtu (117 lb CO2/MMBtu); 0.9 g CH4/MMBtu (0.00198 lb/MMBtu); 2.8 g N2O/MMBtu (0.00616 lb/MMBtu
Mandatory GHG Reporting Rule Emission Factors: 53.02 kg CO2/MMBtu (117 lb CO2/MMBtu);1.0 e10-3 kg/CH4/MMBtu (0.002 lb/MMBtu); 1.0 E 10-4 kg N20/MMbtu (0.0002 lb/MMBtu
AP-42 Section 3.1 Emission Factors: 110 lb CO2/MMBtu; 0.003 lb N2O/MMBtu

**Hazardous Air Pollutant Emissions for CT/HRSG - Steady State - LHV**
**General Electric Combined Cycle Emission Estimates**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 3.1 Stationary Gas Turbines

| | | | | 1,3 - Butadiene | | | Acetaldehyde | | | Acrolein | | | Benzene | | | Ethylbenzene | | | Formaldehyde | | | Naphthalene | | | PAH | | | Propylene Oxide | | | Toluene | | | Xylene | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total GT & HRSG | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | | Emission Factor | | |
| Case No. | Sevier Case No. | Fuel Flow Mlb/hr | LHV (Btu/lb) | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr |
| GE Case # 1 | 1 | 157.28 | 20905 | 4.30E-07 | 1.41E-03 | 6.19E-03 | 4.00E-05 | 1.32E-01 | 0.58 | 6.40E-06 | 2.10E-02 | 0.09 | 1.20E-05 | 3.95E-02 | 0.17 | 3.20E-05 | 1.05E-01 | 0.46 | 1.07E-04 | 0.35 | 1.5 | 1.30E-06 | 4.27E-03 | 0.02 | 2.20E-06 | 7.23E-03 | 0.03 | 2.90E-05 | 0.10 | 0.42 | 1.30E-04 | 0.43 | 1.87 | 6.40E-05 | 0.21 | 0.92 |
| GE Case # 2 | NA | 150.47 | 20905 | 4.30E-07 | 1.35E-03 | 5.92E-03 | 4.00E-05 | 1.26E-01 | 0.55 | 6.40E-06 | 2.01E-02 | 0.09 | 1.20E-05 | 3.77E-02 | 0.17 | 3.20E-05 | 1.01E-01 | 0.44 | 1.07E-04 | 0.34 | 1.5 | 1.30E-06 | 4.09E-03 | 0.02 | 2.20E-06 | 6.92E-03 | 0.03 | 2.90E-05 | 0.09 | 0.40 | 1.30E-04 | 0.41 | 1.79 | 6.40E-05 | 0.20 | 0.88 |
| GE Case # 3 | 2 | 144.24 | 20905 | 4.30E-07 | 1.30E-03 | 5.68E-03 | 4.00E-05 | 1.21E-01 | 0.53 | 6.40E-06 | 1.93E-02 | 0.08 | 1.20E-05 | 3.62E-02 | 0.16 | 3.20E-05 | 9.65E-02 | 0.42 | 1.07E-04 | 0.32 | 1.4 | 1.30E-06 | 3.92E-03 | 0.02 | 2.20E-06 | 6.63E-03 | 0.03 | 2.90E-05 | 0.09 | 0.38 | 1.30E-04 | 0.39 | 1.72 | 6.40E-05 | 0.19 | 0.85 |
| GE Case # 4 | 3a | 93.40 | 20905 | 4.30E-07 | 8.40E-04 | 3.68E-03 | 4.00E-05 | 7.81E-02 | 0.34 | 6.40E-06 | 1.25E-02 | 0.05 | 1.20E-05 | 2.34E-02 | 0.10 | 3.20E-05 | 6.25E-02 | 0.27 | 1.07E-04 | 0.21 | 0.9 | 1.30E-06 | 2.54E-03 | 0.01 | 2.20E-06 | 4.30E-03 | 0.02 | 2.90E-05 | 0.06 | 0.25 | 1.30E-04 | 0.25 | 1.11 | 6.40E-05 | 0.12 | 0.55 |
| GE Case # 5 | 3b | 74.98 | 20905 | 4.30E-07 | 6.74E-04 | 2.95E-03 | 4.00E-05 | 6.27E-02 | 0.27 | 6.40E-06 | 1.00E-02 | 0.04 | 1.20E-05 | 1.88E-02 | 0.08 | 3.20E-05 | 5.02E-02 | 0.22 | 1.07E-04 | 0.17 | 0.7 | 1.30E-06 | 2.04E-03 | 0.01 | 2.20E-06 | 3.45E-03 | 0.02 | 2.90E-05 | 0.05 | 0.20 | 1.30E-04 | 0.20 | 0.89 | 6.40E-05 | 0.10 | 0.44 |
| GE Case # 6 | 4 | 165.29 | 20905 | 4.30E-07 | 1.49E-03 | 0.007 | 4.00E-05 | 1.38E-01 | 0.61 | 6.40E-06 | 2.21E-02 | 0.10 | 1.20E-05 | 4.15E-02 | 0.18 | 3.20E-05 | 1.11E-01 | 0.48 | 1.07E-04 | 0.37 | 1.61 | 1.30E-06 | 4.49E-03 | 0.02 | 2.20E-06 | 7.60E-03 | 0.03 | 2.90E-05 | 0.10 | 0.44 | 1.30E-04 | 0.45 | 1.97 | 6.40E-05 | 0.22 | 0.97 |
| GE Case # 7 | 10 | 160.96 | 20905 | 4.30E-07 | 1.45E-03 | 6.34E-03 | 4.00E-05 | 1.35E-01 | 0.59 | 6.40E-06 | 2.15E-02 | 0.09 | 1.20E-05 | 4.04E-02 | 0.18 | 3.20E-05 | 1.08E-01 | 0.47 | 1.07E-04 | 0.36 | 1.6 | 1.30E-06 | 4.37E-03 | 0.02 | 2.20E-06 | 7.40E-03 | 0.03 | 2.90E-05 | 0.10 | 0.43 | 1.30E-04 | 0.44 | 1.92 | 6.40E-05 | 0.22 | 0.94 |
| GE Case # 8 | 5 | 153.46 | 20905 | 4.30E-07 | 1.38E-03 | 6.04E-03 | 4.00E-05 | 1.28E-01 | 0.56 | 6.40E-06 | 2.05E-02 | 0.09 | 1.20E-05 | 3.85E-02 | 0.17 | 3.20E-05 | 1.03E-01 | 0.45 | 1.07E-04 | 0.34 | 1.5 | 1.30E-06 | 4.17E-03 | 0.02 | 2.20E-06 | 7.06E-03 | 0.03 | 2.90E-05 | 0.09 | 0.41 | 1.30E-04 | 0.42 | 1.83 | 6.40E-05 | 0.21 | 0.90 |
| GE Case # 9 | 6a | 97.46 | 20905 | 4.30E-07 | 8.76E-04 | 3.84E-03 | 4.00E-05 | 8.15E-02 | 0.36 | 6.40E-06 | 1.30E-02 | 0.06 | 1.20E-05 | 2.44E-02 | 0.11 | 3.20E-05 | 6.52E-02 | 0.29 | 1.07E-04 | 0.22 | 1.0 | 1.30E-06 | 2.65E-03 | 0.01 | 2.20E-06 | 4.48E-03 | 0.02 | 2.90E-05 | 0.06 | 0.26 | 1.30E-04 | 0.26 | 1.16 | 6.40E-05 | 0.13 | 0.57 |
| GE Case # 10 | 6b | 81.82 | 20905 | 4.30E-07 | 7.35E-04 | 3.22E-03 | 4.00E-05 | 6.84E-02 | 0.30 | 6.40E-06 | 1.09E-02 | 0.05 | 1.20E-05 | 2.05E-02 | 0.09 | 3.20E-05 | 5.47E-02 | 0.24 | 1.07E-04 | 0.18 | 0.8 | 1.30E-06 | 2.22E-03 | 0.01 | 2.20E-06 | 3.76E-03 | 0.02 | 2.90E-05 | 0.05 | 0.22 | 1.30E-04 | 0.22 | 0.97 | 6.40E-05 | 0.11 | 0.48 |
| GE Case # 11 | 7 | 76.73 | 20905 | 4.30E-07 | 6.90E-04 | 3.02E-03 | 4.00E-05 | 6.42E-02 | 0.28 | 6.40E-06 | 1.03E-02 | 0.04 | 1.20E-05 | 1.92E-02 | 0.08 | 3.20E-05 | 5.13E-02 | 0.22 | 1.07E-04 | 0.17 | 0.7 | 1.30E-06 | 2.09E-03 | 0.01 | 2.20E-06 | 3.53E-03 | 0.02 | 2.90E-05 | 0.05 | 0.20 | 1.30E-04 | 0.21 | 0.91 | 6.40E-05 | 0.10 | 0.45 |
| GE Case # 12 | 9a | 48.73 | 20905 | 4.30E-07 | 4.38E-04 | 1.92E-03 | 4.00E-05 | 4.07E-02 | 0.18 | 6.40E-06 | 6.52E-03 | 0.03 | 1.20E-05 | 1.22E-02 | 0.05 | 3.20E-05 | 3.26E-02 | 0.14 | 1.07E-04 | 0.11 | 0.5 | 1.30E-06 | 1.32E-03 | 0.01 | 2.20E-06 | 2.24E-03 | 0.01 | 2.90E-05 | 0.03 | 0.13 | 1.30E-04 | 0.13 | 0.58 | 6.40E-05 | 0.07 | 0.29 |
| GE Case # 13 | 9b | 40.91 | 20905 | 4.30E-07 | 3.68E-04 | 1.61E-03 | 4.00E-05 | 3.42E-02 | 0.15 | 6.40E-06 | 5.47E-03 | 0.02 | 1.20E-05 | 1.03E-02 | 0.04 | 3.20E-05 | 2.74E-02 | 0.12 | 1.07E-04 | 0.09 | 0.4 | 1.30E-06 | 1.11E-03 | 0.00 | 2.20E-06 | 1.88E-03 | 0.01 | 2.90E-05 | 0.02 | 0.11 | 1.30E-04 | 0.11 | 0.49 | 6.40E-05 | 0.05 | 0.24 |
| GE Case # 14 | 11 | 178.45 | 20905 | 4.30E-07 | 1.60E-03 | 7.03E-03 | 4.00E-05 | 1.49E-01 | 0.65 | 6.40E-06 | 2.39E-02 | 0.10 | 1.20E-05 | 4.48E-02 | 0.20 | 3.20E-05 | 1.19E-01 | 0.52 | 1.07E-04 | 0.40 | 1.7 | 1.30E-06 | 4.85E-03 | 0.02 | 2.20E-06 | 8.21E-03 | 0.04 | 2.90E-05 | 0.11 | 0.47 | 1.30E-04 | 0.48 | 2.12 | 6.40E-05 | 0.24 | 1.05 |
| GE Case # 15 | 12 | 165.06 | 20905 | 4.30E-07 | 1.48E-03 | 6.50E-03 | 4.00E-05 | 1.38E-01 | 0.60 | 6.40E-06 | 2.21E-02 | 0.10 | 1.20E-05 | 4.14E-02 | 0.18 | 3.20E-05 | 1.10E-01 | 0.48 | 1.07E-04 | 0.37 | 1.6 | 1.30E-06 | 4.49E-03 | 0.02 | 2.20E-06 | 7.59E-03 | 0.03 | 2.90E-05 | 0.10 | 0.44 | 1.30E-04 | 0.45 | 1.96 | 6.40E-05 | 0.22 | 0.97 |
| GE Case # 16 | 13a | 112.16 | 20905 | 4.30E-07 | 1.01E-03 | 4.42E-03 | 4.00E-05 | 9.38E-02 | 0.41 | 6.40E-06 | 1.50E-02 | 0.07 | 1.20E-05 | 2.81E-02 | 0.12 | 3.20E-05 | 7.50E-02 | 0.33 | 1.07E-04 | 0.25 | 1.1 | 1.30E-06 | 3.05E-03 | 0.01 | 2.20E-06 | 5.16E-03 | 0.02 | 2.90E-05 | 0.07 | 0.30 | 1.30E-04 | 0.30 | 1.34 | 6.40E-05 | 0.15 | 0.66 |
| GE Case # 17 | 13b | 90.58 | 20905 | 4.30E-07 | 8.14E-04 | 3.57E-03 | 4.00E-05 | 7.57E-02 | 0.33 | 6.40E-06 | 1.21E-02 | 0.05 | 1.20E-05 | 2.27E-02 | 0.10 | 3.20E-05 | 6.06E-02 | 0.27 | 1.07E-04 | 0.20 | 0.9 | 1.30E-06 | 2.46E-03 | 0.01 | 2.20E-06 | 4.17E-03 | 0.02 | 2.90E-05 | 0.05 | 0.24 | 1.30E-04 | 0.25 | 1.08 | 6.40E-05 | 0.12 | 0.53 |
| GE Case # 18 | 14 | 151.22 | 20905 | 4.30E-07 | 1.36E-03 | 5.95E-03 | 4.00E-05 | 1.26E-01 | 0.55 | 6.40E-06 | 2.02E-02 | 0.09 | 1.20E-05 | 3.79E-02 | 0.17 | 3.20E-05 | 1.01E-01 | 0.44 | 1.07E-04 | 0.34 | 1.5 | 1.30E-06 | 4.11E-03 | 0.02 | 2.20E-06 | 6.95E-03 | 0.03 | 2.90E-05 | 0.09 | 0.40 | 1.30E-04 | 0.41 | 1.80 | 6.40E-05 | 0.20 | 0.89 |
| GE Case # 19 | NA | 158.05 | 20905 | 4.30E-07 | 1.42E-03 | 6.22E-03 | 4.00E-05 | 1.32E-01 | 0.58 | 6.40E-06 | 2.11E-02 | 0.09 | 1.20E-05 | 3.96E-02 | 0.17 | 3.20E-05 | 1.06E-01 | 0.46 | 1.07E-04 | 0.35 | 1.5 | 1.30E-06 | 4.30E-03 | 0.02 | 2.20E-06 | 7.27E-03 | 0.03 | 2.90E-05 | 0.10 | 0.42 | 1.30E-04 | 0.43 | 1.88 | 6.40E-05 | 0.21 | 0.93 |
| GE Case # 20 | NA | 159.51 | 20905 | 4.30E-07 | 1.43E-03 | 6.28E-03 | 4.00E-05 | 1.33E-01 | 0.58 | 6.40E-06 | 2.13E-02 | 0.09 | 1.20E-05 | 4.00E-02 | 0.18 | 3.20E-05 | 1.07E-01 | 0.47 | 1.07E-04 | 0.36 | 1.6 | 1.30E-06 | 4.33E-03 | 0.02 | 2.20E-06 | 7.34E-03 | 0.03 | 2.90E-05 | 0.10 | 0.42 | 1.30E-04 | 0.43 | 1.90 | 6.40E-05 | 0.21 | 0.93 |

**Notes:**

1. Standard Conditions for scf are based on GE's standards, namely 68F & 14.6959 ps
2. M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr).
3. Mlb/hr obtained from selected performance data for SPC spreadshee
4. Formaldehyde emissions assume 85% control through catalytic oxidation. (Ref: http://www.poweronsite.org/AppGuide/Emissions/Oxidation_Catalysts.htr

**Hazardous Air Pollutant Emissions for CT/HRSG - Steady State - HHV**
**Combined Cycle Emission Estimates with Siemens CT's**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 3.1 Stationary Gas Turbines

| Case No. | Sevier Case No. | Total GT & HRSG Fuel Flow Mlb/hr | HHV (Btu/lb) | 1,3 - Butadiene Emission Factor lb/MMBtu | lb/hr | tn/yr | Acetaldehyde Emission Factor lb/MMBtu | lb/hr | tn/yr | Acrolein Emission Factor lb/MMBtu | lb/hr | tn/yr | Benzene Emission Factor lb/MMBtu | lb/hr | tn/yr | Ethylbenzene Emission Factor lb/MMBtu | lb/hr | tn/yr | Formaldehyde Emission Factor lb/MMBtu | lb/hr | tn/yr | Naphthalene Emission Factor lb/MMBtu | lb/hr | tn/yr | PAH Emission Factor lb/MMBtu | lb/hr | tn/yr | Propylene Oxide Emission Factor lb/MMBtu | lb/hr | tn/yr | Toluene Emission Factor lb/MMBtu | lb/hr | tn/yr | Xylene Emission Factor lb/MMBtu | lb/hr | tn/yr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Siemens Case # 1 | 1 | 160.17 | 23195 | 4.30E-07 | 1.60E-03 | 0.007 | 4.00E-05 | 1.49E-01 | 0.65 | 6.40E-06 | 2.38E-02 | 0.10 | 1.20E-05 | 4.46E-02 | 0.20 | 3.20E-05 | 1.19E-01 | 0.52 | 1.07E-04 | 0.40 | 1.7 | 1.30E-06 | 4.83E-03 | 0.02 | 2.20E-06 | 8.17E-03 | 0.04 | 2.90E-05 | 0.11 | 0.47 | 1.30E-04 | 0.48 | 2.12 | 6.40E-05 | 0.24 | 1.04 |
| Siemens Case # 2 | 2 | 137.32 | 23195 | 4.30E-07 | 1.37E-03 | 0.006 | 4.00E-05 | 1.27E-01 | 0.56 | 6.40E-06 | 2.04E-02 | 0.09 | 1.20E-05 | 3.82E-02 | 0.17 | 3.20E-05 | 1.02E-01 | 0.45 | 1.07E-04 | 0.34 | 1.5 | 1.30E-06 | 4.14E-03 | 0.02 | 2.20E-06 | 7.01E-03 | 0.03 | 2.90E-05 | 0.09 | 0.40 | 1.30E-04 | 0.41 | 1.81 | 6.40E-05 | 0.20 | 0.89 |
| Siemens Case # 3 | 3 | 83.32 | 23195 | 4.30E-07 | 8.31E-04 | 0.004 | 4.00E-05 | 7.73E-02 | 0.34 | 6.40E-06 | 1.24E-02 | 0.05 | 1.20E-05 | 2.32E-02 | 0.10 | 3.20E-05 | 6.18E-02 | 0.27 | 1.07E-04 | 0.21 | 0.9 | 1.30E-06 | 2.51E-03 | 0.01 | 2.20E-06 | 4.25E-03 | 0.02 | 2.90E-05 | 0.06 | 0.25 | 1.30E-04 | 0.25 | 1.10 | 6.40E-05 | 0.12 | 0.54 |
| Siemens Case # 4 | 4 | 173.47 | 23195 | 4.30E-07 | 1.73E-03 | 0.008 | 4.00E-05 | 1.61E-01 | 0.70 | 6.40E-06 | 2.58E-02 | 0.11 | 1.20E-05 | 4.83E-02 | 0.21 | 3.20E-05 | 1.29E-01 | 0.56 | 1.07E-04 | 0.43 | 1.88 | 1.30E-06 | 5.23E-03 | 0.02 | 2.20E-06 | 8.85E-03 | 0.04 | 2.90E-05 | 0.12 | 0.51 | 1.30E-04 | 0.52 | 2.29 | 6.40E-05 | 0.26 | 1.13 |
| Siemens Case # 5 | 5 | 150.51 | 23195 | 4.30E-07 | 1.50E-03 | 0.007 | 4.00E-05 | 1.40E-01 | 0.61 | 6.40E-06 | 2.23E-02 | 0.10 | 1.20E-05 | 4.19E-02 | 0.18 | 3.20E-05 | 1.12E-01 | 0.49 | 1.07E-04 | 0.37 | 1.6 | 1.30E-06 | 4.54E-03 | 0.02 | 2.20E-06 | 7.68E-03 | 0.03 | 2.90E-05 | 0.10 | 0.44 | 1.30E-04 | 0.45 | 1.99 | 6.40E-05 | 0.22 | 0.98 |
| Siemens Case # 6 | 6 | 95.26 | 23195 | 4.30E-07 | 9.50E-04 | 0.004 | 4.00E-05 | 8.84E-02 | 0.39 | 6.40E-06 | 1.41E-02 | 0.06 | 1.20E-05 | 2.65E-02 | 0.12 | 3.20E-05 | 7.07E-02 | 0.31 | 1.07E-04 | 0.24 | 1.0 | 1.30E-06 | 2.87E-03 | 0.01 | 2.20E-06 | 4.86E-03 | 0.02 | 2.90E-05 | 0.06 | 0.28 | 1.30E-04 | 0.29 | 1.26 | 6.40E-05 | 0.14 | 0.62 |
| Siemens Case # 7 | 7 | 150.66 | 23195 | 4.30E-07 | 1.50E-03 | 0.007 | 4.00E-05 | 1.40E-01 | 0.61 | 6.40E-06 | 2.24E-02 | 0.10 | 1.20E-05 | 4.19E-02 | 0.18 | 3.20E-05 | 1.12E-01 | 0.49 | 1.07E-04 | 0.37 | 1.6 | 1.30E-06 | 4.54E-03 | 0.02 | 2.20E-06 | 7.69E-03 | 0.03 | 2.90E-05 | 0.10 | 0.44 | 1.30E-04 | 0.45 | 1.99 | 6.40E-05 | 0.22 | 0.98 |
| Siemens Case # 8 | 9 | 95.26 | 23195 | 4.30E-07 | 9.50E-04 | 0.004 | 4.00E-05 | 8.84E-02 | 0.39 | 6.40E-06 | 1.41E-02 | 0.06 | 1.20E-05 | 2.65E-02 | 0.12 | 3.20E-05 | 7.07E-02 | 0.31 | 1.07E-04 | 0.24 | 1.0 | 1.30E-06 | 2.87E-03 | 0.01 | 2.20E-06 | 4.86E-03 | 0.02 | 2.90E-05 | 0.06 | 0.28 | 1.30E-04 | 0.29 | 1.26 | 6.40E-05 | 0.14 | 0.62 |
| Siemens Case # 9 | 10 | 152.80 | 23195 | 4.30E-07 | 1.52E-03 | 0.007 | 4.00E-05 | 1.42E-01 | 0.62 | 6.40E-06 | 2.27E-02 | 0.10 | 1.20E-05 | 4.25E-02 | 0.19 | 3.20E-05 | 1.13E-01 | 0.50 | 1.07E-04 | 0.38 | 1.7 | 1.30E-06 | 4.61E-03 | 0.02 | 2.20E-06 | 7.80E-03 | 0.03 | 2.90E-05 | 0.10 | 0.45 | 1.30E-04 | 0.46 | 2.02 | 6.40E-05 | 0.23 | 0.99 |
| Siemens Case # 10 | 12 | 171.67 | 23195 | 4.30E-07 | 1.71E-03 | 0.007 | 4.00E-05 | 1.59E-01 | 0.70 | 6.40E-06 | 2.55E-02 | 0.11 | 1.20E-05 | 4.78E-02 | 0.21 | 3.20E-05 | 1.27E-01 | 0.56 | 1.07E-04 | 0.42 | 1.9 | 1.30E-06 | 5.18E-03 | 0.02 | 2.20E-06 | 8.76E-03 | 0.04 | 2.90E-05 | 0.12 | 0.51 | 1.30E-04 | 0.52 | 2.27 | 6.40E-05 | 0.25 | 1.12 |
| Siemens Case # 11 | 13 | 53.69 | 23195 | 4.30E-07 | 5.35E-04 | 0.002 | 4.00E-05 | 4.98E-02 | 0.22 | 6.40E-06 | 7.97E-03 | 0.03 | 1.20E-05 | 1.49E-02 | 0.07 | 3.20E-05 | 3.99E-02 | 0.17 | 1.07E-04 | 0.13 | 0.6 | 1.30E-06 | 1.62E-03 | 0.01 | 2.20E-06 | 2.74E-03 | 0.01 | 2.90E-05 | 0.04 | 0.16 | 1.30E-04 | 0.16 | 0.71 | 6.40E-05 | 0.08 | 0.35 |
| Siemens Case # 12 | 14 | 74.12 | 23195 | 4.30E-07 | 7.39E-04 | 0.003 | 4.00E-05 | 6.88E-02 | 0.30 | 6.40E-06 | 1.10E-02 | 0.05 | 1.20E-05 | 2.06E-02 | 0.09 | 3.20E-05 | 5.50E-02 | 0.24 | 1.07E-04 | 0.18 | 0.8 | 1.30E-06 | 2.23E-03 | 0.01 | 2.20E-06 | 3.78E-03 | 0.02 | 2.90E-05 | 0.05 | 0.22 | 1.30E-04 | 0.22 | 0.98 | 6.40E-05 | 0.11 | 0.48 |

**Notes:**

M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr).
Mlb/hr obtained from selected performance data for SPC performance data spreadsheet for Siemen
Formaldehyde emissions assume 85% control through catalytic oxidation. (Ref: http://www.poweronsite.org/AppGuide/Emissions/Oxidation_Catalysts.htn

**Hazardous Air Pollutant Emissions for CT/HRSG - Steady State - LHV**
**Combined Cycle Emission Estimates with Siemens CT's**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 3.1 Stationary Gas Turbines

| | | Total | | 1,3 - Butadiene | | | Acetaldehyde | | | Acrolein | | | Benzene | | | Ethylbenzene | | | Formaldehyde | | | Naphthalene | | | PAH | | | Propylene Oxide | | | Toluene | | | Xylene | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | GT & HRSG | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | | Emission | | |
| | Sevier | Fuel Flow | LHV | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | | Factor | | |
| Case No. | Case No. | Mlb/hr | (Btu/lb) | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr | lb/MMBtu | lb/hr | tn/yr |
| Siemens Case # 1 | 1 | 160.17 | 20892 | 4.30E-07 | 1.44E-03 | 6.30E-03 | 4.00E-05 | 1.34E-01 | 0.59 | 6.40E-06 | 2.14E-02 | 0.09 | 1.20E-05 | 4.02E-02 | 0.18 | 3.20E-05 | 1.07E-01 | 0.47 | 1.07E-04 | 0.36 | 1.6 | 1.30E-06 | 4.35E-03 | 0.02 | 2.20E-06 | 7.36E-03 | 0.03 | 2.90E-05 | 0.10 | 0.43 | 1.30E-04 | 0.44 | 1.91 | 6.40E-05 | 0.21 | 0.94 |
| Siemens Case # 2 | 2 | 137.32 | 20892 | 4.30E-07 | 1.23E-03 | 5.40E-03 | 4.00E-05 | 1.15E-01 | 0.50 | 6.40E-06 | 1.84E-02 | 0.08 | 1.20E-05 | 3.44E-02 | 0.15 | 3.20E-05 | 9.18E-02 | 0.40 | 1.07E-04 | 0.31 | 1.3 | 1.30E-06 | 3.73E-03 | 0.02 | 2.20E-06 | 6.31E-03 | 0.03 | 2.90E-05 | 0.08 | 0.36 | 1.30E-04 | 0.37 | 1.63 | 6.40E-05 | 0.18 | 0.80 |
| Siemens Case # 3 | 3 | 83.32 | 20892 | 4.30E-07 | 7.49E-04 | 3.28E-03 | 4.00E-05 | 6.96E-02 | 0.30 | 6.40E-06 | 1.11E-02 | 0.05 | 1.20E-05 | 2.09E-02 | 0.09 | 3.20E-05 | 5.57E-02 | 0.24 | 1.07E-04 | 0.19 | 0.8 | 1.30E-06 | 2.26E-03 | 0.01 | 2.20E-06 | 3.83E-03 | 0.02 | 2.90E-05 | 0.05 | 0.22 | 1.30E-04 | 0.23 | 0.99 | 6.40E-05 | 0.11 | 0.49 |
| Siemens Case # 4 | 4 | 173.47 | 20892 | 4.30E-07 | 1.56E-03 | 0.007 | 4.00E-05 | 1.45E-01 | 0.63 | 6.40E-06 | 2.32E-02 | 0.10 | 1.20E-05 | 4.35E-02 | 0.19 | 3.20E-05 | 1.16E-01 | 0.51 | 1.07E-04 | 0.39 | 1.69 | 1.30E-06 | 4.71E-03 | 0.02 | 2.20E-06 | 7.97E-03 | 0.03 | 2.90E-05 | 0.11 | 0.46 | 1.30E-04 | 0.47 | 2.06 | 6.40E-05 | 0.23 | 1.02 |
| Siemens Case # 5 | 5 | 150.51 | 20892 | 4.30E-07 | 1.35E-03 | 5.92E-03 | 4.00E-05 | 1.26E-01 | 0.55 | 6.40E-06 | 2.01E-02 | 0.09 | 1.20E-05 | 3.77E-02 | 0.17 | 3.20E-05 | 1.01E-01 | 0.44 | 1.07E-04 | 0.33 | 1.5 | 1.30E-06 | 4.09E-03 | 0.02 | 2.20E-06 | 6.92E-03 | 0.03 | 2.90E-05 | 0.09 | 0.40 | 1.30E-04 | 0.41 | 1.79 | 6.40E-05 | 0.20 | 0.88 |
| Siemens Case # 6 | 6 | 95.26 | 20892 | 4.30E-07 | 8.56E-04 | 3.75E-03 | 4.00E-05 | 7.96E-02 | 0.35 | 6.40E-06 | 1.27E-02 | 0.06 | 1.20E-05 | 2.39E-02 | 0.10 | 3.20E-05 | 6.37E-02 | 0.28 | 1.07E-04 | 0.21 | 0.9 | 1.30E-06 | 2.59E-03 | 0.01 | 2.20E-06 | 4.38E-03 | 0.02 | 2.90E-05 | 0.06 | 0.25 | 1.30E-04 | 0.26 | 1.13 | 6.40E-05 | 0.13 | 0.56 |
| Siemens Case # 7 | 7 | 150.66 | 20892 | 4.30E-07 | 1.35E-03 | 5.93E-03 | 4.00E-05 | 1.26E-01 | 0.55 | 6.40E-06 | 2.01E-02 | 0.09 | 1.20E-05 | 3.78E-02 | 0.17 | 3.20E-05 | 1.01E-01 | 0.44 | 1.07E-04 | 0.34 | 1.5 | 1.30E-06 | 4.09E-03 | 0.02 | 2.20E-06 | 6.92E-03 | 0.03 | 2.90E-05 | 0.09 | 0.40 | 1.30E-04 | 0.41 | 1.79 | 6.40E-05 | 0.20 | 0.88 |
| Siemens Case # 8 | 9 | 95.26 | 20892 | 4.30E-07 | 8.56E-04 | 3.75E-03 | 4.00E-05 | 7.96E-02 | 0.35 | 6.40E-06 | 1.27E-02 | 0.06 | 1.20E-05 | 2.39E-02 | 0.10 | 3.20E-05 | 6.37E-02 | 0.28 | 1.07E-04 | 0.21 | 0.9 | 1.30E-06 | 2.59E-03 | 0.01 | 2.20E-06 | 4.38E-03 | 0.02 | 2.90E-05 | 0.06 | 0.25 | 1.30E-04 | 0.26 | 1.13 | 6.40E-05 | 0.13 | 0.56 |
| Siemens Case # 9 | 10 | 152.80 | 20892 | 4.30E-07 | 1.37E-03 | 6.01E-03 | 4.00E-05 | 1.28E-01 | 0.56 | 6.40E-06 | 2.04E-02 | 0.09 | 1.20E-05 | 3.83E-02 | 0.17 | 3.20E-05 | 1.02E-01 | 0.45 | 1.07E-04 | 0.34 | 1.5 | 1.30E-06 | 4.15E-03 | 0.02 | 2.20E-06 | 7.02E-03 | 0.03 | 2.90E-05 | 0.09 | 0.41 | 1.30E-04 | 0.41 | 1.82 | 6.40E-05 | 0.20 | 0.89 |
| Siemens Case # 10 | 12 | 171.67 | 20892 | 4.30E-07 | 1.54E-03 | 6.75E-03 | 4.00E-05 | 1.43E-01 | 0.63 | 6.40E-06 | 2.30E-02 | 0.10 | 1.20E-05 | 4.30E-02 | 0.19 | 3.20E-05 | 1.15E-01 | 0.50 | 1.07E-04 | 0.38 | 1.7 | 1.30E-06 | 4.66E-03 | 0.02 | 2.20E-06 | 7.89E-03 | 0.03 | 2.90E-05 | 0.10 | 0.46 | 1.30E-04 | 0.47 | 2.04 | 6.40E-05 | 0.23 | 1.01 |
| Siemens Case # 11 | 13 | 53.69 | 20892 | 4.30E-07 | 4.82E-04 | 2.11E-03 | 4.00E-05 | 4.49E-02 | 0.20 | 6.40E-06 | 7.18E-03 | 0.03 | 1.20E-05 | 1.35E-02 | 0.06 | 3.20E-05 | 3.59E-02 | 0.16 | 1.07E-04 | 0.12 | 0.5 | 1.30E-06 | 1.46E-03 | 0.01 | 2.20E-06 | 2.47E-03 | 0.01 | 2.90E-05 | 0.03 | 0.14 | 1.30E-04 | 0.15 | 0.64 | 6.40E-05 | 0.07 | 0.31 |
| Siemens Case # 12 | 14 | 74.12 | 20892 | 4.30E-07 | 6.66E-04 | 2.92E-03 | 4.00E-05 | 6.19E-02 | 0.27 | 6.40E-06 | 9.91E-03 | 0.04 | 1.20E-05 | 1.86E-02 | 0.08 | 3.20E-05 | 4.96E-02 | 0.22 | 1.07E-04 | 0.16 | 0.7 | 1.30E-06 | 2.01E-03 | 0.01 | 2.20E-06 | 3.41E-03 | 0.01 | 2.90E-05 | 0.04 | 0.20 | 1.30E-04 | 0.20 | 0.88 | 6.40E-05 | 0.10 | 0.43 |

**Notes:**

M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr).
Mlb/hr obtained from selected performance data for SPC performance data spreadsheet for Sieme
Formaldehyde emissions assume 85% control through catalytic oxidation. (Ref: http://www.poweronsite.org/AppGuide/Emissions/Oxidation_Catalysts.htr

# Appendix D
# Auxiliary Equipment, Road, $H_2SO_4$ and Fuel Tank Emission Estimates

**1250 KW Diesel Emergency Generator**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 3.4 Large Stationary Diesel And All Stationary Dual-fuel Engine

| Pollutant | Emission Rate (lb/hp-hr) | Engine Power (HP) | Engine Power (MMBtu/hr)[1] | Emission Rate (lb/hr) | Operating Hours (hr/yr) | Uncontrolled Emissions (lb/yr) | (tn/yr) |
|---|---|---|---|---|---|---|---|
| $NO_x$ | | 1853 | 12.40 | 18.64 | 500 | 9320.00 | 4.66 |
| CO | | 1853 | 12.40 | 2.78 | 500 | 1390.00 | 0.70 |
| $SO_2$ | 0.008090 | 1853 | 12.40 | 0.75 | 500 | 374.77 | 0.19 |
| $PM_{10}$ [2] | | 1853 | 12.40 | 0.17 | 500 | 83.77 | 0.04 |
| $PM_{2.5}$ (includes condensible)[2] | | 1853 | 12.40 | 0.14 | 500 | 70.04 | 0.04 |
| PM | 0.0001 | 1853 | 12.40 | 0.20 | 500 | 101.92 | 0.05 |
| HC | 0.000418 | 1853 | 12.40 | 0.77 | 500 | 387.28 | 0.19 |
| ***GHG*** | | | | | | | |
| $CO_2$ | 1.16 | 1853 | 12.40 | 2149.480 | 500 | 1074740.00 | 537.37 |
| $CH_4$ | 0.000705 | 1853 | 12.40 | 1.306 | 500 | 653.18 | 0.33 |
| $N_2O$ [4] | 0.0006 | | 12.40 | 0.016 | 500 | 8.20 | 0.00 |
| **$CO_2e$ (MT)** | | | | | | | **494.9** |
| ***HAPS*** [3] | | | | | | | |
| Benzene | 7.76E-04 | 1853 | 12.40 | 9.62E-03 | 500 | 4.81 | 2.41E-03 |
| Toluene | 2.81E-04 | 1853 | 12.40 | 3.48E-03 | 500 | 1.74 | 8.71E-04 |
| Xylene | 1.93E-04 | 1853 | 12.40 | 2.39E-03 | 500 | 1.20 | 5.98E-04 |
| Formaldehyde | 7.89E-05 | 1853 | 12.40 | 9.78E-04 | 500 | 0.49 | 2.45E-04 |
| Acetaldehyde | 2.52E-05 | 1853 | 12.40 | 3.12E-04 | 500 | 0.16 | 7.81E-05 |
| Acrolein | 7.88E-06 | 1853 | 12.40 | 9.77E-05 | 500 | 0.05 | 2.44E-05 |
| Naphthalene | 1.30E-04 | 1853 | 12.40 | 1.61E-03 | 500 | 0.81 | 4.03E-04 |
| **Total HAP** | | | | | | | 4.63E-03 |
| ***PAH*** [3] | | | | | | | |
| Acenaphthylene | 9.23E-06 | 1853 | 12.40 | 1.14E-04 | 500 | 0.06 | 2.86E-05 |
| Acenaphthene | 4.68E-06 | 1853 | 12.40 | 5.80E-05 | 500 | 0.03 | 1.45E-05 |
| Fluorene | 1.28E-05 | 1853 | 12.40 | 1.59E-04 | 500 | 0.08 | 3.97E-05 |
| Phenanathrene | 4.08E-05 | 1853 | 12.40 | 5.06E-04 | 500 | 0.25 | 1.26E-04 |
| Anthracene | 1.23E-06 | 1853 | 12.40 | 1.53E-05 | 500 | 0.01 | 3.81E-06 |
| Fluoranthene | 4.03E-06 | 1853 | 12.40 | 5.00E-05 | 500 | 0.02 | 1.25E-05 |
| Pyrene | 3.71E-06 | 1853 | 12.40 | 4.60E-05 | 500 | 0.02 | 1.15E-05 |
| Benz(a)anthracene | 6.22E-07 | 1853 | 12.40 | 7.71E-06 | 500 | 0.00 | 1.93E-06 |
| Chrysene | 1.53E-06 | 1853 | 12.40 | 1.90E-05 | 500 | 0.01 | 4.74E-06 |
| Benzo(b)fluoranthene | 1.11E-06 | 1853 | 12.40 | 1.38E-05 | 500 | 0.01 | 3.44E-06 |
| Benzo(k)fluoranthene | 2.18E-07 | 1853 | 12.40 | 2.70E-06 | 500 | 0.00 | 6.76E-07 |
| Benzo(a)pyrene | 2.57E-07 | 1853 | 12.40 | 3.19E-06 | 500 | 0.00 | 7.97E-07 |
| Indeno(1,2,3-cd)pyrene | 4.14E-07 | 1853 | 12.40 | 5.13E-06 | 500 | 0.00 | 1.28E-06 |
| Dibenzo(a,h)anthracene | 3.46E-07 | 1853 | 12.40 | 4.29E-06 | 500 | 0.00 | 1.07E-06 |
| Benzo(g,h,i)perylene | 5.56E-07 | 1853 | 12.40 | 6.89E-06 | 500 | 0.00 | 1.72E-06 |

**Assumptions:**
Operating hours - 500 per year
[1] 90.5 gal/hr diesel fuel X 0.137 = 12.4 MMBtu/hr
[2] $PM_{10}$ and $PM_{2.5}$ Emission rates based on manufacturer PM data and particle size ratios as found in Section 3.4
[3] HAPS and Polycyclic aromatic hydrocarbons (PAH) emission rates based on MMBtu/hr
Diesel fuel energy content = 137,000 Btu/gal and a density of 7.1 lb/ga
Gallons per hour based on manufacturer supplied data
$NO_2$, CO, HC, and PM emissions based on manufacturer supplied data
Sulfur content of fuel is 0.05% by weigh
$CO_2$ and $CH_4$ emission factors from AP-42, Section 3.4.

**480 HP Diesel Fire Pump**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 3.3.3 Gasoline And Diesel Industrial Engines

| Pollutant | Emission Rate (lb/hp-hr) | Engine Power (HP) | Engine Power (MMBtu/hr)[1] | Emission Rate (lb/hr) | Operating Hours (hr/yr) | Uncontrolled Emissions (lb/yr) | (tn/yr) |
|---|---|---|---|---|---|---|---|
| $NO_x$ | | 480 | | 5.270 | 500 | 2635.00 | 1.32 |
| CO | | 480 | | 0.490 | 500 | 245.00 | 0.12 |
| $SO_2$ | 0.002050 | 480 | | 0.984 | 500 | 492.00 | 0.25 |
| $PM_{10}$ [2] | | 480 | | 0.070 | 500 | 35.00 | 0.02 |
| $PM_{2.5}$ (includes condensible)[2] | | 480 | | 0.064 | 500 | 32.20 | 0.02 |
| HC | | 480 | | 0.130 | 500 | 65.00 | 0.03 |
| ***GHG*** | | | | | | | |
| $CO_2$ | 1.15 | 480 | | 552.000 | 500 | 276000.00 | 138.00 |
| $CH_4$ [4] | 0.0030 | | 3.10 | 0.021 | 500 | 10.25 | 0.01 |
| $N_2O$ [4] | 0.0006 | | 3.10 | 0.004 | 500 | 2.05 | 0.00 |
| **$CO_2e$ (MT)** | | | | | | | **125.6** |
| ***HAPS*** [3] | | | | | | | |
| Benzene | 9.33E-04 | 480 | 3.10 | 2.89E-03 | 500 | 1.45 | 7.23E-04 |
| Toluene | 4.09E-04 | 480 | 3.10 | 1.27E-03 | 500 | 0.63 | 3.17E-04 |
| Xylene | 2.85E-04 | 480 | 3.10 | 8.84E-04 | 500 | 0.44 | 2.21E-04 |
| 1,3-Butadiene | 3.91E-05 | 480 | 3.10 | 1.21E-04 | 500 | 0.06 | 3.03E-05 |
| Formaldehyde | 1.18E-03 | 480 | 3.10 | 3.66E-03 | 500 | 1.83 | 9.15E-04 |
| Acetaldehyde | 7.67E-04 | 480 | 3.10 | 2.38E-03 | 500 | 1.19 | 5.94E-04 |
| Acrolein | 9.25E-05 | 480 | 3.10 | 2.87E-04 | 500 | 0.14 | 7.17E-05 |
| Naphthalene | 8.48E-05 | 480 | 3.10 | 2.63E-04 | 500 | 0.13 | 6.57E-05 |
| **Total HAP** | | | | | | | 2.94E-03 |
| ***PAH*** [3] | | | | | | | |
| Acenaphthylene | 5.06E-06 | 480 | 3.10 | 1.57E-05 | 500 | 0.01 | 3.92E-06 |
| Acenaphthene | 1.42E-06 | 480 | 3.10 | 4.40E-06 | 500 | 0.00 | 1.10E-06 |
| Fluorene | 2.92E-05 | 480 | 3.10 | 9.05E-05 | 500 | 0.05 | 2.26E-05 |
| Phenanathrene | 2.94E-05 | 480 | 3.10 | 9.11E-05 | 500 | 0.05 | 2.28E-05 |
| Anthracene | 1.87E-06 | 480 | 3.10 | 5.80E-06 | 500 | 0.00 | 1.45E-06 |
| Fluoranthene | 7.61E-06 | 480 | 3.10 | 2.36E-05 | 500 | 0.01 | 5.90E-06 |
| Pyrene | 4.78E-06 | 480 | 3.10 | 1.48E-05 | 500 | 0.01 | 3.70E-06 |
| Benz(a)anthracene | 1.68E-06 | 480 | 3.10 | 5.21E-06 | 500 | 0.00 | 1.30E-06 |
| Chrysene | 3.53E-07 | 480 | 3.10 | 1.09E-06 | 500 | 0.00 | 2.74E-07 |
| Benzo(b)fluoranthene | 9.91E-08 | 480 | 3.10 | 3.07E-07 | 500 | 0.00 | 7.68E-08 |
| Benzo(k)fluoranthene | 1.55E-07 | 480 | 3.10 | 4.81E-07 | 500 | 0.00 | 1.20E-07 |
| Benzo(a)pyrene | 1.88E-07 | 480 | 3.10 | 5.83E-07 | 500 | 0.00 | 1.46E-07 |
| Indeno(1,2,3-cd)pyrene | 3.75E-07 | 480 | 3.10 | 1.16E-06 | 500 | 0.00 | 2.91E-07 |
| Dibenzo(a,h)anthracene | 5.83E-07 | 480 | 3.10 | 1.81E-06 | 500 | 0.00 | 4.52E-07 |
| Benzo(g,h,i)perylene | 4.89E-07 | 480 | 3.10 | 1.52E-06 | 500 | 0.00 | 3.79E-07 |

**Assumptions:**
Operating hours - 500 per year
[1] 22.6 gal/hr diesel fuel X 0.137 = 3.10 MMBtu/hr
[2] $PM_{10}$ emission rates based on manufacturer PM data. PM2.5 fraction of engine exhaust PM10 was assumed to be 92% based on CARB CEIDARS database.
[3] HAPS and polycyclic aromatic hydrocarbons (PAH) emission rates based on MMBtu/hr
[4] $CH_4$ and $N_2O$ emissions obtained from 40 CFR Part 98, Table C-2. Units are in kilograms/MMBtu
Diesel fuel energy content = 137,000 Btu/gal and a density of 7.1 lb/gal
Gallons per hour based on manufacturer supplied data
$NO_2$, CO, HC, and PM emissions based on manufacturer supplied data
$CO_2$ emission factor obtained from AP-42.

**Convection Heaters**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 1.4 Natural Gas Combustion, 1998

**Calculation:**

$E_{(lb/hr)}$ = (Rating (MMBtu/hr) * (Emission Factor (lb/MMBtu)

Heater input: 22.264 MMBtu/hr

| | Emission Factor | | Emission Rates | | |
|---|---|---|---|---|---|
| **Pollutant** | **lb/MMBtu** | **lb/$10^6$ scf** | **lb/hr** | **tn/yr** | **tn/yr[1]** |
| $NO_x$ | 0.036 | | 0.808 | 3.54 | 7.08 |
| $SO_2$ | 0.001 | | 0.013 | 0.06 | 0.12 |
| CO | 0.074 | | 1.643 | 7.20 | 14.39 |
| VOC | 0.006 | | 0.134 | 0.59 | 1.17 |
| $PM_{10}$ | 0.010 | | 0.223 | 0.98 | 1.95 |
| $PM_{2.5}$ | 0.010 | | 0.223 | 0.98 | 1.95 |
| Lead | 4.90E-07 | 0.0005 | 0.000 | 4.78E-05 | 9.56E-05 |
| ***GHG*** | | | | | |
| $CO_2$ | 117.65 | 120,000 | 2619.29 | 1.15E+04 | 2.29E+04 |
| Methane ($CH_4$) | 2.25E-03 | 2.3 | 0.050 | 2.20E-01 | 4.40E-01 |
| Nitrous oxide ($N_2O$) | 6.27E-04 | 0.6400 | 0.014 | 6.12E-02 | 1.22E-01 |
| **$CO_2$e (MT)** | | | | | **20,858.1** |
| ***HAPS*** | | | | | |
| Benzene | 2.06E-06 | 0.0021 | 4.58E-05 | 2.01E-04 | 4.02E-04 |
| Formaldehyde | 7.35E-05 | 0.0750 | 1.64E-03 | 7.17E-03 | 1.43E-02 |
| Hexane | 1.76E-03 | 1.8000 | 3.93E-02 | 1.72E-01 | 3.44E-01 |
| Naphthalene | 5.98E-07 | 0.0006 | 1.33E-05 | 5.83E-05 | 1.17E-04 |
| Toluene | 3.33E-06 | 0.0034 | 7.42E-05 | 3.25E-04 | 6.50E-04 |
| Arsenic | 1.96E-07 | 0.0002 | 4.37E-06 | 1.91E-05 | 3.82E-05 |
| Beryllium | 1.18E-08 | 1.20E-05 | 2.62E-07 | 1.15E-06 | 2.29E-06 |
| Cadmium | 1.08E-06 | 0.0011 | 2.40E-05 | 1.05E-04 | 2.10E-04 |
| Chromium | 1.37E-06 | 0.0014 | 3.06E-05 | 1.34E-04 | 2.68E-04 |
| Cobalt | 8.24E-08 | 0.0001 | 1.83E-06 | 8.03E-06 | 1.61E-05 |
| Manganese | 3.73E-07 | 0.0004 | 8.29E-06 | 3.63E-05 | 7.27E-05 |
| Mercury | 2.55E-07 | 0.0003 | 5.68E-06 | 2.49E-05 | 4.97E-05 |
| Nickel | 2.06E-06 | 0.0021 | 4.58E-05 | 2.01E-04 | 4.02E-04 |
| Selenium | 2.35E-08 | 2.40E-05 | 5.24E-07 | 2.29E-06 | 4.59E-06 |
| Total HAPS | | | | | 0.361 |

**Assumptions:**

$NO_x$ and CO emissions from manufacturer supplied data

$SO_2$ emissions based on KRG with 0.75 grains/100scf sulfur

[1] Emissions are for two heaters

Global Warming Potentials obtained from Climate Registry General Reporting Protocol, Version 1.1 2008

MT = metric ton

**Auxiliary Boiler**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 1.4 Natural Gas Combustion, 1998

**Calculation:**
E (lb/hr) = (Rating (MMBtu/hr) * (Emission Factor (lb/MMBtu)
Heater input: 85 MMBtu/hr

| | Emission Factor | | Emission Rates | | |
|---|---|---|---|---|---|
| **Pollutant** | **lb/MMBtu** | **lb/$10^6$ scf** | **lb/hr** | **tn/yr** | |
| $NO_x$ | 0.017 | | 1.445 | 6.33 | |
| $SO_2$ | 0.0024 | | 0.204 | 0.89 | |
| CO | 0.0375 | | 3.188 | 13.96 | |
| VOC | 0.006 | | 0.510 | 2.23 | |
| $PM_{10}$ | 0.010 | | 0.850 | 3.72 | |
| $PM_{2.5}$ | 0.010 | | 0.850 | 3.72 | |
| Lead | 4.90E-07 | 0.0005 | 0.000 | 1.83E-04 | |
| ***GHG*** | | | | | |
| $CO_2$ | 117.65 | 120,000 | 10000.00 | 43800.0 | 39734.48 |
| Methane ($CH_4$) | 2.25E-03 | 2.3 | 0.192 | 0.840 | 0.761578 |
| Nitrous oxide ($N_2O$) | 6.27E-04 | 0.6400 | 0.053 | 0.234 | 0.211917 |
| **$CO_2$e (MT)** | | | | **39,816.2** | |
| ***HAPS*** | | | | | |
| Benzene | 2.06E-06 | 0.0021 | 1.75E-04 | 7.67E-04 | |
| Formaldehyde | 7.35E-05 | 0.0750 | 6.25E-03 | 2.74E-02 | |
| Hexane | 1.76E-03 | 1.8000 | 1.50E-01 | 6.57E-01 | |
| Naphthalene | 5.98E-07 | 0.0006 | 5.08E-05 | 2.23E-04 | |
| Toluene | 3.33E-06 | 0.0034 | 2.83E-04 | 1.24E-03 | |
| Arsenic | 1.96E-07 | 0.0002 | 1.67E-05 | 7.30E-05 | |
| Beryllium | 1.18E-08 | 1.20E-05 | 1.00E-06 | 4.38E-06 | |
| Cadmium | 1.08E-06 | 0.0011 | 9.17E-05 | 4.02E-04 | |
| Chromium | 1.37E-06 | 0.0014 | 1.17E-04 | 5.11E-04 | |
| Cobalt | 8.24E-08 | 0.0001 | 7.00E-06 | 3.07E-05 | |
| Manganese | 3.73E-07 | 0.0004 | 3.17E-05 | 1.39E-04 | |
| Mercury | 2.55E-07 | 0.0003 | 2.17E-05 | 9.49E-05 | |
| Nickel | 2.06E-06 | 0.0021 | 1.75E-04 | 7.67E-04 | |
| Selenium | 2.35E-08 | 2.40E-05 | 2.00E-06 | 8.76E-06 | |
| Total HAPS | | | | 0.689 | |

**Assumptions:**
Global Warming Potentials obtained from Climate Registry General Reporting Protocol, Version 1.1 2008
MT = metric ton
$SO_2$ emissions based on KRG with 0.75 grains/100scf sulfur

**$PM_{10}$ and $PM_{2.5}$ Emissions - Paved Roads**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** AP-42, Section 13.2.2 Unpaved Roads

| Source | R/T Distance | | Weight of Load | |
|---|---|---|---|---|
| Aqueous ammonia delivery | 0.60 | VMT/truck | 52.5 | mean vehicle weight/truck (tons) |

| Aqueous ammonia delivery trucks | Throughput | Max trips | Max VMT | Oper. Hrs |
|---|---|---|---|---|
| Daily - | 9 | 9 | 5.4 | 24 |
| Annual - | 3294 | 1976 | 1185.8 | 8760 |

$PM_{10}$ Emission Factor => E = k * (s/12)a * (W/3)b * [(365-P)/365]
E (annual) = 1.862 lbs/VMT
$PM_{10}$ Emission Factor => E = k * (s/12)a * (W/3)b
E (daily) = 2.384 lbs/VMT

$PM_{2.5}$ Emission Factor => E = k * (s/12)a * (W/3)b * [(365-P)/365]
E (annual) = 0.186 lbs/VMT
$PM_{2.5}$ Emission Factor => E = k * (s/12)a * (W/3)b
E (daily) = 0.238 lbs/VMT

Where
E = Emission factor (pounds per VMT)
k, a, b = constants (AP-42, Section 13.2.2 Unpaved Roads Table 13.2.2-2)
s = surface material silt content 4.8 per UDAQ Memo - Emission Factors for Paved and Unpaved Roads 3/10/2008
$W_{AA}$ = mean vehicle weight (tons) 52.5
P = Number of days with 0.01" of precipitation 80 AP-42, Figure 13.2.2-1
CF = Control Factor 95% vacuum truck

| | PM10 | | PM2.5 |
|---|---|---|---|
| k = | 1.5 | k = | 0.15 |
| s = | 4.8 | s = | 4.8 |
| $W_{AA}$ = | 52.5 | $W_{AA}$ = | 52.5 |
| P = | 80 | P = | 80 |
| a = | 0.9 | a = | 0.9 |
| b = | 0.45 | b = | 0.45 |

| | lbs/VMT | | Max VMT | | $PM_{10}$ Uncontrolled | | | | | $PM_{10}$ Controlled | | | $PM_{2.5}$ Uncontrolled | | | | | $PM_{2.5}$ Controlled | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | PM10 | | daily | annual | annual | daily | annual | annual | $PM_{2.5}$ Uncontrolled | | daily | annual | annual | daily | annual | annual |
| Source | daily | annual | daily | annual | lbs/day | lbs/yr | lb/hr | lb/hr | tn/yr | lb/hr | lb/hr | tn/yr | lbs/day | lbs/yr | lb/hr | lb/hr | tn/yr | lb/hr | lb/hr | tn/yr |
| Aqueous ammonia delivery tanker trucks | 2.384 | 1.862 | 5.4 | 1186 | 12.87 | 2207.45 | 0.5364 | 0.2520 | 1.1 | 0.0268 | 0.0126 | 0.06 | 1.29 | 220.74 | 0.0536 | 0.0252 | 0.1 | 0.0027 | 0.0013 | 0.01 |

**Assumptions:**
60 aqueous ammonia deliveries per week with 19% aqueous $NH_3$
Deliveries based on 2500 pound per hour ammonia requirement
7000 gallons per truck
Aqueous ammonia - 7.75 pounds per gallon
Gross truck weight - 40 tons
Truck capacity - 25 tons
Paved road

**$H_2SO_4$ Emissions - Combined Cycle Plant**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**Reference:** Estimating Total Sulfuric Acid Emissions from Stationary Power Plants, EPRI, 2007.

$E = K * F1 * F2 * E2_{NG}$

Where:

k= Molecular weight and units conversion

98.07 = Molecular weight of $H_2SO_4$

64.04 = Molecular weight of $SO_2$

F1 = Fuel Impact Factor (0.0555 for NG)

F2= Heat removal factor (0.5)

$E2_{NG}$ = $SO_2$ Emissions (tn/yr)

$E = K * F1 * F2 * E2_{NG}$

E = 2060.21 lbs/yr $H_2SO_4$ released (Siemens)

E = 1.03 tn/yr $H_2SO_4$ released (Siemens)

E= 0.235 lb/hr - Siemens

$E = K * F1 * F2 * E2_{NG}$

E = 1989.66 lbs/yr $H_2SO_4$ released (GE)

E = 0.99 tn/yr $H_2SO_4$ released (GE)

E= 0.227 lb/hr - GE

**Assumptions:**

$SO_2$ emissions (24.24 tn/yr) based on Siemens emission estimates

$SO_2$ emissions (23.41 tn/yr) based on GE emission estimates

# TANKS 4.0.9d
## Emissions Report - Detail Format
## Tank Indentification and Physical Characteristics

**Identification**

| | |
|---|---|
| User Identification: | SPC - 1000 gallon diesel tank |
| City: | Sigurd |
| State: | Utah |
| Company: | Sevier Power Company |
| Type of Tank: | Horizontal Tank |
| Description: | 1000 gallon diesel fuel tank for emergency generator |

**Tank Dimensions**

| | | |
|---|---|---|
| Shell Length (ft): | | 10.00 |
| Diameter (ft): | | 4.50 |
| Volume (gallons): | | 1,000.00 |
| Turnovers: | | 45.30 |
| Net Throughput(gal/yr): | | 45,300.00 |
| Is Tank Heated (y/n): | N | |
| Is Tank Underground (y/n): | N | |

**Paint Characteristics**

| | |
|---|---|
| Shell Color/Shade: | White/White |
| Shell Condition | Good |

**Breather Vent Settings**

| | |
|---|---|
| Vacuum Settings (psig): | -0.03 |
| Pressure Settings (psig) | 0.03 |

Meterological Data used in Emissions Calculations: Salt Lake City, Utah (Avg Atmospheric Pressure = 12.64 psia)

**TANKS 4.0.9d**
**Emissions Report - Detail Format**
**Liquid Contents of Storage Tank**

**SPC - 1000 gallon diesel tank - Horizontal Tank**
**Sigurd, Utah**

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) Avg. | Min. | Max. | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) Avg. | Min. | Max. | Vapor Mol. Weight. | Liquid Mass Fract. | Vapor Mass Fract. | Mol. Weight | Basis for Vapor Pressure Calculations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Distillate fuel oil no. 2 | All | 53.92 | 47.99 | 59.86 | 51.98 | 0.0056 | 0.0042 | 0.0074 | 130.0000 | | | 188.00 | Option 1: VP50 = .0045 VP60 = .0074 |

# TANKS 4.0.9d
## Emissions Report - Detail Format
## Detail Calculations (AP-42)

**SPC - 1000 gallon diesel tank - Horizontal Tank**
**Sigurd, Utah**

| Annual Emission Calcaulations | |
|---|---|
| Standing Losses (lb): | 0.2049 |
| Vapor Space Volume (cu ft): | 101.3014 |
| Vapor Density (lb/cu ft): | 0.0001 |
| Vapor Space Expansion Factor: | 0.0417 |
| Vented Vapor Saturation Factor: | 0.9993 |
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft): | 101.3014 |
| Tank Diameter (ft): | 4.5000 |
| Effective Diameter (ft): | 7.5713 |
| Vapor Space Outage (ft): | 2.2500 |
| Tank Shell Length (ft): | 10.0000 |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0001 |
| Vapor Molecular Weight (lb/lb-mole): | 130.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.0056 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 513.5939 |
| Daily Average Ambient Temp. (deg. F): | 51.9625 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 511.6525 |
| Tank Paint Solar Absorptance (Shell): | 0.1700 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,452.1184 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0417 |
| Daily Vapor Temperature Range (deg. R): | 23.7301 |
| Daily Vapor Pressure Range (psia): | 0.0031 |
| Breather Vent Press. Setting Range(psia): | 0.0600 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.0056 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.0042 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.0074 |
| Daily Avg. Liquid Surface Temp. (deg R): | 513.5939 |
| Daily Min. Liquid Surface Temp. (deg R): | 507.6614 |
| Daily Max. Liquid Surface Temp. (deg R): | 519.5264 |
| Daily Ambient Temp. Range (deg. R): | 23.3583 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.9993 |
| Vapor Pressure at Daily Average Liquid: Surface Temperature (psia): | 0.0056 |
| Vapor Space Outage (ft): | 2.2500 |
| Working Losses (lb): | 0.6553 |
| Vapor Molecular Weight (lb/lb-mole): | 130.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.0056 |
| Annual Net Throughput (gal/yr.): | 45,300.0000 |
| Annual Turnovers: | 45.3000 |
| Turnover Factor: | 0.8289 |
| Tank Diameter (ft): | 4.5000 |
| Working Loss Product Factor: | 1.0000 |
| Total Losses (lb): | 0.8602 |

**TANKS 4.0.9d**
**Emissions Report - Detail Format**
**Individual Tank Emission Totals**

## Emissions Report for: Annual

**SPC - 1000 gallon diesel tank - Horizontal Tank**
**Sigurd, Utah**

| | Losses(lbs) | | |
|---|---|---|---|
| Components | Working Loss | Breathing Loss | Total Emissions |
| Distillate fuel oil no. 2 | 0.66 | 0.20 | 0.86 |

# TANKS 4.0.9d
## Emissions Report - Detail Format
## Tank Indentification and Physical Characteristics

**Identification**

| | |
|---|---|
| User Identification: | Sevier Power Company |
| City: | Sigurd |
| State: | Utah |
| Company: | Sevier Power Company |
| Type of Tank: | Horizontal Tank |
| Description: | 500 gallon diesel fuel tank for fire pump |

**Tank Dimensions**

| | |
|---|---|
| Shell Length (ft): | 6.00 |
| Diameter (ft): | 4.00 |
| Volume (gallons): | 500.00 |
| Turnovers: | 22.60 |
| Net Throughput(gal/yr): | 11,300.00 |
| Is Tank Heated (y/n): | N |
| Is Tank Underground (y/n): | N |

**Paint Characteristics**

| | |
|---|---|
| Shell Color/Shade: | White/White |
| Shell Condition | Good |

**Breather Vent Settings**

| | |
|---|---|
| Vacuum Settings (psig): | -0.03 |
| Pressure Settings (psig) | 0.03 |

Meterological Data used in Emissions Calculations: Salt Lake City, Utah (Avg Atmospheric Pressure = 12.64 psia)

**TANKS 4.0.9d**
**Emissions Report - Detail Format**
**Liquid Contents of Storage Tank**

**Sevier Power Company - Horizontal Tank**
**Sigurd, Utah**

| Mixture/Component | Month | Daily Liquid Surf. Temperature (deg F) Avg. | Min. | Max. | Liquid Bulk Temp (deg F) | Vapor Pressure (psia) Avg. | Min. | Max. | Vapor Mol. Weight. | Liquid Mass Fract. | Vapor Mass Fract. | Mol. Weight | Basis for Vapor Pressure Calculations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Distillate fuel oil no. 2 | All | 53.92 | 47.99 | 59.86 | 51.98 | 0.0056 | 0.0042 | 0.0074 | 130.0000 | | | 188.00 | Option 1: VP50 = .0045 VP60 = .0074 |

# TANKS 4.0.9d
## Emissions Report - Detail Format
## Detail Calculations (AP-42)

**Sevier Power Company - Horizontal Tank**
**Sigurd, Utah**

Annual Emission Calcaulations

| | |
|---|---|
| Standing Losses (lb): | 0.0972 |
| Vapor Space Volume (cu ft): | 48.0243 |
| Vapor Density (lb/cu ft): | 0.0001 |
| Vapor Space Expansion Factor: | 0.0417 |
| Vented Vapor Saturation Factor: | 0.9994 |
| Tank Vapor Space Volume: | |
| Vapor Space Volume (cu ft): | 48.0243 |
| Tank Diameter (ft): | 4.0000 |
| Effective Diameter (ft): | 5.5293 |
| Vapor Space Outage (ft): | 2.0000 |
| Tank Shell Length (ft): | 6.0000 |
| Vapor Density | |
| Vapor Density (lb/cu ft): | 0.0001 |
| Vapor Molecular Weight (lb/lb-mole): | 130.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.0056 |
| Daily Avg. Liquid Surface Temp. (deg. R): | 513.5939 |
| Daily Average Ambient Temp. (deg. F): | 51.9625 |
| Ideal Gas Constant R (psia cuft / (lb-mol-deg R)): | 10.731 |
| Liquid Bulk Temperature (deg. R): | 511.6525 |
| Tank Paint Solar Absorptance (Shell): | 0.1700 |
| Daily Total Solar Insulation Factor (Btu/sqft day): | 1,452.1184 |
| Vapor Space Expansion Factor | |
| Vapor Space Expansion Factor: | 0.0417 |
| Daily Vapor Temperature Range (deg. R): | 23.7301 |
| Daily Vapor Pressure Range (psia): | 0.0031 |
| Breather Vent Press. Setting Range(psia): | 0.0600 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.0056 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.0042 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.0074 |
| Daily Avg. Liquid Surface Temp. (deg R): | 513.5939 |
| Daily Min. Liquid Surface Temp. (deg R): | 507.6614 |
| Daily Max. Liquid Surface Temp. (deg R): | 519.5264 |
| Daily Ambient Temp. Range (deg. R): | 23.3583 |
| Vented Vapor Saturation Factor | |
| Vented Vapor Saturation Factor: | 0.9994 |
| Vapor Pressure at Daily Average Liquid: Surface Temperature (psia): | 0.0056 |
| Vapor Space Outage (ft): | 2.0000 |
| Working Losses (lb): | 0.1972 |
| Vapor Molecular Weight (lb/lb-mole): | 130.0000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.0056 |
| Annual Net Throughput (gal/yr.): | 11,300.0000 |
| Annual Turnovers: | 22.6000 |
| Turnover Factor: | 1.0000 |
| Tank Diameter (ft): | 4.0000 |
| Working Loss Product Factor: | 1.0000 |
| Total Losses (lb): | 0.2944 |

**TANKS 4.0.9d**
**Emissions Report - Detail Format**
**Individual Tank Emission Totals**

**Emissions Report for: Annual**

**Sevier Power Company - Horizontal Tank**
**Sigurd, Utah**

| | Losses(lbs) | | |
|---|---|---|---|
| Components | Working Loss | Breathing Loss | Total Emissions |
| Distillate fuel oil no. 2 | 0.20 | 0.10 | 0.29 |

# Appendix E
# CT/HRSG Greenhouse Gas Emissions

**Greenhouse Gas Emissions for CT/HRSG - Steady State - HHV**
**General Electric Combined Cycle Emission Estimates**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

| | | | | $CO_2$ | | | | $N_2O$ | | | | $CH_4$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case No. | Sevier Case No. | Total GT & HRSG Fuel Flow Mlb/hr | HHV (Btu/lb) | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr |
| GE Case # 1 | 1 | 157.28 | 23221 | 117 | 4.27E+05 | 1871605.8 | 1697883.4 | 0.006 | 22.50 | 98.54 | 89.39 | 0.002 | 7231.4 | 31673.3 | 28733.4 |
| GE Case # 2 | NA | 150.47 | 23221 | 117 | 4.09E+05 | 1790568.0 | 1624367.5 | 0.006 | 21.52 | 94.27 | 85.52 | 0.002 | 6918.2 | 30301.9 | 27489.3 |
| GE Case # 3 | 2 | 144.24 | 23221 | 117 | 3.92E+05 | 1716432.0 | 1557112.8 | 0.006 | 20.63 | 90.37 | 81.98 | 0.002 | 6631.8 | 29047.3 | 26351.1 |
| GE Case # 4 | 3a | 93.40 | 23221 | 117 | 2.54E+05 | 1111444.5 | 1008280.2 | 0.006 | 13.36 | 58.52 | 53.09 | 0.002 | 4294.3 | 18809.1 | 17063.2 |
| GE Case # 5 | 3b | 74.98 | 23221 | 117 | 2.04E+05 | 892249.5 | 809430.9 | 0.006 | 10.73 | 46.98 | 42.62 | 0.002 | 3447.4 | 15099.6 | 13698.1 |
| GE Case # 6 | 4 | 165.29 | 23221 | 117 | 4.49E+05 | 1966923.5 | 1784353.7 | 0.006 | 23.64 | 103.56 | 93.95 | 0.002 | 7599.6 | 33286.4 | 30196.8 |
| GE Case # 7 | 10 | 160.96 | 23221 | 117 | 4.37E+05 | 1915397.2 | 1737610.1 | 0.006 | 23.02 | 100.84 | 91.48 | 0.002 | 7400.6 | 32414.4 | 29405.7 |
| GE Case # 8 | 5 | 153.46 | 23221 | 117 | 4.17E+05 | 1826148.5 | 1656645.4 | 0.006 | 21.95 | 96.15 | 87.22 | 0.002 | 7055.7 | 30904.1 | 28035.5 |
| GE Case # 9 | 6a | 97.46 | 23221 | 117 | 2.65E+05 | 1159757.8 | 1052109.1 | 0.006 | 13.94 | 61.06 | 55.39 | 0.002 | 4481.0 | 19626.7 | 17804.9 |
| GE Case # 10 | 6b | 81.82 | 23221 | 117 | 2.22E+05 | 973644.4 | 883270.7 | 0.006 | 11.70 | 51.26 | 46.50 | 0.002 | 3761.9 | 16477.1 | 14947.7 |
| GE Case # 11 | 7 | 76.73 | 23221 | 117 | 2.08E+05 | 913074.2 | 828322.7 | 0.006 | 10.98 | 48.07 | 43.61 | 0.002 | 3527.9 | 15452.0 | 14017.8 |
| GE Case # 12 | 9a | 48.73 | 23221 | 117 | 1.32E+05 | 579878.9 | 526054.5 | 0.006 | 6.97 | 30.53 | 27.70 | 0.002 | 2240.5 | 9813.3 | 8902.5 |
| GE Case # 13 | 9b | 40.91 | 23221 | 117 | 1.11E+05 | 486822.2 | 441635.4 | 0.006 | 5.85 | 25.63 | 23.25 | 0.002 | 1880.9 | 8238.5 | 7473.8 |
| GE Case # 14 | 11 | 178.45 | 23221 | 117 | 4.85E+05 | 2123525.3 | 1926419.7 | 0.006 | 25.53 | 111.80 | 101.43 | 0.002 | 8204.7 | 35936.6 | 32600.9 |
| GE Case # 15 | 12 | 165.06 | 23221 | 117 | 4.48E+05 | 1964186.5 | 1781870.7 | 0.006 | 23.61 | 103.41 | 93.81 | 0.002 | 7589.1 | 33240.1 | 30154.7 |
| GE Case # 16 | 13a | 112.16 | 23221 | 117 | 3.05E+05 | 1334685.3 | 1210799.8 | 0.006 | 16.04 | 70.27 | 63.75 | 0.002 | 5156.8 | 22587.0 | 20490.5 |
| GE Case # 17 | 13b | 90.58 | 23221 | 117 | 2.46E+05 | 1077886.9 | 977837.5 | 0.006 | 12.96 | 56.75 | 51.48 | 0.002 | 4164.6 | 18241.2 | 16548.0 |
| GE Case # 18 | 14 | 151.22 | 23221 | 117 | 4.11E+05 | 1799492.8 | 1632463.9 | 0.006 | 21.63 | 94.74 | 85.95 | 0.002 | 6952.7 | 30453.0 | 27626.3 |
| GE Case # 19 | NA | 158.05 | 23221 | 117 | 4.29E+05 | 1880768.7 | 1706195.8 | 0.006 | 22.61 | 99.02 | 89.83 | 0.002 | 7266.8 | 31828.4 | 28874.1 |
| GE Case # 20 | NA | 159.51 | 23221 | 117 | 4.33E+05 | 1898142.5 | 1721956.9 | 0.006 | 22.82 | 99.94 | 90.66 | 0.002 | 7333.9 | 32122.4 | 29140.8 |

**Notes:**

1. Standard Conditions for scf are based on GE's standards, namely 68F & 14.6959 psi
2. M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr)
3. Mlb/hr obtained from selected performance data for SPC spreadsheet
4. $CH_4$ emissions based on vendor supplied data.

Comparison of Emission Factors:
Climate Registry default GHG Emission Factors: 53.06 kg CO2/MMBtu (117 lb CO2/MMBtu); 0.9 g CH4/MMBtu (0.00198 lb/MMBtu); 2.8 g N2O/MMBtu (0.00616 lb/MMBtu
Mandatory GHG Reporting Rule Emission Factors: 53.02 kg CO2/MMBtu (117 lb CO2/MMBtu);1.0 e10-3 kg/CH4/MMBtu (0.002 lb/MMBtu); 1.0 E 10-4 kg N20/MMbtu (0.0002 lb/MMBtu
AP-42 Section 3.1 Emission Factors: 110 lb CO2/MMBtu; 0.003 lb N2O/MMBtu

**Greenhouse Gas Emissions for CT/HRSG - Steady State - HHV**
**General Electric Combined Cycle Emission Estimates**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

Total Emissions $CO_2e$ = $CO_2$ emissions (MT) X GWP + $CH_4$ emissions (MT) * GWP+ $N_2O$ Emissions (MT) * GWP

| | Global Warming Potential | Highest (MT) |
|---|---|---|
| $CO_2$ | 1 | 1784354 |
| $CH_4$ | 21 | 30196.75 |
| $N_2O$ | 310 | 93.95 |

Total Emissions $CO_2e$ = 2,447,608.6 MT

**Assumptions:**
Global Warming Potentials obtained from Climate Registry General Reporting Protocol, Version 1.1 2008
MT = Metric Tons
$CO_2e$ based on SPC operating case #4

**Greenhouse Gas Emissions for CT/HRSG - Steady State - LHV**
**General Electric Combined Cycle Emission Estimates**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

| | | | | $CO_2$ | | | | $N_2O$ | | | | $CH_4$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case No. | Sevier Case No. | Total GT & HRSG Fuel Flow Mlb/hr | LHV (Btu/lb) | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr |
| GE Case # 1 | 1 | 157.28 | 20905 | 117 | 3.85E+05 | 1684936.9 | 1528541.1 | 0.006 | 20.25 | 88.71 | 80.48 | 0.002 | 6510.1 | 28514.3 | 25867.6 |
| GE Case # 2 | NA | 150.47 | 20905 | 117 | 3.68E+05 | 1611981.5 | 1462357.4 | 0.006 | 19.38 | 84.87 | 76.99 | 0.002 | 6228.2 | 27279.7 | 24747.6 |
| GE Case # 3 | 2 | 144.24 | 20905 | 117 | 3.53E+05 | 1545239.7 | 1401810.6 | 0.006 | 18.57 | 81.36 | 73.80 | 0.002 | 5970.4 | 26150.2 | 23722.9 |
| GE Case # 4 | 3a | 93.40 | 20905 | 117 | 2.28E+05 | 1000592.0 | 907717.0 | 0.006 | 12.03 | 52.68 | 47.79 | 0.002 | 3866.0 | 16933.1 | 15361.4 |
| GE Case # 5 | 3b | 74.98 | 20905 | 117 | 1.83E+05 | 803259.0 | 728700.5 | 0.006 | 9.66 | 42.29 | 38.37 | 0.002 | 3103.6 | 13593.6 | 12331.9 |
| GE Case # 6 | 4 | 165.29 | 20905 | 117 | 4.04E+05 | 1770747.9 | 1606387.0 | 0.006 | 21.29 | 93.23 | 84.58 | 0.002 | 6841.7 | 29966.5 | 27185.0 |
| GE Case # 7 | 10 | 160.96 | 20905 | 117 | 3.94E+05 | 1724360.7 | 1564305.5 | 0.006 | 20.73 | 90.79 | 82.36 | 0.002 | 6662.4 | 29181.5 | 26472.9 |
| GE Case # 8 | 5 | 153.46 | 20905 | 117 | 3.75E+05 | 1644013.3 | 1491416.0 | 0.006 | 19.76 | 86.56 | 78.52 | 0.002 | 6352.0 | 27821.8 | 25239.3 |
| GE Case # 9 | 6a | 97.46 | 20905 | 117 | 2.38E+05 | 1044086.7 | 947174.5 | 0.006 | 12.55 | 54.97 | 49.87 | 0.002 | 4034.1 | 17669.2 | 16029.1 |
| GE Case # 10 | 6b | 81.82 | 20905 | 117 | 2.00E+05 | 876535.7 | 795175.7 | 0.006 | 10.54 | 46.15 | 41.87 | 0.002 | 3386.7 | 14833.7 | 13456.8 |
| GE Case # 11 | 7 | 76.73 | 20905 | 117 | 1.88E+05 | 822006.7 | 745708.0 | 0.006 | 9.88 | 43.28 | 39.26 | 0.002 | 3176.0 | 13910.9 | 12619.7 |
| GE Case # 12 | 9a | 48.73 | 20905 | 117 | 1.19E+05 | 522043.3 | 473587.3 | 0.006 | 6.28 | 27.49 | 24.93 | 0.002 | 2017.0 | 8834.6 | 8014.6 |
| GE Case # 13 | 9b | 40.91 | 20905 | 117 | 1.00E+05 | 438267.9 | 397587.8 | 0.006 | 5.27 | 23.07 | 20.93 | 0.002 | 1693.3 | 7416.8 | 6728.4 |
| GE Case # 14 | 11 | 178.45 | 20905 | 117 | 4.36E+05 | 1911730.6 | 1734283.8 | 0.006 | 22.98 | 100.65 | 91.31 | 0.002 | 7386.4 | 32352.4 | 29349.4 |
| GE Case # 15 | 12 | 165.06 | 20905 | 117 | 4.04E+05 | 1768283.9 | 1604151.8 | 0.006 | 21.26 | 93.10 | 84.46 | 0.002 | 6832.1 | 29924.8 | 27147.2 |
| GE Case # 16 | 13a | 112.16 | 20905 | 117 | 2.74E+05 | 1201567.4 | 1090037.9 | 0.006 | 14.44 | 63.26 | 57.39 | 0.002 | 4642.5 | 20334.2 | 18446.8 |
| GE Case # 17 | 13b | 90.58 | 20905 | 117 | 2.22E+05 | 970381.4 | 880310.6 | 0.006 | 11.66 | 51.09 | 46.35 | 0.002 | 3749.3 | 16421.8 | 14897.6 |
| GE Case # 18 | 14 | 151.22 | 20905 | 117 | 3.70E+05 | 1620016.3 | 1469646.4 | 0.006 | 19.47 | 85.29 | 77.38 | 0.002 | 6259.3 | 27415.7 | 24870.9 |
| GE Case # 19 | NA | 158.05 | 20905 | 117 | 3.87E+05 | 1693185.9 | 1536024.4 | 0.006 | 20.35 | 89.15 | 80.87 | 0.002 | 6542.0 | 28653.9 | 25994.3 |
| GE Case # 20 | NA | 159.51 | 20905 | 117 | 3.90E+05 | 1708826.8 | 1550213.5 | 0.006 | 20.54 | 89.97 | 81.62 | 0.002 | 6602.4 | 28918.6 | 26234.4 |

**Notes:**

1. Standard Conditions for scf are based on GE's standards, namely 68F & 14.6959 psi
2. M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr)
3. Mlb/hr obtained from selected performance data for SPC spreadsheet

Comparison of Emission Factors:
Climate Registry default GHG Emission Factors Tier B: 53.06 kg CO2/MMBtu (117 lb CO2/MMBtu); 0.9 g CH4/MMBtu (0.00198 lb/MMBtu); 2.8 g N2O/MMBtu (0.00616 lb/MMBtu
Mandatory GHG Reporting Rule Emission Factors: 53.02 kg CO2/MMBtu (117 lb CO2/MMBtu);1.0 e10-3 kg/CH4/MMBtu (0.002 lb/MMBtu); 1.0 E 10-4 kg N20/MMbtu (0.0002 lb/MMBtu
AP-42 Section 3.1 Emission Factors: 110 lb CO2/MMBtu; 0.003 lb N2O/MMBtu

**Greenhouse Gas Emissions for CT/HRSG - Steady State - LHV**
**General Electric Combined Cycle Emission Estimates**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

Total Emissions $CO_2e$ = $CO_2$ emissions (MT) X GWP + $CH_4$ emissions (MT) * GWP+ $N_2O$ Emissions (MT) * GWP

| | Global Warming Potential | Highest (MT) |
|---|---|---|
| $CO_2$ | 1 | 1606387 |
| $CH_4$ | 21 | 27185.01 |
| $N_2O$ | 310 | 84.58 |

Total Emissions $CO_2e$ = 2,203,490.7 MT

**Assumptions:**
Global Warming Potentials obtained from Climate Registry General Reporting Protocol, Version 1.1 2008
MT = Metric Tons
$CO_2e$ based on SPC operating case #4

**Greenhouse Gas Emissions for CT/HRSG - Steady State - HHV**
**Combined Cycle Emission Estimates with Siemens CT's**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

| | | | | $CO_2$ | | | | $N_2O$ | | | | $CH_4$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case No. | Sevier Case No. | Total GT & HRSG Fuel Flow Mlb/hr | HHV (Btu/lb) | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr |
| Siemens Case # 1 | 1 | 160.17 | 23195 | 117 | 4.35E+05 | 1903862.3 | 1727145.8 | 0.006 | 22.89 | 100.24 | 90.93 | 0.002 | 7356.0 | 32219.2 | 29228.6 |
| Siemens Case # 2 | 2 | 137.32 | 23195 | 117 | 3.73E+05 | 1632255.5 | 1480749.6 | 0.006 | 19.62 | 85.94 | 77.96 | 0.002 | 6306.6 | 27622.8 | 25058.8 |
| Siemens Case # 3 | 3 | 83.32 | 23195 | 117 | 2.26E+05 | 990384.0 | 898456.5 | 0.006 | 11.90 | 52.14 | 47.30 | 0.002 | 3826.6 | 16760.3 | 15204.6 |
| Siemens Case # 4 | 4 | 173.47 | 23195 | 117 | 4.71E+05 | 2061952.8 | 1870562.4 | 0.006 | 24.79 | 108.56 | 98.48 | 0.002 | 7966.8 | 34894.6 | 31655.7 |
| Siemens Case # 5 | 5 | 150.51 | 23195 | 117 | 4.08E+05 | 1789038.6 | 1622980.0 | 0.006 | 21.51 | 94.19 | 85.45 | 0.002 | 6912.3 | 30276.0 | 27465.8 |
| Siemens Case # 6 | 6 | 95.26 | 23195 | 117 | 2.59E+05 | 1132308.9 | 1027208.0 | 0.006 | 13.61 | 59.62 | 54.08 | 0.002 | 4374.9 | 19162.2 | 17383.5 |
| Siemens Case # 7 | 7 | 150.66 | 23195 | 117 | 4.09E+05 | 1790821.6 | 1624597.5 | 0.006 | 21.53 | 94.29 | 85.53 | 0.002 | 6919.2 | 30306.2 | 27493.2 |
| Siemens Case # 8 | 9 | 95.26 | 23195 | 117 | 2.59E+05 | 1132308.9 | 1027208.0 | 0.006 | 13.61 | 59.62 | 54.08 | 0.002 | 4374.9 | 19162.2 | 17383.5 |
| Siemens Case # 9 | 10 | 152.80 | 23195 | 117 | 4.15E+05 | 1816258.7 | 1647673.6 | 0.006 | 21.83 | 95.63 | 86.75 | 0.002 | 7017.5 | 30736.7 | 27883.7 |
| Siemens Case # 10 | 12 | 171.67 | 23195 | 117 | 4.66E+05 | 2040557.1 | 1851152.6 | 0.006 | 24.53 | 107.43 | 97.46 | 0.002 | 7884.1 | 34532.5 | 31327.2 |
| Siemens Case # 11 | 13 | 53.69 | 23195 | 117 | 1.46E+05 | 638186.7 | 578950.2 | 0.006 | 7.67 | 33.60 | 30.48 | 0.002 | 2465.8 | 10800.1 | 9797.6 |
| Siemens Case # 12 | 14 | 74.12 | 23195 | 117 | 2.01E+05 | 881028.1 | 799251.1 | 0.006 | 10.59 | 46.39 | 42.08 | 0.002 | 3404.0 | 14909.7 | 13525.8 |

**Notes:**

M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr)
Mlb/hr obtained from selected performance data for SPC performance data spreadsheet for Siemens
Formaldehyde emissions assume 85% control through catalytic oxidation. (Ref: http://www.poweronsite.org/AppGuide/Emissions/Oxidation_Catalysts.htm

**Comparison of Emission Factors:**
Climate Registry default GHG Emission Factors: 53.06 kg CO2/MMBtu (117 lb CO2/MMBtu); 0.9 g CH4/MMBtu (0.00198 lb/MMBtu); 2.8 g N2O/MMBtu (0.00616 lb/MMBtu
Mandatory GHG Reporting Rule Emission Factors: 53.02 kg CO2/MMBtu (117 lb CO2/MMBtu);1.0 e10-3 kg/CH4/MMBtu (0.002 lb/MMBtu); 1.0 E 10-4 kg N20/MMbtu (0.0002 lb/MMBtu
AP-42 Section 3.1 Emission Factors: 110 lb CO2/MMBtu; 0.003 lb N2O/MMBtu

**Greenhouse Gas Emissions for CT/HRSG - Steady State - HHV**
**Combined Cycle Emission Estimates with Siemens CT's**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

Total Emissions $CO_2e$ = $CO_2$ emissions (MT) X GWP + $CH_4$ emissions (MT) * GWP+ $N_2O$ Emissions (MT) * GWP

| | Global Warming Potential | Highest (MT) |
|---|---|---|
| $CO_2$ | 1 | 1870562 |
| $CH_4$ | 21 | 31655.67 |
| $N_2O$ | 310 | 98.48 |

Total Emissions $CO_2e$ = 2,565,861.6 MT

**Assumptions:**
Global Warming Potentials obtained from Climate Registry General Reporting Protocol, Version 1.1 2008
MT = Metric Tons
Highest GHG emissions based on Siemens/SPC Case #4

**Greenhouse Gas Emissions for CT/HRSG - Steady State - LHV**
**Combined Cycle Emission Estimates with Siemens CT's**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

| | | | | $CO_2$ | | | | $N_2O$ | | | | $CH_4$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case No. | Sevier Case No. | Total GT & HRSG Fuel Flow Mlb/hr | LHV (Btu/lb) | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr | Emission Factor lb/MMBtu | lb/hr | tn/yr | Metric tn/yr |
| Siemens Case # 1 | 1 | 160.17 | 20892 | 117 | 3.92E+05 | 1714830.4 | 1555659.8 | 0.006 | 20.61 | 90.29 | 81.90 | 0.002 | 6625.6 | 29020.2 | 26326.6 |
| Siemens Case # 2 | 2 | 137.32 | 20892 | 117 | 3.36E+05 | 1470191.1 | 1333727.9 | 0.006 | 17.67 | 77.40 | 70.22 | 0.002 | 5680.4 | 24880.2 | 22570.8 |
| Siemens Case # 3 | 3 | 83.32 | 20892 | 117 | 2.04E+05 | 892050.1 | 809250.0 | 0.006 | 10.72 | 46.97 | 42.61 | 0.002 | 3446.6 | 15096.2 | 13695.0 |
| Siemens Case # 4 | 4 | 173.47 | 20892 | 117 | 4.24E+05 | 1857224.3 | 1684836.8 | 0.006 | 22.32 | 97.78 | 88.71 | 0.002 | 7175.8 | 31430.0 | 28512.6 |
| Siemens Case # 5 | 5 | 150.51 | 20892 | 117 | 3.68E+05 | 1611407.4 | 1461836.5 | 0.006 | 19.37 | 84.84 | 76.97 | 0.002 | 6226.0 | 27270.0 | 24738.8 |
| Siemens Case # 6 | 6 | 95.26 | 20892 | 117 | 2.33E+05 | 1019883.5 | 925217.9 | 0.006 | 12.26 | 53.70 | 48.71 | 0.002 | 3940.5 | 17259.6 | 15657.5 |
| Siemens Case # 7 | 7 | 150.66 | 20892 | 117 | 3.68E+05 | 1613013.3 | 1463293.4 | 0.006 | 19.39 | 84.92 | 77.04 | 0.002 | 6232.2 | 27297.1 | 24763.4 |
| Siemens Case # 8 | 9 | 95.26 | 20892 | 117 | 2.33E+05 | 1019883.5 | 925217.9 | 0.006 | 12.26 | 53.70 | 48.71 | 0.002 | 3940.5 | 17259.6 | 15657.5 |
| Siemens Case # 9 | 10 | 152.80 | 20892 | 117 | 3.73E+05 | 1635924.8 | 1484078.3 | 0.006 | 19.66 | 86.13 | 78.14 | 0.002 | 6320.7 | 27684.9 | 25115.2 |
| Siemens Case # 10 | 12 | 171.67 | 20892 | 117 | 4.20E+05 | 1837953.0 | 1667354.2 | 0.006 | 22.09 | 96.77 | 87.79 | 0.002 | 7101.3 | 31103.8 | 28216.8 |
| Siemens Case # 11 | 13 | 53.69 | 20892 | 117 | 1.31E+05 | 574822.0 | 521467.0 | 0.006 | 6.91 | 30.26 | 27.46 | 0.002 | 2220.9 | 9727.8 | 8824.8 |
| Siemens Case # 12 | 14 | 74.12 | 20892 | 117 | 1.81E+05 | 793552.0 | 719894.5 | 0.006 | 9.54 | 41.78 | 37.90 | 0.002 | 3066.1 | 13429.3 | 12182.8 |

**Notes:**

M = 1000 (i.e. Mlb/hr = 1000 lb/hr, MMscf/hr = 1,000,000 scf/hr)
Mlb/hr obtained from selected performance data for SPC performance data spreadsheet for Siemens

**Comparison of Emission Factors:**
Climate Registry default GHG Emission Factors Tier B: 53.06 kg CO2/MMBtu (117 lb CO2/MMBtu); 0.9 g CH4/MMBtu (0.00198 lb/MMBtu); 2.8 g N2O/MMBtu (0.00616 lb/MMBtu
Mandatory GHG Reporting Rule Emission Factors: 53.02 kg CO2/MMBtu (117 lb CO2/MMBtu);1.0 e10-3 kg/CH4/MMBtu (0.002 lb/MMBtu); 1.0 E 10-4 kg N20/MMbtu (0.0002 lb/MMBtu
AP-42 Section 3.1 Emission Factors: 110 lb CO2/MMBtu; 0.003 lb N2O/MMBtu

**Greenhouse Gas Emissions for CT/HRSG - Steady State - LHV**
**Combined Cycle Emission Estimates with Siemens CT's**

**Source:** Sevier Power Company
**Location:** Sigurd, Utah
**EPA Reference:** Climate Registry General Reporting Protocol, Version 1.1 2008

Total Emissions $CO_2e$ = $CO_2$ emissions (MT) X GWP + $CH_4$ emissions (MT) * GWP+ $N_2O$ Emissions (MT) * GWP

| | Global Warming Potential | Highest (MT) |
|---|---|---|
| $CO_2$ | 1 | 1684837 |
| $CH_4$ | 21 | 28512.62 |
| $N_2O$ | 310 | 88.71 |

Total Emissions $CO_2e$ = 2,311,100.7 MT

**Assumptions:**
Global Warming Potentials obtained from Climate Registry General Reporting Protocol, Version 1.1 2008
MT = Metric Tons
Highest GHG emissions based on Siemens/SPC Case #4

# Appendix F
# Modeling Protocol Agreement Letter

State of Utah

GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

DAQE-GN0125290003-11

June 7, 2011

Mr. Bruce Taylor
Sevier Power Company
620 S Main
Bountiful, UT 84010

Dear Bruce:

RE: Acceptance of Modeling Protocol for Proposed Sevier Power Company Plant Near Sigurd, Utah
Project Number: N012529-0003

The Utah Division of Air Quality (UDAQ) recently received a Class I and II modeling protocol from Sevier Power Company for the proposed construction of a nominal 570 megawatt (MW) natural gas dry cooled, combined-cycle electric generating facility near Sigurd, Utah. The single block power plant will consist of two combustion turbines (CT), two heat recovery steam fired generators and a steam turbine. Sigurd is located in Sevier County, Utah which is in attainment for all criteria pollutants.

The UDAQ, after reviewing the materials submitted, agrees that the proposed project would constitute a major modification to a Prevention of Significant Deterioration (PSD) source. Therefore, an emissions impact analysis consistent with the requirements of UAC307-410-3 would be required as part of a complete Notice of Intent. In doing so, the air quality analysis should address the requirements of UAC307-401, 403, 405, 406, and 410.

The UDAQ agrees with the protocol assertion that the EPA – AERMOD modeling system is the preferred model for near-field analyses, and should be used to address impacts from the proposed project in all of its near-field analyses. The UDAQ also agrees with the protocol assertion that the EPA – CALPUFF modeling system is the preferred model for far-field analyses, and should be used to address impacts from the proposed project in all of its far-field analyses. The only exception would be the use of the EPA – VISCREEN model to address the issue of plume blight.

With respect to meteorological data, the UDAQ accepts the use of the one year of onsite meteorological data collected during the period August 7, 2001 through August 6, 2002. The UDAQ also accepts the use of the three years of MM5 data outlined in the protocol for use in the far-field analyses.

All other information included in the modeling protocol, including the processing of meteorological data, will be reviewed and approved during the New Source Review process, which is the proper legal forum for review and approval of permit applications.

If you have any questions, please feel free to contact me at 801-536-4459 or by email at jjenks@utah.gov. Tom Orth will be the project lead on issues related to modeling. His contact information is 801-536-4005 or torth@utah.gov

Sincerely,

John Jenks
NSR Project Engineer

cc: Tom Orth, UDAQ
George Wilkerson, MSI

# Appendix G
# Load Screening Analyses Modeling Results

**General Electric**

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.02741 | ON 01110524: | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.75325 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82451 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51921 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 13.63241 AT | ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.29075 AT | ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.28225 AT | ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 13.12546 AT | ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 12.93970 AT | ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 12.86823 AT | ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 12.56371 AT | ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 12.51076 AT | ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.44608 AT | ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.35260 AT | ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| GEN | 1ST HIGHEST VALUE IS | 43.43715 AT | ( 414150.00, 4300100.00, 1617.61, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 42.84589 AT | ( 414250.00, 4300050.00, 1615.65, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 42.30010 AT | ( 414150.00, 4300050.00, 1616.96, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 41.97583 AT | ( 414200.00, 4300100.00, 1616.92, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 41.75660 AT | ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 40.79585 AT | ( 414100.00, 4300050.00, 1617.56, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 40.10091 AT | ( 414200.00, 4300150.00, 1616.86, 2455.62, 0.00) | DC | |

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          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                    *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                 ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93071 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29092 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59196 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20428 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78550 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59773 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38282 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23283 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX
MX W481 8785 MAIN:Data Remaining After End of Year. Number of Hours= 24

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 30.10019 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64944 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.76754c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.79005 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 2.02741 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.01511 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.00329 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.99382 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.91210 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.91130 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.87374 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.86591 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.85989 | AT ( 413000.00, 4304400.00, 1778.62, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.85344 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82450 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05108 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72770 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72328 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50487 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17369 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13122 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04331 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.93358 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89288 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX
MX W481 8785 MAIN:Data Remaining After End of Year. Number of Hours= 24

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.24436 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.77608 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82475 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51924 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
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*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 14.32102 AT | ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.66548 AT | ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.49204 AT | ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 13.37229 AT | ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 13.31221 AT | ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 13.17464 AT | ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 13.14952 AT | ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 13.14765 AT | ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.99509 AT | ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.95245 AT | ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93068 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29090 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59194 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20426 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78548 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38261 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23275 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC  ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 31.45111 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64901 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.89239c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78996 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 2.24436 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.06502 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.06025 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.04576 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 2.03109 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 2.02307 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.98374 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.93863 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.91350 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.88740 | AT ( 411800.00, 4302800.00, 1738.37, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82474 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05178 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72779 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72357 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50578 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17852 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13119 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04329 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.94469 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89315 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.41282 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.50409 | ON 01100324: | AT ( 413800.00, 4305600.00, 1778.20, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82470 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51930 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 10.89814 AT | ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 10.67860 AT | ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 10.57927 AT | ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 10.26819 AT | ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 10.26695 AT | ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 10.23995 AT | ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 10.17532 AT | ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 10.04823 AT | ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 10.02533 AT | ( 411000.00, 4301200.00, 1770.55, 2747.41, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 10.01992 AT | ( 411000.00, 4301800.00, 1788.62, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93051 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29080 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59186 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20418 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78541 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38163 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23251 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
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**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX
MX W481 8785 MAIN:Data Remaining After End of Year. Number of Hours=

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 23.26053 | ON 02072106: | AT ( 410000.00, 4300600.00, 1784.05, 2747.41, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64702 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.36720 | ON 02062508: | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78945 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 2.41282 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.13113 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.08562 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.02277 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.97193 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.91855 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.85112 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.84140 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.83640 | AT ( 412200.00, 4303400.00, 1790.28, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.82629 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                                NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82469 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05299 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72762 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72309 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50732 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.19733 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13104 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04320 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.96397 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89375 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX
MX W481 8785 MAIN:Data Remaining After End of Year. Number of Hours= 24

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.18720 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.66793 | ON 01102124: | AT ( 415000.00, 4307500.00, 1770.74, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82584 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51950 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  3 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:                    AUX
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*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 9.24041 AT | ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 9.05245 AT | ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 8.92336 AT | ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 8.87800 AT | ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 8.81030 AT | ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 8.75074 AT | ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 8.61790 AT | ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 8.59890 AT | ( 411400.00, 4301800.00, 1746.60, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 8.52450 AT | ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 8.51423 AT | ( 412200.00, 4304000.00, 1767.72, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| GEN | 1ST HIGHEST VALUE IS | 43.43715 AT | ( 414150.00, 4300100.00, 1617.61, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 42.84589 AT | ( 414250.00, 4300050.00, 1615.65, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 42.30010 AT | ( 414150.00, 4300050.00, 1616.96, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 41.97583 AT | ( 414200.00, 4300100.00, 1616.92, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 41.75660 AT | ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 40.79585 AT | ( 414100.00, 4300050.00, 1617.56, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 40.10091 AT | ( 414200.00, 4300150.00, 1616.86, 2455.62, 0.00) | DC | |

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          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                    *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                 ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                      NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93048 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29078 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59185 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20417 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78540 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38146 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23248 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of  Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 22.89410 | ON 02072106: | AT ( 410200.00, 4300600.00, 1774.53, 2747.41, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64673 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.67484 | ON 01102708: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78936 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 3.18720 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.39097 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.30793 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.30207 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 2.23293 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 2.21363 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 2.20296 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 2.17789 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 2.17714 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 2.11338 | AT ( 412200.00, 4303400.00, 1790.28, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                          *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82583 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05616 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72820 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72435 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.51130 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.22100 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13102 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04318 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       5.00098 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89535 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.41478 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.75121 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82465 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51923 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.89480 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 15.10004 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 15.04433 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 15.03285 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 14.97010 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.76831 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.74675 | AT ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.65352 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 14.60393 | AT ( 411000.00, 4301200.00, 1770.55, 2747.41, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 14.59120 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93067 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29090 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59193 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20424 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78546 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38255 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23272 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=                    24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 34.85194 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64874 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 5.35514c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78995 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS 2.41478 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 2.14242 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 2.13439 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 2.09745 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 2.08606 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 2.07716 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 2.01707 | AT ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 2.01454 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 1.93510 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 1.93484 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

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                                                                                                  NETWORK
GROUP ID                     AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82464 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05173 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72774 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72346 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50575 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17995 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13117 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04329 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.94720 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89305 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.93229 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.51478 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82355 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51910 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 14.26494 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.51533 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.50721 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 13.34851 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 13.20546 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 13.18226 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 13.11629 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 13.03193 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.87631 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.84321 | AT ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93068 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29090 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59194 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20426 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78548 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38262 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23275 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 31.03121 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64894 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.86796c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78996 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.93229 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.76288 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.76162 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.74734 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.73981 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.72711 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.71159 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.65918 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.64604 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.60452 | AT ( 411800.00, 4302800.00, 1738.37, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

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                                                                                                  NETWORK
GROUP ID                     AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82354 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04931 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72717 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72188 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50265 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.16923 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13116 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04328 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.91642 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89205 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.01911 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.62840 | ON 01102124: | AT ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82529 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51940 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 11.86952 AT | ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 11.77839 AT | ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 11.61408 AT | ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 11.25345 AT | ( 411000.00, 4301600.00, 1766.41, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 11.24704 AT | ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 11.22438 AT | ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 11.16530 AT | ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 11.12787 AT | ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 11.04565 AT | ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 10.94089 AT | ( 413000.00, 4304400.00, 1778.62, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93049 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29078 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59185 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20417 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78540 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38151 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23249 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 30.07104 | ON 02072106: | AT ( 410200.00, 4300600.00, 1774.53, 2747.41, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64681 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.70608 | ON 02062508: | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78942 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 3.01911 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.34362 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.28821 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.21442 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 2.20572 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 2.18220 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 2.13801 | AT ( 412800.00, 4303800.00, 1742.01, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 2.12362 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 2.10799 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 2.07229 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  NETWORK GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82528 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05491 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72791 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72375 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50975 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.21424 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13102 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04319 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.99702 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89463 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.58553 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.74884 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82617 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51955 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 11.65532 | AT ( 411400.00, 4301800.00, 1746.60, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 11.45914 | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 11.37411 | AT ( 411200.00, 4301800.00, 1747.53, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 11.31429 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 10.85409 | AT ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 10.78349 | AT ( 412400.00, 4303400.00, 1754.12, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 10.73355 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 10.58230 | AT ( 411000.00, 4301600.00, 1766.41, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 10.52991 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 10.42269 | AT ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93048 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29078 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59185 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20417 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78540 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38144 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23248 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 3.58553 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.50478 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.47857 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.46232 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 2.40919 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 2.39402 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 2.32044 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 2.30445 | AT ( 412200.00, 4304000.00, 1767.72, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 2.27757 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 2.26225 | AT ( 416500.00, 4308500.00, 1727.51, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



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                          *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                   ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82616 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05737 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72837 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72471 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.51282 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.23312 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13101 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04318 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       5.01544 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89593 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.19251 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.63187 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82411 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51916 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 11103 *** *** SPC *** 08/16/11
*** On-site Meteorological Data *** 18:58:12
PAGE 4

**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.69793 AT | ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 14.98229 AT | ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 14.83565 AT | ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 14.61879 AT | ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 14.58953 AT | ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.55321 AT | ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.54907 AT | ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.45437 AT | ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 14.30203 AT | ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 14.29946 AT | ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| GEN | 1ST HIGHEST VALUE IS | 43.43715 AT | ( 414150.00, 4300100.00, 1617.61, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 42.84589 AT | ( 414250.00, 4300050.00, 1615.65, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 42.30010 AT | ( 414150.00, 4300050.00, 1616.96, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 41.97583 AT | ( 414200.00, 4300100.00, 1616.92, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 41.75660 AT | ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 40.79585 AT | ( 414100.00, 4300050.00, 1617.56, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 40.10091 AT | ( 414200.00, 4300150.00, 1616.86, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 40.03417 AT | ( 414100.00, 4300000.00, 1616.80, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 38.64721 AT | ( 414250.00, 4300000.00, 1615.08, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 38.54943 AT | ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC | |

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AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                      NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93068 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29090 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59193 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20425 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78547 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38262 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23274 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
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 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           4 Warning Message(s)
 A Total of         151 Informational Message(s)

 A Total of        8784 Hours Were Processed

 A Total of           5 Calm Hours Identified

 A Total of         146 Missing Hours Identified (  1.66 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
 CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
 CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
 MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 31.73978 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64869 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.91642c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78992 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 2.19251 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.95288 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.93952 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.92708 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.92315 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.91380 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.87806 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.82322 | AT ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.80488 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.79465 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82410 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05055 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72746 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72268 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50423 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17480 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13116 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04328 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.93230 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89256 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.15036 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.76752 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82434 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51919 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.81082 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 15.53518 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 15.47585 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 15.27824 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 15.10866 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.92097 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.89556 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.72402 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 14.63404 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 14.44237 | AT ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93073 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29094 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59196 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20428 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78549 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59773 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38293 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23283 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 35.31635 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64951 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 5.59467c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.79013 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 2.15036 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.03572 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.02934 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.02247 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.97282 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.94619 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.94129 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.90756 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.90476 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.87539 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82433 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05079 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72762 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72308 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50453 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17334 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13121 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04331 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.93217 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89269 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.27228 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.52453 | ON 02012624: | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82439 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51925 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 13.31704 | AT ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.28470 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.11442 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 12.78072 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 12.74599 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 12.48879 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 12.29324 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 12.26220 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.24617 | AT ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.14379 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93053 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29081 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59187 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20419 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78541 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38174 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23253 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 29.33085 | ON 02072106: | AT ( 410000.00, 4300600.00, 1784.05, 2747.41, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64723 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.16567 | ON 02062508: | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78953 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 2.27228 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.09372 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.01636 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.00221 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.97656 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.85116 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.78306 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.77579 | AT ( 412200.00, 4303400.00, 1790.28, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.77239 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.76164 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                          *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                   ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82438 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05221 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72747 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72273 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50634 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.19269 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13105 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04321 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.95608 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89335 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.21567 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.69836 | ON 01102124: | AT ( 415000.00, 4307500.00, 1770.74, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82572 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51948 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 12.33510 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 12.12084 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 11.92199 | AT ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 11.87042 | AT ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 11.84160 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 11.75731 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 11.61256 | AT ( 411400.00, 4301800.00, 1746.60, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 11.52567 | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 11.44054 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 11.43204 | AT ( 412200.00, 4304000.00, 1767.72, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93049 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29078 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59185 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20417 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78540 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38149 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23248 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 26.92801 | ON 02072106: | AT ( 410200.00, 4300600.00, 1774.53, 2747.41, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64675 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.33411 | ON 01102708: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78938 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 3.21567 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.39791 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.33986 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.31927 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 2.24114 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 2.23593 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 2.19884 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 2.19206 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 2.18693 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 2.12037 | AT ( 412200.00, 4303400.00, 1790.28, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82571 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05599 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72814 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72422 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.51110 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.22121 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13102 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04318 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       5.00124 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89522 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.98378 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.51162 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14937 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12866 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82361 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51910 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 14.44682 AT | ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.76594 AT | ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.71998 AT | ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 13.38672 AT | ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 13.34600 AT | ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 13.32603 AT | ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 13.30217 AT | ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 13.27468 AT | ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 13.18581 AT | ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 13.10369 AT | ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93067 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29090 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59193 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20425 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78547 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38257 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23273 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX
MX W481 8785 MAIN:Data Remaining After End of Year. Number of Hours=

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 31.49228 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64883 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 4.89926c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78994 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
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*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.98378 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.77874 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.77276 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.77057 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.76284 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.74027 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.73723 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.66675 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.65203 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.64641 | AT ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14937 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14656 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08630 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08365 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



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                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82360 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04949 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72719 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72195 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50287 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17044 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13116 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04328 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.91915 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89212 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

**Siemens**

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.74425 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.39676 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82360 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51911 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.35330 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 14.59224 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 14.51502 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 14.43405 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 14.26268 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.16445 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.09923 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.06799 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 13.87643 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 13.85195 | AT ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93070 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29091 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59195 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20426 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78547 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38997 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23594 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 22.17355 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64831 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.45819c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78988 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.74425 AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.61915 AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.61605 AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.59710 AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.59650 AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.57790 AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.54820 AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.51860 AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.50044 AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.47729 AT ( 411800.00, 4302800.00, 1738.37, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82359 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04972 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72714 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72178 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50310 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17286 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13113 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04326 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.91897 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89236 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.16883 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.00845 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82188 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51890 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC  ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 12.75523 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 12.44899 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 12.32238 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 12.11502 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 12.06812 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 11.98547 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 11.81055 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 11.70101 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 11.60073 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 11.56888 | AT ( 412800.00, 4304400.00, 1796.35, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93069 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29091 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59195 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20425 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78547 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38990 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23594 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 18.46907 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64825 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.92695c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78984 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.16883 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.16074 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.15934 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.15866 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.11135 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.09174 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.08541 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.07266 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.07137 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.06780 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

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                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82187 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04605 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72625 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.71934 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.49843 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.15783 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13111 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04324 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89075 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.87580 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=          24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 1.57709 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 1.13049 | ON 02043024: | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 6.82304 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 6.51909 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  3 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 9.69194 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 9.68019 | AT ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 9.34855 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 9.28201 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 9.27756 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 8.98797 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 8.96511 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 8.87581 | AT ( 411000.00, 4301800.00, 1788.62, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 8.86570 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 8.81151 | AT ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93052 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29080 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59187 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20418 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78541 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38890 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23568 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 15.77882 | ON 02072106: | AT ( 410000.00, 4300600.00, 1784.05, 2747.41, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64698 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.15229 | ON 02043008: | AT ( 413000.00, 4304000.00, 1746.41, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78954 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS 1.57709 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 1.50642 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 1.47569 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 1.44705 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 1.43465 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 1.31493 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 1.28841 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 1.27458 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 1.26516 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 1.26239 | AT ( 412200.00, 4303400.00, 1790.28, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82303 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04935 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72677 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72069 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50259 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17936 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13103 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04320 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.91579 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89233 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.74116 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.50588 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82388 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51913 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  3 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.70197 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 15.37427 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 15.36957 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 15.14440 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 15.00318 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.84316 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.51330 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.44080 | AT ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 14.43242 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 14.31600 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                          **

                                                                                                                NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - -
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 23.07988 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64868 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.65457c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78997 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.74116 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.73807 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.73060 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.71799 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.64853 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.63248 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.61725 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.60949 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.60860 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.59433 | AT ( 413000.00, 4304400.00, 1778.62, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82387 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.05017 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72732 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72225 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50367 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17310 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13117 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04328 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.92305 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89255 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.29646 | ON 01110524: | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.10838 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82224 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51893 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 13.10949 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.09975 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.05859 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 12.89628 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 12.65538 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 12.63963 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 12.48794 | AT ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 12.38947 | AT ( 413400.00, 4305400.00, 1840.04, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.32930 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.19841 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                     *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93073 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29094 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59198 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20428 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78549 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59773 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.39017 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23602 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 19.79811 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64860 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.12830c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78993 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.29646 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.27631 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.26066 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.24004 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.20251 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.18962 | AT ( 413000.00, 4304600.00, 1779.56, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.18505 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.18197 | AT ( 413000.00, 4304400.00, 1778.62, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.17983 | AT ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.17972 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

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                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82223 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04670 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72647 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.71991 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.49925 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.15928 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13114 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04326 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89103 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.88231 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  4 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.47781 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.05445 | ON 01102724: | AT ( 416000.00, 4308500.00, 1744.53, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82268 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51903 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 10.88545 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 10.65140 | AT ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 10.20158 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 10.14456 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 10.13843 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 10.06524 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 9.94674 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 9.93846 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 9.78835 | AT ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 9.60567 | AT ( 413000.00, 4304800.00, 1788.59, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                          **

                                                                                                                NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - -
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 15.31467 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64711 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.12942 | ON 02051808: | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78957 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS 1.47781 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 1.42357 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 1.38938 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 1.30912 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 1.28881 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 1.28149 | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 1.28088 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 1.21258 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 1.19411 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 1.19188 | AT ( 411800.00, 4302800.00, 1738.37, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



```
                          *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82267 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04838 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72660 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72029 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50138 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17314 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13105 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04320 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.90424 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89183 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.36840 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.13933 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82234 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51895 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 13.93665 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.48891 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.40546 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 13.22280 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 13.10527 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 12.98413 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 12.90874 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 12.84214 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.67014 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.58880 | AT ( 412800.00, 4304400.00, 1796.35, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93070 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29091 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59195 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20426 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78547 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59772 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38996 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23594 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 20.23387 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64828 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.20887c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78987 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.36840 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.30958 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.30590 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.30555 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.26829 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.24803 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.23962 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.22180 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.22047 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.20829 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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                          *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF PM-25    IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82233 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04706 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72650 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72003 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.49973 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.16215 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13112 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04325 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89117 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.88834 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.54462 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.12064 | ON 02043024: | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82286 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51906 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  3 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 10.87125 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 10.85230 | AT ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 10.75030 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 10.73006 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 10.61319 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 10.25302 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 10.21181 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 10.18832 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 10.12873 | AT ( 413000.00, 4304800.00, 1788.59, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 10.01680 | AT ( 412800.00, 4304200.00, 1776.75, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93053 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29080 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59187 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20418 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78541 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38896 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23569 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 15.75254 | ON 02072106: | AT ( 410000.00, 4300600.00, 1784.05, 2747.41, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64697 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.14009 | ON 02062508: | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78955 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.54462 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.49461 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.46510 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.43912 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.41670 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.29782 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.28922 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.25624 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.24815 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.24698 | AT ( 412200.00, 4303400.00, 1790.28, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
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**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

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                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82285 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04901 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72669 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72049 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50218 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.17827 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13104 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04320 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.91450 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89213 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.29777 | ON 01110524: | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.11160 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82225 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51893 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  3 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 13.14753 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.13676 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.10763 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 12.95816 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 12.69305 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 12.68719 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 12.48112 | AT ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 12.38557 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.34242 | AT ( 413400.00, 4305400.00, 1840.04, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.22531 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                          **

                                                                                                                NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - -
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 20.09521 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64859 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.17618c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78993 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.29777 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.27963 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.26471 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.23854 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.21696 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.19239 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.19056 | AT ( 413000.00, 4304600.00, 1779.56, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.18540 | AT ( 413000.00, 4304400.00, 1778.62, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.18392 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.17809 | AT ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                  NETWORK
GROUP ID                     AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82224 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04673 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72647 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.71992 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.49929 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.15952 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13114 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04326 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89104 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.88281 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  4 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.39395 | ON 01110524: | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.16057 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82248 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51895 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 14.29237 AT | ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 14.24947 AT | ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 14.23945 AT | ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 14.21105 AT | ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 14.12950 AT | ( 413400.00, 4305400.00, 1840.04, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.06375 AT | ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 13.89838 AT | ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 13.69921 AT | ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 13.66301 AT | ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 13.27823 AT | ( 411200.00, 4302800.00, 1806.73, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 AT | ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 AT | ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



```
                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - -
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of  Hours=           24
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 21.36731 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64944 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.35483c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.79013 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS 1.39395 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 1.33447 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 1.33131 | AT ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 1.30603 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 1.29982 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 1.28580 | AT ( 412000.00, 4304400.00, 1857.96, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 1.23213 | AT ( 411800.00, 4304400.00, 1849.38, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 1.22718 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 1.22356 | AT ( 411800.00, 4303000.00, 1757.53, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 1.21092 | AT ( 413000.00, 4304600.00, 1779.56, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

```
GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82247 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04694 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72663 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.72032 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.49954 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.15785 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13120 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04330 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89117 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.88203 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=         24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 1.45381 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 1.02135 | ON 01102724: | AT ( 416000.00, 4308500.00, 1744.53, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 6.82237 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH 2ND HIGH VALUE IS | 6.51898 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
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*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 11.58946 | AT ( 413600.00, 4305200.00, 1785.08, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 11.25271 | AT ( 413400.00, 4305000.00, 1785.81, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 11.24181 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 11.05137 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 10.72409 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 10.59303 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 10.56902 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 10.50977 | AT ( 411000.00, 4301200.00, 1770.55, 2747.41, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 10.41822 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 10.24934 | AT ( 410600.00, 4301800.00, 1800.38, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93058 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29084 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59189 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20420 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78543 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59771 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.38926 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23576 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=          24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 17.36123 | ON 01122302: | AT ( 411200.00, 4301600.00, 1734.38, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64744 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 2.52603c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78965 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.45381 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.31619 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.30509 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.23662 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.21422 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.19953 | AT ( 413000.00, 4304200.00, 1756.53, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.19133 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.16987 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.15541 | AT ( 411800.00, 4302800.00, 1738.37, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.15171 | AT ( 412800.00, 4304000.00, 1756.77, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82236 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04747 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72646 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.71992 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.50024 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.16713 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13106 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04322 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89375 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.89139 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  4 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 1.30079 | ON 01110524: | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.11945 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 6.82229 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.51894 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 13.39630 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 13.20696 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 13.11995 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 13.11786 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 12.81772 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 12.77709 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 12.49844 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 12.49740 | AT ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 12.38975 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 12.22222 | AT ( 413400.00, 4305400.00, 1840.04, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.54776 | AT ( 414500.00, 4300450.00, 1614.95, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.24006 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
          3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
          7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
          8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
         10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                      *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                  ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93072 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS     111.09623 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS     105.29093 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS     103.39358 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS     101.59197 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS     100.20427 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS      97.78549 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS      97.59773 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS      96.39010 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS      94.23600 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  4 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 19.69480 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 330.64848 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.11593c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09623 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.78991 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 1.30079 | AT ( 412200.00, 4304400.00, 1843.24, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 1.28766 | AT ( 412400.00, 4304400.00, 1833.17, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.27598 | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.24962 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.23393 | AT ( 413200.00, 4304600.00, 1761.00, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.21040 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.19222 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.19186 | AT ( 413000.00, 4304400.00, 1778.62, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.19096 | AT ( 413000.00, 4304600.00, 1779.56, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.18462 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



**MODELOPTs:  RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM  1ST-HIGHEST 24-HR RESULTS AVERAGED OVER  1 YEARS ***

** CONC OF PM-25  IN MICROGRAMS/M**3  **

```
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  NETWORK GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.82228 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.04683 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.72648 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.71996 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.49943 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.16020 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.13113 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.04326 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       4.89109 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.88436 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  4 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

# Appendix H
# Near-Field Analysis AERMOD Results

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 35.31635 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 7.16255 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 11.66271 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 33.33082 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 209.60303 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 237.30003 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 330.64951 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | | | | | OF TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 5.59467c | ON 02012508: AT ( | 412000.00, | 4302800.00, | 1743.05, | 2753.55, | 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 2.09620 | ON 01092808: AT ( | 414400.00, | 4300450.00, | 1616.55, | 2455.62, | 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 2.85175 | ON 02012808: AT ( | 414426.40, | 4300311.40, | 1615.33, | 2455.62, | 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 9.85495 | ON 02012916: AT ( | 414228.70, | 4300312.40, | 1616.79, | 2455.62, | 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 63.69363 | ON 02071308: AT ( | 414316.40, | 4300428.20, | 1618.03, | 2455.62, | 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 72.00170 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 82.79013 | ON 01092808: AT ( | 414404.00, | 4300428.20, | 1616.27, | 2455.62, | 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 118 PPARM:Input Parameter May Be Out-of-Range for Parameter VS
CN W305 17 WAKFLG:Stack height > or = EPA formula height for SRCID: STK2
CN W305 38 WAKFLG:Stack height > or = EPA formula height for SRCID: AUX

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 0.29549 AT | ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.26615 AT | ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.25968 AT | ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.24647 AT | ( 415000.00, 4307500.00, 1770.74, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.24515 AT | ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.22429 AT | ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.22092 AT | ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.21509 AT | ( 416000.00, 4308500.00, 1744.53, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.21255 AT | ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.20585 AT | ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 2.34034 AT | ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.15021 AT | ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.88373 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.85768 AT | ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.82982 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.40672 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.32223 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.29247 AT | ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.27690 AT | ( 414500.00, 4300550.00, 1615.81, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.21033 AT | ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       1.75751 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.73418 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.60553 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.59874 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.55776 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.55305 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.49857 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.48226 AT (  414200.00,  4300050.00,  1616.33,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.37887 AT (  414150.00,  4300000.00,  1616.30,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.37164 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       0.45090 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.44529 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.43893 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.43784 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.42611 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.42396 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.41504 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.41110 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.38758 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.38469 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
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                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   1 YEARS ***

                                    ** CONC OF NO2      IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.18529 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       3.74772 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       3.44854 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.31077 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       2.98310 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       2.83198 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.61109 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.45427 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.37276 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.37147 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       3.19297 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       3.05205 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       2.93561 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       2.58701 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       2.20936 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       2.19734 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.03435 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.91033 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.73557 AT (  414500.00,  4300500.00,  1615.41,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.59082 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       7.75294 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.09153 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       6.89514 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       6.41846 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.32188 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.02766 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.86790 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.71331 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       5.52343 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       5.49415 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=
```

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.81082 AT | ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 15.53518 AT | ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 15.47585 AT | ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 15.27824 AT | ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 15.10866 AT | ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.92097 AT | ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.89556 AT | ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.72402 AT | ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 14.63404 AT | ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 14.44237 AT | ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.82135 AT | ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.58604 AT | ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28918 AT | ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18394 AT | ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30586 AT | ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56170 AT | ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.54430 AT | ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.19843 AT | ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92786 AT | ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.60115 AT | ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| GEN | 1ST HIGHEST VALUE IS | 43.43715 AT | ( 414150.00, 4300100.00, 1617.61, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 42.84589 AT | ( 414250.00, 4300050.00, 1615.65, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 42.30010 AT | ( 414150.00, 4300050.00, 1616.96, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 41.97583 AT | ( 414200.00, 4300100.00, 1616.92, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 41.75660 AT | ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 40.79585 AT | ( 414100.00, 4300050.00, 1617.56, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 40.10091 AT | ( 414200.00, 4300150.00, 1616.86, 2455.62, 0.00) | DC | |

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         8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
         9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
        10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX      1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
         2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
         3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
         4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
         5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
         6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
         7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
         8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
         9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
        10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
```



**MODELOPTs: RegDFAULT CONC  ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

```
                                                                                                  NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1  1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
         2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
         3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
         4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
         5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
         6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
         7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
         8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
        10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2  1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
         2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
         3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
         4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
         5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
         6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
         7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
         8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
         9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
        10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL      1ST HIGHEST VALUE IS     119.93073 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
         2ND HIGHEST VALUE IS     111.09034 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
         3RD HIGHEST VALUE IS     105.29094 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
         4TH HIGHEST VALUE IS     103.38864 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
         5TH HIGHEST VALUE IS     101.59093 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
         6TH HIGHEST VALUE IS     100.19324 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
         7TH HIGHEST VALUE IS      97.78348 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
         8TH HIGHEST VALUE IS      97.59232 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
         9TH HIGHEST VALUE IS      96.37748 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
        10TH HIGHEST VALUE IS      94.22437 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
```

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 5 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
CN W415    8785 MAXDCO:MAXDCONT THRESH not reached within range of ranks       GRP ALL
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 3.58553 | ON 01102724: | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.74884 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.14938 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.12865 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.07082m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06119 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 2.01221 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 1.90469 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 4.13201 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 3.96987 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 4.74545 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 4.70656m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| HROAD | HIGH | 1ST HIGH VALUE IS | 0.64336 | ON 01120424: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.63462 | ON 01121224: | AT ( 414228.90, 4300140.50, 1616.87, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 7.08481 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.77189 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

```
*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

*** AERMOD - VERSION  11103 ***   *** SPC                                                                    ***        08/18/11
                                  *** 2002 On-site Meteorological Data                                       ***        08:44:58
                                                                                                                        PAGE   5
**MODELOPTs:  RegDFAULT CONC                                                  ELEV


*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            3 Warning Message(s)
A Total of          151 Informational Message(s)

A Total of         8784 Hours Were Processed

A Total of            5 Calm Hours Identified

A Total of          146 Missing Hours Identified (  1.66 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 0.28463 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.25637 | AT ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.25013 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.23741 | AT ( 415000.00, 4307500.00, 1770.74, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.23614 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.21605 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.21280 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.20718 | AT ( 416000.00, 4308500.00, 1744.53, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.20474 | AT ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.19829 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.03106 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.02854 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.02500 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.02465 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.02428 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.01867 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.01755 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.01715 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.01695 | AT ( 414500.00, 4300550.00, 1615.81, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.01606 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| GEN | 1ST HIGHEST VALUE IS | 0.01325 | AT ( 414200.00, 4300100.00, 1616.92, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.01307 | AT ( 414228.90, 4300140.50, 1616.87, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.01210 | AT ( 414150.00, 4300050.00, 1616.96, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.01205 | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.01174 | AT ( 414249.80, 4300140.50, 1616.66, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.01171 | AT ( 414200.00, 4300150.00, 1616.86, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.01130 | AT ( 414150.00, 4300100.00, 1617.61, 2455.62, 0.00) | DC | |

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          8TH HIGHEST VALUE IS       0.01117 AT (  414200.00,  4300050.00,  1616.33,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.01039 AT (  414150.00,  4300000.00,  1616.30,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.01034 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       0.26509 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.26179 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.25805 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.25741 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.25051 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.24925 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.24401 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.24169 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.22786 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.22616 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
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                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   1 YEARS ***

                                    ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       1.16442 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.04268 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.95944 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.92112 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.82995 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.78791 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.72645 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.68282 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.66014 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.65979 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       0.88834 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.84914 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.81674 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.71975 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.61468 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.61134 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.56599 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.53149 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.48287 AT (  414500.00,  4300500.00,  1615.41,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.44260 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC

HROAD     1ST HIGHEST VALUE IS       0.02641 AT (  414426.80,  4300171.10,  1614.35,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.02590 AT (  414444.60,  4300171.10,  1614.04,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.02495 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.02474 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.02469 AT (  414426.70,  4300217.90,  1614.76,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.02455 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.02434 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.02426 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.02408 AT (  414426.40,  4300288.00,  1615.21,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.02397 AT (  414426.60,  4300241.20,  1614.89,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       1.80232 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.59133 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.56598 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.53971 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.49657 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.36022 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.33207 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.32148 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.31321 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.28697 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

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SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
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*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 1ST-HIGHEST 24-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM-25 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 3.58553 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.50478 | AT ( 412600.00, 4304000.00, 1777.63, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 2.47857 | AT ( 412400.00, 4304000.00, 1770.28, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 2.46232 | AT ( 412200.00, 4304200.00, 1791.61, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 2.40919 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 2.39402 | AT ( 414500.00, 4306500.00, 1745.79, 2753.55, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 2.32044 | AT ( 412000.00, 4304200.00, 1789.53, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 2.30445 | AT ( 412200.00, 4304000.00, 1767.72, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 2.27757 | AT ( 412600.00, 4304200.00, 1786.98, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 2.26225 | AT ( 416500.00, 4308500.00, 1727.51, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 0.14938 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.14725 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.14657 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.12094 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.11188 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.10433 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.08675 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.08629 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.08366 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.08298 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       0.05863 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.05843 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.05750 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.05610 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05584 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05493 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05295 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04971 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.04815 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       2.01221 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.89625 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.77346 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.76792 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.71852 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.70383 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.68576 AT (  414150.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.67186 AT (  414200.00,  4300250.00,  1616.63,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.56155 AT (  414100.00,  4300150.00,  1617.61,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.51127 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
```



```
                         *** THE SUMMARY OF MAXIMUM   1ST-HIGHEST 24-HR RESULTS AVERAGED OVER   1 YEARS ***

                                 ** CONC OF PM-25    IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.13201 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.10919 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.00719 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.74212 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.57151 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.40945 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       3.06870 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.95413 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.60242 AT (  414350.00,  4300500.00,  1618.02,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.49917 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       4.74545 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       4.74353 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       4.08754 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.48991 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       3.42276 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       3.38440 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.96164 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.93699 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.59363 AT (  414450.00,  4300550.00,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.41637 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC

HROAD     1ST HIGHEST VALUE IS       0.06434 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.06418 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.06058 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.06014 AT (  414250.70,  4300428.20,  1618.63,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.05989 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.05884 AT (  414312.40,  4300140.50,  1615.88,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.05744 AT (  414291.60,  4300140.50,  1616.14,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.05714 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.05672 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.05630 AT (  414333.30,  4300140.50,  1615.55,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       6.85203 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       6.09366 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       5.75574 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       5.75195 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       5.55284 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       5.27092 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.16317 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.08283 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       5.04840 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       4.93318 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

# Appendix I
# Full Impact Analysis Source Information

## Linda Conger

**From:** Tom Orth <torth@utah.gov>
**Sent:** Monday, August 08, 2011 12:12 PM
**To:** Scott Adamson
**Subject:** Sevier Power - Contributing Sources for NO2 and PM10

Redmond Minerals

PM10 - 11.65 lb/hr - UTME 424750, UTMN 4322470, 100 m x 100 m area source
NO2 - 3.65 lb/hr - UTME 424750, UTMN 4322470, 30' stack, 475 K, 15 m/s, 0
.5 m diameter.

Western Clay

PM10 - 6.85 lb/hr - UTME 420100, UTMN 4308300, 100 m x 100 m area source
NO2 - 4.45 lb/hr - UTME 420100, UTMN 4308300, 30' stack, 475 K, 15 m/s, 0
.5 m diameter.

Conversation T. Orth Scott Adamson MSI Sept 6. 2011 8:30 AM
Western Clay - Change source dimensions to 250m x 250m.

## Point Sources

| Source Description | Easting (X) | Northing (Y) | Base Elevation | Stack Height | Temperature | Exit Velocity | Stack Diameter | NO2 | CO | PM-25 | PM-10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (m) | (m) | (m) | (m) | (K) | (m/s) | (m) | (g/s) | (g/s) | (g/s) | (g/s) |
| USGC1BH | 416449.97 | 4299283 | 1592.33 | 3.6576 | 293 | 4.723 | 0.7254 | | | | 0.0446 |
| USGB4 | 416295.34 | 4299460 | 1591.33 | 11.1252 | 449.82 | 12.2177 | 0.9623 | | | | 0.084419 |
| USGB5 | 416340.41 | 4299406 | 1591.03 | 17.3736 | 377.59 | 3.088 | 0.9671 | | | | 0.084419 |
| USGB6 | 416344.91 | 4299401 | 1591.03 | 18.5928 | 366.48 | 14.868 | 0.7154 | | | | 0.084419 |
| USGB1 | 416406.22 | 4299367.5 | 1591.09 | 9.91 | 293.15 | 11.9991 | 0.3712 | | | | 0.0276 |
| USGB2 | 416403.28 | 4299370.5 | 1591.06 | 17.6784 | 372.04 | 0.001 | 34.2595 | | | | 0.033742 |
| USGB9 | 416383.72 | 4299358.5 | 1591.31 | 7.16 | 366.48 | 12.08 | 0.2865 | | | | 0.018547 |
| USGB7 | 416403.34 | 4299398.5 | 1590.93 | 8.99 | 293.15 | 16.113 | 0.3923 | | | | 0.044603 |
| USGM1 | 416417.09 | 4299317 | 1591.84 | 16.764 | 293.15 | 13.742 | 0.381 | | | | 0.035821 |
| USGM2 | 416435.28 | 4299325.5 | 1591.68 | 11.7348 | 338.71 | 11.3456 | 0.4871 | | | | 0.0484 |
| USGM3 | 416417.91 | 4299357.5 | 1591.08 | 11.5824 | 390 | 0.001 | 33.9913 | | | | 0.0123 |
| USGM5 | 416413.75 | 4299360.5 | 1591.04 | 17.3736 | 377.59 | 5.3707 | 0.3862 | | | | 0.0118 |
| USGM7 | 416428.34 | 4299343 | 1591.33 | 12.2682 | 355.37 | 8.821 | 0.3048 | | | | 0.014717 |
| USGR1 | 416415 | 4299354 | 1591.14 | 9.52 | 293.15 | 12.0481 | 0.2667 | | | | 0.0169 |
| GPDRY1 | 416323.81 | 4298570 | 1598.05 | 9.09 | 427.59 | 16.1544 | 0.732 | | | | 0.0252 |
| GPDRY2 | 416323.81 | 4298580 | 1597.95 | 8.85 | 483.15 | 15.8496 | 0.903 | | | | 0.060479 |
| GPDRY3 | 416323.81 | 4298604 | 1597.8 | 8.69 | 438.71 | 13.716 | 0.891 | | | | 0.065519 |
| GPDRY4 | 416323.81 | 4298647 | 1597.21 | 8.77 | 366.48 | 9.144 | 0.891 | | | | 0.050399 |
| GPDRY5 | 416323.81 | 4298659 | 1597.17 | 9.66 | 316.48 | 3.6576 | 1.22 | | | | 0.050399 |
| GPRD1 | 416363.81 | 4298764 | 1597.34 | 20.44 | 338.71 | 27.07 | 0.406 | | | | 0.110878 |
| GPRD2 | 416372.81 | 4298764 | 1597.55 | 20.44 | 338.71 | 23.7744 | 0.405 | | | | 0.097018 |
| GPKD1 | 416361.81 | 4298757 | 1597.37 | 20.44 | 422.04 | 16.68 | 0.458 | | | | 0.069299 |
| GPKD2 | 416367.81 | 4298757 | 1597.54 | 20.44 | 422.04 | 14.38 | 0.458 | | | | 0.071819 |
| GPKD3 | 416373.81 | 4298757 | 1597.66 | 20.44 | 422.04 | 17.26 | 0.458 | | | | 0.065519 |
| GPKE1 | 416361.81 | 4298753 | 1597.39 | 20.44 | 533.15 | 3.73 | 0.763 | | | | 0.01512 |
| GPKE2 | 416367.81 | 4298753 | 1597.55 | 20.44 | 533.15 | 3.73 | 0.763 | | | | 0.01512 |
| GPKE3 | 416373.81 | 4298753 | 1597.69 | 20.44 | 533.15 | 3.73 | 0.763 | | | | 0.01512 |
| GPBDBVD | 416330.41 | 4298723.5 | 1596.89 | 23.79 | 294.26 | 23.74 | 0.397 | | | | 0.066779 |
| GPMBVD | 416357.81 | 4298736 | 1597.44 | 17.39 | 294.26 | 18.5318 | 0.488 | | | | 0.079379 |
| GPAD | 416371.81 | 4298736 | 1597.74 | 14.34 | 399.82 | 14.2342 | 0.458 | | | | 0.157497 |

| Source Description | Easting (X) | Northing (Y) | Base Elevation | Stack Height | Temperature | Exit Velocity | Stack Diameter | NO2 | CO | PM-25 | PM-10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (m) | (m) | (m) | (m) | (K) | (m/s) | (m) | (g/s) | (g/s) | (g/s) | (g/s) |
| GPAB | 416377.81 | 4298690 | 1598.07 | 12.2 | 422 | 9.71 | 0.305 | | | | 0.00504 |
| GPCD | 416394.19 | 4298748.5 | 1598.15 | 15.545 | 294 | 13.8761 | 0.518 | | | | 0.066779 |
| GPEDT | 416377.81 | 4298693 | 1598.07 | 11.29 | 294 | 23.0375 | 0.488 | | | | 0.098278 |
| MBVD2 | 416363.41 | 4298736 | 1597.55 | 21.336 | 313.71 | 27.3406 | 0.762 | | | | 0.267116 |

## Area Sources

| Source Description | Easting (X) | Northing (Y) | Base Elevation | Release Height | Easterly Length | Northerly Length | Angle from | Vertical Dimension | PM-10 |
|---|---|---|---|---|---|---|---|---|---|
| | (m) | (m) | (m) | (m) | (m) | (m) | | (m) | (g/s) |
| USGWPILE | 416540.72 | 4299355 | 1590.93 | 15.24 | 94.29 | 94.29 | 0 | 0 | 0.039074 |
| USGPIL3A | 416354.66 | 4299078.5 | 1591.13 | 3.05 | 4.5 | 4.5 | 300 | 0 | 0.002349 |
| USGPIL3B | 416357.19 | 4299080.5 | 1591.13 | 3.05 | 4.5 | 4.5 | 30 | 0 | 0.002349 |
| USGPILE4 | 416394.78 | 4299122 | 1591.13 | 3.05 | 2.45 | 2.45 | 0 | 0.00E+00 | 7.00E-04 |
| USGPILE5 | 416384.91 | 4299110 | 1591.13 | 3.05 | 3.42 | 3.42 | 0 | 0 | 0.00136 |
| USGPILE6 | 416376.62 | 4299097 | 1591.13 | 3.05 | 3.75 | 3.75 | 0 | 0 | 0.00163 |
| USGPILE7 | 416373.03 | 4299081.5 | 1591.13 | 3.05 | 4.6 | 4.6 | 0 | 0 | 0.002461 |
| USGPILE8 | 416432.84 | 4299070.5 | 1591.44 | 3.05 | 3.23 | 3.23 | 0 | 0 | 0.00121 |
| USGPILE9 | 416438.09 | 4299083 | 1591.42 | 3.05 | 3.66 | 3.66 | 0 | 0 | 0.00155 |
| USGPIL10 | 416439.59 | 4299100 | 1591.31 | 3.05 | 3.43 | 3.43 | 0 | 0 | 0.001369 |
| USGPILE1 | 416479.47 | 4299276 | 1592.33 | 13.72 | 11.28 | 11.28 | 0 | 0 | 0.013411 |
| USGPILE2 | 416447.25 | 4299241.5 | 1592.33 | 13.72 | 5.95 | 5.95 | 0 | 0 | 0.003721 |
| USGLDBLD | 416417.44 | 4299066.5 | 1591.13 | 0.5 | 45.72 | 30.48 | 290 | 0.00E+00 | 7.00E-04 |
| USGLOADR | 416474.66 | 4299236.5 | 1592.33 | 0.5 | 30.48 | 22.86 | 290 | 0.00E+00 | 5.00E-04 |
| Redmond Minerals PM10 | 424750 | 4322470 | 1561.65 | 0 | 100 | 100 | | | 1.467875 |
| Western Clay PM10 | 420100 | 4308300 | 1569.28 | 0 | 100 | 100 | | | 0.863085 |

## Volume Sources

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| HROAD_0001 | 414457 | 4300145 | 1613.6 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0002 | 414446.85 | 4300145.4 | 1613.83 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0003 | 414436.85 | 4300145.4 | 1614.03 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0004 | 414426.85 | 4300145.4 | 1614.15 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0005 | 414416.85 | 4300145.4 | 1614.33 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0006 | 414416.66 | 4300155.2 | 1614.44 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0007 | 414416.64 | 4300165.2 | 1614.53 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0008 | 414416.63 | 4300175.2 | 1614.59 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0009 | 414416.61 | 4300185.2 | 1614.64 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0010 | 414416.59 | 4300195.2 | 1614.73 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0011 | 414416.58 | 4300205.2 | 1614.83 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0012 | 414416.56 | 4300215.2 | 1614.91 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0013 | 414416.55 | 4300225.2 | 1614.96 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0014 | 414416.53 | 4300235.2 | 1615.04 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0015 | 414416.52 | 4300245.2 | 1615.11 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0016 | 414416.5 | 4300255.2 | 1615.16 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0017 | 414416.49 | 4300265.2 | 1615.23 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0018 | 414416.47 | 4300275.2 | 1615.31 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0019 | 414416.46 | 4300285.2 | 1615.36 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0020 | 414416.44 | 4300295.2 | 1615.41 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0021 | 414416.43 | 4300305.2 | 1615.46 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0022 | 414416.41 | 4300315.2 | 1615.54 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0023 | 414416.4 | 4300325.2 | 1615.6 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0024 | 414416.38 | 4300335.2 | 1615.65 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0025 | 414416.37 | 4300345.2 | 1615.72 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0026 | 414416.35 | 4300355.2 | 1615.76 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0027 | 414416.34 | 4300365.2 | 1615.84 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0028 | 414416.32 | 4300375.2 | 1615.92 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0029 | 414415.37 | 4300384.3 | 1615.95 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0030 | 414405.37 | 4300384.3 | 1616.16 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0031 | 414395.37 | 4300384.3 | 1616.36 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0032 | 414385.37 | 4300384.3 | 1616.56 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0033 | 414375.37 | 4300384.3 | 1616.75 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0034 | 414365.37 | 4300384.3 | 1616.95 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0035 | 414355.37 | 4300384.3 | 1617.15 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0036 | 414345.37 | 4300384.3 | 1617.33 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0037 | 414335.37 | 4300384.3 | 1617.45 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0038 | 414325.37 | 4300384.3 | 1617.64 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| HROAD_0039 | 414315.37 | 4300384.3 | 1617.85 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0040 | 414305.37 | 4300384.3 | 1618.05 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0041 | 414295.37 | 4300384.3 | 1618.22 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0042 | 414285.37 | 4300384.3 | 1618.25 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0043 | 414275.37 | 4300384.3 | 1618.32 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0044 | 414265.37 | 4300384.3 | 1618.29 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0045 | 414255.37 | 4300384.3 | 1618.11 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0046 | 414245.37 | 4300384.3 | 1617.89 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0047 | 414239.92 | 4300379.7 | 1617.69 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0048 | 414239.92 | 4300369.7 | 1617.59 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0049 | 414239.92 | 4300359.7 | 1617.49 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0050 | 414239.92 | 4300349.7 | 1617.4 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0051 | 414239.92 | 4300339.7 | 1617.31 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0052 | 414239.92 | 4300329.7 | 1617.2 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0053 | 414239.92 | 4300319.7 | 1617.16 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0054 | 414239.92 | 4300309.7 | 1617.12 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0055 | 414239.92 | 4300299.7 | 1617.02 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0056 | 414239.92 | 4300289.7 | 1617.01 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0057 | 414239.92 | 4300279.7 | 1616.95 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0058 | 414239.92 | 4300269.7 | 1616.92 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0059 | 414239.92 | 4300259.7 | 1616.94 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0060 | 414239.92 | 4300249.7 | 1617.01 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0061 | 414239.92 | 4300239.7 | 1616.99 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0062 | 414239.92 | 4300229.7 | 1616.99 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0063 | 414239.92 | 4300219.7 | 1617.01 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0064 | 414239.92 | 4300209.7 | 1616.97 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0065 | 414239.92 | 4300199.7 | 1616.95 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0066 | 414239.92 | 4300189.7 | 1616.95 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0067 | 414239.92 | 4300179.7 | 1616.95 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0068 | 414239.92 | 4300169.7 | 1616.91 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0069 | 414242.99 | 4300160.3 | 1616.88 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0070 | 414249.14 | 4300152.8 | 1616.77 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0071 | 414257.33 | 4300147.3 | 1616.65 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0072 | 414267 | 4300145 | 1616.54 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0073 | 414277 | 4300145 | 1616.42 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0074 | 414287 | 4300145.1 | 1616.24 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0075 | 414297 | 4300145.1 | 1616.13 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0076 | 414307 | 4300145.1 | 1616.02 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0077 | 414317 | 4300145.1 | 1615.84 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| HROAD_0078 | 414327 | 4300145.1 | 1615.72 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0079 | 414337 | 4300145.2 | 1615.55 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0080 | 414347 | 4300145.2 | 1615.42 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0081 | 414357 | 4300145.2 | 1615.25 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0082 | 414367 | 4300145.2 | 1615.13 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0083 | 414377 | 4300145.2 | 1615 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0084 | 414387 | 4300145.2 | 1614.83 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0085 | 414397 | 4300145.3 | 1614.64 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0086 | 414407 | 4300145.3 | 1614.52 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0087 | 414417 | 4300145.3 | 1614.33 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0088 | 414427 | 4300145.3 | 1614.15 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0089 | 414437 | 4300145.3 | 1614.03 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0090 | 414447 | 4300145.4 | 1613.82 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| HROAD_0091 | 414457 | 4300145.4 | 1613.62 | 4 | 6.51 | 1.86 | | | 3.71E-06 | 3.71E-05 |
| USGRD1 | 416060.22 | 4299505.5 | 1592.00 | 0.5 | 5.67 | 0.35 | | | | 0.00166 |
| USGRD2 | 416086.75 | 4299505.5 | 1592.00 | 0.5 | 5.67 | 0.35 | | | | 0.00166 |
| USGRD3 | 416115.41 | 4299504 | 1592.00 | 0.5 | 5.67 | 0.35 | | | | 0.00166 |
| USGRD4 | 416137.69 | 4299501.5 | 1592.00 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD5 | 416161.69 | 4299498 | 1591.90 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD6 | 416183.03 | 4299493.5 | 1591.12 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD7 | 416204.97 | 4299488.5 | 1591.00 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD8 | 416225.47 | 4299479 | 1591.00 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD9 | 416240.53 | 4299469 | 1591.00 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD10 | 416255.59 | 4299456 | 1591.00 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD11 | 416268.91 | 4299443.5 | 1591.00 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD12 | 416283.94 | 4299429 | 1590.92 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD13 | 416297.19 | 4299413 | 1590.34 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD14 | 416310.47 | 4299398 | 1590.01 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD15 | 416326.72 | 4299379 | 1590.20 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD16 | 416343.03 | 4299361 | 1590.17 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGRD17 | 416355.19 | 4299344.5 | 1590.76 | 0.5 | 5.67 | 0.35 | | | | 7.65E-05 |
| USGWR1 | 416146.91 | 4299507.5 | 1592.00 | 1.52 | 5.67 | 2.23 | | | | 0.00158 |
| USGWR2 | 416173.56 | 4299509.5 | 1591.84 | 1.52 | 5.67 | 2.23 | | | | 0.00158 |
| USGWR3 | 416202.47 | 4299510.5 | 1591.34 | 1.52 | 5.67 | 2.23 | | | | 0.00158 |
| USGWR4 | 416231.94 | 4299507.5 | 1591.00 | 1.52 | 5.67 | 2.23 | | | | 0.00158 |
| USGWR5 | 416261.41 | 4299506.5 | 1591.00 | 1.52 | 5.67 | 2.23 | | | | 0.00158 |
| USGWR6 | 416281.28 | 4299504.5 | 1591.00 | 1.52 | 5.67 | 2.23 | | | | 0.00112 |
| USGWR7 | 416301.91 | 4299499 | 1591.00 | 1.52 | 5.67 | 2.23 | | | | 0.00112 |
| USGWR8 | 416318.94 | 4299488.5 | 1590.75 | 1.52 | 5.67 | 2.23 | | | | 0.00112 |

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| USGRM1 | 416298.84 | 4299509.5 | 1591.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM2 | 416335.22 | 4299510 | 1590.80 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM3 | 416366.06 | 4299507.5 | 1589.28 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM4 | 416393 | 4299498 | 1589.56 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM5 | 416412.84 | 4299479.5 | 1590.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM6 | 416426.31 | 4299459 | 1590.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM7 | 416430.56 | 4299433.5 | 1590.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM8 | 416429.03 | 4299411 | 1590.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM9 | 416427.09 | 4299389.5 | 1590.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGRM10 | 416422.12 | 4299369 | 1590.00 | 1.52 | 5.67 | 2.23 | | | | 4.67E-04 |
| USGQR1 | 416595.69 | 4299170 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR2 | 416622.69 | 4299190 | 1591.19 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR3 | 416648.59 | 4299211.5 | 1591.76 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR4 | 416668.69 | 4299235.5 | 1592.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR5 | 416681.12 | 4299264 | 1592.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR6 | 416700.69 | 4299288.5 | 1592.17 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR7 | 416724.53 | 4299309.5 | 1592.98 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR8 | 416753.62 | 4299327 | 1592.90 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR9 | 416781.94 | 4299338.5 | 1593.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR10 | 416810.53 | 4299351 | 1593.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR11 | 416840.69 | 4299362.5 | 1592.22 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR12 | 416872.44 | 4299371.5 | 1591.99 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR13 | 416901.56 | 4299382 | 1591.12 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR14 | 416930.12 | 4299397.5 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR15 | 416956.06 | 4299414 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR16 | 416984.62 | 4299430.5 | 1592.38 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR17 | 417011.62 | 4299449 | 1595.63 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR18 | 417038.09 | 4299471 | 1598.00 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGQR19 | 417063.5 | 4299492 | 1597.93 | 1.52 | 5.67 | 0.99 | | | | 4.20E-04 |
| USGBHFUG | 416444.03 | 4299262 | 1591.00 | 8.23 | 3.81 | 3.81 | | | | 8.40E-04 |
| USGBA1 | 416561.69 | 4299170 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 2.30E-04 |
| USGBA2 | 416528.59 | 4299164.5 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 2.30E-04 |
| USGBA3 | 416495.09 | 4299157.5 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 2.30E-04 |
| USGBA4 | 416464.19 | 4299147.5 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 2.30E-04 |
| USGBA5 | 416440.31 | 4299126 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 2.30E-04 |
| USGBA6 | 416415.91 | 4299101.5 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 2.30E-04 |
| USGB2C1 | 416416.16 | 4299134 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.75E-04 |
| USGB2C2 | 416420.5 | 4299167 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.75E-04 |
| USGB2C3 | 416425.53 | 4299203 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.75E-04 |

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| USGB2C4 | 416448.44 | 4299224 | 1591.00 | 1.52 | 5.67 | 0.99 | | | | 4.75E-04 |
| GPCR | 416390.41 | 4298753 | 1596.00 | 3 | 2.33 | 8.37 | | | | 0.0145 |
| GPL1_2 | 416252 | 4298943.5 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_3 | 416262.41 | 4298942.5 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_4 | 416272.41 | 4298941 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_5 | 416282.41 | 4298939 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_6 | 416292.41 | 4298937.5 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_7 | 416302.41 | 4298932.5 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_8 | 416306.19 | 4298926.5 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL1_9 | 416304 | 4298919 | 1591.06 | 2.438 | 7.5 | 2.3 | | | | 6.38E-04 |
| GPL2_1 | 416304.81 | 4298909 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_2 | 416304.81 | 4298899 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_3 | 416304.81 | 4298889 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_4 | 416304.81 | 4298879 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_5 | 416304.81 | 4298869 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_6 | 416304.81 | 4298859 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_7 | 416304.81 | 4298849 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL3_1 | 416304.81 | 4298735 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_2 | 416304.81 | 4298725 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_3 | 416304.81 | 4298715 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_4 | 416304.81 | 4298705 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_5 | 416304.81 | 4298695 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_6 | 416304.81 | 4298685 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_7 | 416304.81 | 4298675 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_8 | 416304.81 | 4298665 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_9 | 416304.81 | 4298655 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_10 | 416304.81 | 4298645 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_11 | 416304.81 | 4298635 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_12 | 416304.81 | 4298625 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_13 | 416304.81 | 4298615 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_14 | 416304.81 | 4298605 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_15 | 416304.81 | 4298595 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_16 | 416304.81 | 4298585 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_17 | 416304.81 | 4298575 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_18 | 416304.81 | 4298565 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_19 | 416304.81 | 4298555 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_20 | 416304.81 | 4298545 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_21 | 416304.81 | 4298535 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_22 | 416314.81 | 4298535 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| GPL3_23 | 416324.81 | 4298535 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_24 | 416334.81 | 4298535 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_25 | 416344.81 | 4298535 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_26 | 416355.59 | 4298535 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_27 | 416381.09 | 4298639 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_28 | 416381.09 | 4298629 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_29 | 416381.09 | 4298619 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_30 | 416381.09 | 4298609 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_31 | 416381.09 | 4298599 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_32 | 416381.09 | 4298589 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_33 | 416381.09 | 4298579 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_34 | 416369.91 | 4298570.5 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_35 | 416366.59 | 4298558.5 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL3_36 | 416361.31 | 4298545 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.54E-05 |
| GPL8_1 | 416381.09 | 4298739 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_2 | 416381.09 | 4298729 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_3 | 416381.09 | 4298719 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_4 | 416381.09 | 4298709 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_5 | 416381.09 | 4298699 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_6 | 416381.09 | 4298689 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_7 | 416381.09 | 4298679 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_8 | 416381.09 | 4298669 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_9 | 416381.09 | 4298659 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL8_10 | 416381.09 | 4298649 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_1 | 416381.09 | 4298839 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_2 | 416381.09 | 4298829 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_3 | 416381.09 | 4298819 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_4 | 416381.09 | 4298809 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_5 | 416381.09 | 4298799 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_6 | 416381.09 | 4298789 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_7 | 416381.09 | 4298779 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_8 | 416381.09 | 4298769 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_9 | 416381.09 | 4298759 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL9_10 | 416381.09 | 4298749 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL10_1 | 416371.91 | 4298867 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL10_2 | 416381.09 | 4298859 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL10_3 | 416381.09 | 4298849 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 1.15E-04 |
| GPL16_1 | 416313.69 | 4298917 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |
| GPL16_2 | 416321.5 | 4298911 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |

| Source ID | Easting (X) (m) | Northing (m) | Base (m) | Release (m) | Horizonta (m) | Vertical (m) | NO2 (g/s) | CO (g/s) | PM-25 (g/s) | PM-10 (g/s) |
|---|---|---|---|---|---|---|---|---|---|---|
| GPL16_3 | 416329.31 | 4298905 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |
| GPL16_4 | 416337.09 | 4298898 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |
| GPL16_5 | 416344.91 | 4298892 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |
| GPL16_6 | 416352.69 | 4298886 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |
| GPL16_7 | 416360.5 | 4298880 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 5.10E-04 |
| GPL2_8 | 416304.81 | 4298835 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_9 | 416304.81 | 4298825 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_10 | 416304.81 | 4298815 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_11 | 416304.81 | 4298805 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_12 | 416304.81 | 4298795 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_13 | 416304.81 | 4298785 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_14 | 416304.81 | 4298775 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_15 | 416304.81 | 4298765 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_16 | 416304.81 | 4298755 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| GPL2_17 | 416304.81 | 4298745 | 1594.10 | 2.438 | 7.5 | 2.3 | | | | 4.55E-05 |
| ROCKPIL5 | 416425.09 | 4298780 | 1599.58 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| ROCKPIL1 | 416425.09 | 4298840 | 1597.38 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| ROCKPIL2 | 416425.09 | 4298800 | 1598.64 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| ROCKPIL3 | 416405.09 | 4298840 | 1596.90 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| ROCKPIL4 | 416425.09 | 4298820 | 1597.84 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| RECYPIL1 | 416405 | 4298820 | 1597.35 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| RECYPIL2 | 416425 | 4298760 | 1600.37 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| RECYPIL3 | 416405 | 4298800 | 1597.84 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| RECYPIL5 | 416405 | 4298780 | 1598.09 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |
| RECYPIL4 | 416405 | 4298760 | 1598.35 | 3.05 | 10.4 | 2.8 | | | | 0.0014 |

# Appendix J
# Full Impact Analysis AERMOD Results

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM 8TH-HIGHEST MAX DAILY 1-HR RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 15.81082 | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 15.53518 | AT ( 413400.00, 4305200.00, 1809.42, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 15.47585 | AT ( 411200.00, 4302000.00, 1781.70, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 15.27824 | AT ( 413200.00, 4304800.00, 1802.75, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 15.10866 | AT ( 413600.00, 4305400.00, 1806.70, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 14.92097 | AT ( 410800.00, 4301800.00, 1820.47, 2747.41, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 14.89556 | AT ( 411400.00, 4302000.00, 1771.24, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 14.72402 | AT ( 412400.00, 4304200.00, 1803.76, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 14.63404 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 14.44237 | AT ( 412600.00, 4304400.00, 1819.81, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 50.83308 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 47.60164 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 47.28981 | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 47.18101 | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 46.30748 | AT ( 414250.70, 4300428.20, 1618.63, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 43.56113 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 43.53500 | AT ( 414272.60, 4300428.20, 1618.69, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 43.20380 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 42.92966 | AT ( 414228.60, 4300435.20, 1618.43, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 42.59631 | AT ( 414400.00, 4300550.00, 1617.72, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS      43.43715 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
           2ND HIGHEST VALUE IS      42.84589 AT (  414250.00,  4300050.00,  1615.65,  2455.62,    0.00)  DC
           3RD HIGHEST VALUE IS      42.30010 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
           4TH HIGHEST VALUE IS      41.97583 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
           5TH HIGHEST VALUE IS      41.75660 AT (  414270.70,  4300140.50,  1616.45,  2455.62,    0.00)  DC
           6TH HIGHEST VALUE IS      40.79585 AT (  414100.00,  4300050.00,  1617.56,  2455.62,    0.00)  DC
           7TH HIGHEST VALUE IS      40.10091 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
           8TH HIGHEST VALUE IS      40.03417 AT (  414100.00,  4300000.00,  1616.80,  2455.62,    0.00)  DC
           9TH HIGHEST VALUE IS      38.64721 AT (  414250.00,  4300000.00,  1615.08,  2455.62,    0.00)  DC
          10TH HIGHEST VALUE IS      38.54943 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       7.70631 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
           2ND HIGHEST VALUE IS       7.35084 AT (  414000.00,  4302800.00,  1673.34,  2753.55,    0.00)  DC
           3RD HIGHEST VALUE IS       7.25690 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
           4TH HIGHEST VALUE IS       7.13037 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
           5TH HIGHEST VALUE IS       6.99361 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
           6TH HIGHEST VALUE IS       6.91918 AT (  414000.00,  4303000.00,  1677.74,  2753.55,    0.00)  DC
           7TH HIGHEST VALUE IS       6.52919 AT (  414200.00,  4303000.00,  1671.78,  2753.55,    0.00)  DC
           8TH HIGHEST VALUE IS       6.47755 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
           9TH HIGHEST VALUE IS       6.35278 AT (  414000.00,  4303200.00,  1679.52,  2753.55,    0.00)  DC
          10TH HIGHEST VALUE IS       6.26475 AT (  414200.00,  4303200.00,  1673.25,  2753.55,    0.00)  DC
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                    *** THE SUMMARY OF MAXIMUM   8TH-HIGHEST MAX DAILY  1-HR RESULTS AVERAGED OVER   1 YEARS ***

                                 ** CONC OF NO2      IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS      63.38608 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
           2ND HIGHEST VALUE IS      62.45968 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
           3RD HIGHEST VALUE IS      62.04819 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
           4TH HIGHEST VALUE IS      60.60899 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
           5TH HIGHEST VALUE IS      59.21011 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
           6TH HIGHEST VALUE IS      55.94688 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
           7TH HIGHEST VALUE IS      55.15829 AT (  414272.60,  4300428.20,  1618.69,  2455.62,    0.00)  DC
           8TH HIGHEST VALUE IS      51.36303 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
           9TH HIGHEST VALUE IS      50.43401 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          10TH HIGHEST VALUE IS      47.87136 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS      74.39008 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
           2ND HIGHEST VALUE IS      72.75103 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
           3RD HIGHEST VALUE IS      69.34552 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
           4TH HIGHEST VALUE IS      67.28513 AT (  414426.30,  4300334.70,  1615.46,  2455.62,    0.00)  DC
           5TH HIGHEST VALUE IS      67.08331 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
           6TH HIGHEST VALUE IS      65.93152 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
           7TH HIGHEST VALUE IS      62.75395 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
           8TH HIGHEST VALUE IS      61.38467 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC
           9TH HIGHEST VALUE IS      57.33144 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          10TH HIGHEST VALUE IS      56.06875 AT (  414426.50,  4300264.60,  1615.06,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS     119.93305 AT (  414228.60,  4300386.10,  1617.35,  2455.62,    0.00)  DC
           2ND HIGHEST VALUE IS     111.09630 AT (  414426.40,  4300311.40,  1615.33,  2455.62,    0.00)  DC
           3RD HIGHEST VALUE IS     105.29505 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
           4TH HIGHEST VALUE IS     103.40118 AT (  414228.60,  4300410.60,  1617.85,  2455.62,    0.00)  DC
           5TH HIGHEST VALUE IS     101.59213 AT (  414400.00,  4300500.00,  1617.22,  2455.62,    0.00)  DC
           6TH HIGHEST VALUE IS     100.20450 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
           7TH HIGHEST VALUE IS      97.78556 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
           8TH HIGHEST VALUE IS      97.59779 AT (  414400.00,  4300550.00,  1617.72,  2455.62,    0.00)  DC
           9TH HIGHEST VALUE IS      96.41558 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          10TH HIGHEST VALUE IS      94.23338 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=           24
```

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2001 Year: 2001

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

| GROUP ID | | AVERAGE CONC | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE | NETWORK GRID-ID |
|---|---|---|---|---|---|
| STACKS | 1ST HIGHEST VALUE IS | 0.29549 | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 0.26615 | AT ( 415500.00, 4308000.00, 1766.80, 2753.55, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 0.25968 | AT ( 416000.00, 4309000.00, 1775.83, 2753.55, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 0.24647 | AT ( 415000.00, 4307500.00, 1770.74, 2753.55, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 0.24515 | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 0.22429 | AT ( 416500.00, 4307500.00, 1731.55, 2636.83, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 0.22092 | AT ( 415500.00, 4307000.00, 1739.39, 2753.55, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 0.21509 | AT ( 416000.00, 4308500.00, 1744.53, 2753.55, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 0.21255 | AT ( 414500.00, 4307000.00, 1780.07, 2753.55, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 0.20585 | AT ( 416500.00, 4309000.00, 1740.02, 2753.55, 0.00) | DC | |
| FP | 1ST HIGHEST VALUE IS | 2.34034 | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC | |
| | 2ND HIGHEST VALUE IS | 2.15021 | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC | |
| | 3RD HIGHEST VALUE IS | 1.88373 | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC | |
| | 4TH HIGHEST VALUE IS | 1.85768 | AT ( 414450.00, 4300500.00, 1616.32, 2455.62, 0.00) | DC | |
| | 5TH HIGHEST VALUE IS | 1.82982 | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC | |
| | 6TH HIGHEST VALUE IS | 1.40672 | AT ( 414400.00, 4300500.00, 1617.22, 2455.62, 0.00) | DC | |
| | 7TH HIGHEST VALUE IS | 1.32223 | AT ( 414500.00, 4300500.00, 1615.41, 2455.62, 0.00) | DC | |
| | 8TH HIGHEST VALUE IS | 1.29247 | AT ( 414450.00, 4300550.00, 1616.82, 2455.62, 0.00) | DC | |
| | 9TH HIGHEST VALUE IS | 1.27690 | AT ( 414500.00, 4300550.00, 1615.81, 2455.62, 0.00) | DC | |
| | 10TH HIGHEST VALUE IS | 1.21033 | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC | |

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GEN       1ST HIGHEST VALUE IS       1.75751 AT (  414200.00,  4300100.00,  1616.92,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       1.73418 AT (  414228.90,  4300140.50,  1616.87,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       1.60553 AT (  414150.00,  4300050.00,  1616.96,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       1.59874 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       1.55776 AT (  414249.80,  4300140.50,  1616.66,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       1.55305 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       1.49857 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.48226 AT (  414200.00,  4300050.00,  1616.33,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.37887 AT (  414150.00,  4300000.00,  1616.30,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.37164 AT (  414250.00,  4300100.00,  1616.26,  2455.62,    0.00)  DC

AUX       1ST HIGHEST VALUE IS       0.45090 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       0.44529 AT (  414228.80,  4300214.20,  1616.86,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       0.43893 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       0.43784 AT (  414200.00,  4300200.00,  1616.63,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       0.42611 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       0.42396 AT (  414228.80,  4300238.70,  1616.82,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       0.41504 AT (  414200.00,  4300150.00,  1616.86,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       0.41110 AT (  414150.00,  4300150.00,  1616.93,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       0.38758 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       0.38469 AT (  414150.00,  4300100.00,  1617.61,  2455.62,    0.00)  DC
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                                   *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   1 YEARS ***

                                    ** CONC OF NO2      IN MICROGRAMS/M**3                        **

                                                                                                          NETWORK
GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

HEATER1   1ST HIGHEST VALUE IS       4.18529 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       3.74772 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       3.44854 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       3.31077 AT (  414316.40,  4300428.20,  1618.03,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       2.98310 AT (  414338.30,  4300428.20,  1617.59,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       2.83198 AT (  414294.50,  4300428.20,  1618.45,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.61109 AT (  414360.20,  4300428.20,  1617.08,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       2.45427 AT (  414228.80,  4300263.30,  1616.76,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       2.37276 AT (  414228.60,  4300361.50,  1617.11,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       2.37147 AT (  414350.00,  4300450.00,  1617.37,  2455.62,    0.00)  DC

HEATER2   1ST HIGHEST VALUE IS       3.19297 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       3.05205 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       2.93561 AT (  414426.00,  4300404.90,  1615.83,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       2.58701 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       2.20936 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       2.19734 AT (  414426.10,  4300381.50,  1615.74,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       2.03435 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       1.91033 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       1.73557 AT (  414500.00,  4300500.00,  1615.41,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       1.59082 AT (  414228.90,  4300189.60,  1616.93,  2455.62,    0.00)  DC

ALL       1ST HIGHEST VALUE IS       7.81350 AT (  414404.00,  4300428.20,  1616.27,  2455.62,    0.00)  DC
          2ND HIGHEST VALUE IS       7.15306 AT (  414426.00,  4300428.20,  1615.97,  2455.62,    0.00)  DC
          3RD HIGHEST VALUE IS       6.95497 AT (  414400.00,  4300450.00,  1616.55,  2455.62,    0.00)  DC
          4TH HIGHEST VALUE IS       6.47721 AT (  414228.70,  4300312.40,  1616.79,  2455.62,    0.00)  DC
          5TH HIGHEST VALUE IS       6.38406 AT (  414450.00,  4300450.00,  1615.81,  2455.62,    0.00)  DC
          6TH HIGHEST VALUE IS       6.08847 AT (  414450.00,  4300500.00,  1616.32,  2455.62,    0.00)  DC
          7TH HIGHEST VALUE IS       5.92650 AT (  414228.70,  4300287.80,  1616.77,  2455.62,    0.00)  DC
          8TH HIGHEST VALUE IS       5.77291 AT (  414382.10,  4300428.20,  1616.60,  2455.62,    0.00)  DC
          9TH HIGHEST VALUE IS       5.58182 AT (  414228.70,  4300336.90,  1616.98,  2455.62,    0.00)  DC
         10TH HIGHEST VALUE IS       5.55136 AT (  414228.90,  4300165.00,  1616.93,  2455.62,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter          VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:        STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:         AUX
MX W481    8785   MAIN:Data Remaining After End of Year. Number of Hours=          24
```

**MODELOPTs: RegDFAULT CONC  ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM-10 IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| SPC | HIGH | 1ST HIGH VALUE IS | 7.08481 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 6.77189 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| UGS | HIGH | 1ST HIGH VALUE IS | 16.28142 | ON 02072124: | AT ( 416400.00, 4299200.00, 1591.23, 1958.06, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 15.78235 | ON 02041824: | AT ( 416400.00, 4299200.00, 1591.23, 1958.06, 0.00) | DC |
| GP | HIGH | 1ST HIGH VALUE IS | 34.74182 | ON 02020324: | AT ( 416800.00, 4299200.00, 1627.68, 1762.52, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 31.04570 | ON 01111224: | AT ( 416800.00, 4299200.00, 1627.68, 1762.52, 0.00) | DC |
| WESTCLAY | HIGH | 1ST HIGH VALUE IS | 412.18718 | ON 02021024: | AT ( 420000.00, 4308500.00, 1571.26, 1571.26, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 315.09929 | ON 01111524: | AT ( 420500.00, 4308500.00, 1569.34, 1569.34, 0.00) | DC |
| REDMOND | HIGH | 1ST HIGH VALUE IS | 20.04141m | ON 02041124: | AT ( 422000.00, 4314000.00, 1575.22, 1575.22, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 9.85277 | ON 02012024: | AT ( 424000.00, 4315000.00, 1558.81, 1558.81, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 412.25969 | ON 02021024: | AT ( 420000.00, 4308500.00, 1571.26, 1571.26, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 315.35819 | ON 01111524: | AT ( 420500.00, 4308500.00, 1569.34, 1569.34, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 8 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
SO W320     447  PPARM:Input Parameter May Be Out-of-Range for Parameter            DS
SO W320     462  PPARM:Input Parameter May Be Out-of-Range for Parameter            DS
SO W320     537  APARM:Input Parameter May Be Out-of-Range for Parameter         ANGLE
SO W320     570  APARM:Input Parameter May Be Out-of-Range for Parameter         ANGLE
SO W320     573  APARM:Input Parameter May Be Out-of-Range for Parameter         ANGLE
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

# Appendix K
# HAPS Spreadsheet and HAPS AERMOD Analyses Results

## Sevier Power Company
### GE #11 Calculations for HAPs

**Reference:** ACGIH 2011
**Source:** All Sources
**Type of Release Point:** Vertically Unrestricted

| HAP Name | CAS Number | Potential Emissions | Type of HAP | UDAQ published TLV/ TWA (1) | | | UDAQ's Emission Threshold Factor (ETF) for Vertically Restricted Sources (1) | | | | Emission Threshold Value (ETV) (2) | | | | Ratio of Potential Emissions to ETV (3) | | | | Modeling Required? | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (ug/m$^3$) | | | (m$^3$ lb / mg hr) | | | | (lb/hr) | | | | | | | | | | | |
| | | lb/hr | | acute | chronic | carcinogenic | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m |
| Benzene | 71-43-2 | 3.20E-02 | chronic | | 1597 | | 0.051 | 0.066 | 0.123 | 0.269 | 8.1E-02 | 1.1E-01 | 2.0E-01 | 4.3E-01 | 3.9E-01 | 3.0E-01 | 1.6E-01 | 7.4E-02 | No | No | No | No |
| Toluene | 108-88-3 | 2.14E-01 | chronic | | 75362 | | 0.051 | 0.066 | 0.123 | 0.269 | 3.8E+00 | 5.0E+00 | 9.3E+00 | 2.0E+01 | 5.6E-02 | 4.3E-02 | 2.3E-02 | 1.1E-02 | No | No | No | No |
| Xylene | 1330-20-7 | 1.06E-01 | chronic | | 434192 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.2E+01 | 2.9E+01 | 5.3E+01 | 1.2E+02 | 4.8E-03 | 3.7E-03 | 2.0E-03 | 9.1E-04 | No | No | No | No |
| 1,3 - Butadiene | 87-68-3 | 8.11E-04 | carcinogenic | | | 4425 | 0.017 | 0.022 | 0.041 | 0.09 | 7.5E-02 | 9.7E-02 | 1.8E-01 | 4.0E-01 | 1.1E-02 | 8.3E-03 | 4.5E-03 | 2.0E-03 | No | No | No | No |
| Formaldehyde | 50-00-0 | 1.83E-01 | acute | 368 | | | 0.038 | 0.051 | 0.092 | 0.18 | 1.4E-02 | 1.9E-02 | 3.4E-02 | 6.6E-02 | 1.3E+01 | 9.8E+00 | 5.4E+00 | 2.8E+00 | Yes | Yes | Yes | Yes |
| Acetaldehyde | 75-07-0 | 6.69E-02 | acute | 45041 | | | 0.038 | 0.051 | 0.092 | 0.18 | 1.7E+00 | 2.3E+00 | 4.1E+00 | 8.1E+00 | 3.9E-02 | 2.9E-02 | 1.6E-02 | 8.2E-03 | No | No | No | No |
| Acrolein | 107-02-8 | 1.07E-02 | chronic | | 229 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.2E-02 | 1.5E-02 | 2.8E-02 | 6.2E-02 | 9.1E-01 | 7.0E-01 | 3.8E-01 | 1.7E-01 | No | No | No | No |
| Naphthalene | 91-20-3 | 4.02E-03 | chronic | | 52429 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.7E+00 | 3.5E+00 | 6.4E+00 | 1.4E+01 | 1.5E-03 | 1.2E-03 | 6.2E-04 | 2.9E-04 | No | No | No | No |
| Hexane | 110-54-3 | 1.89E-01 | chronic | | 176237 | | 0.051 | 0.066 | 0.123 | 0.269 | 9.0E+00 | 1.2E+01 | 2.2E+01 | 4.7E+01 | 2.1E-02 | 1.6E-02 | 8.7E-03 | 4.0E-03 | No | No | No | No |
| Arsenic | 7440-38-2 | 2.10E-05 | chronic | | 10 | | 0.051 | 0.066 | 0.123 | 0.269 | 5.1E-04 | 6.6E-04 | 1.2E-03 | 2.7E-03 | 4.1E-02 | 3.2E-02 | 1.7E-02 | 7.8E-03 | No | No | No | No |
| Beryllium | 7440-41-7 | 1.26E-06 | chronic | | 0.05 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.6E-06 | 3.3E-06 | 6.2E-06 | 1.3E-05 | 4.9E-01 | 3.8E-01 | 2.1E-01 | 9.4E-02 | No | No | No | No |
| Cadmium | 7440-43-9 | 1.16E-04 | carcinogenic | | | 2 | 0.017 | 0.022 | 0.041 | 0.09 | 3.4E-05 | 4.4E-05 | 8.2E-05 | 1.8E-04 | 3.4E+00 | 2.6E+00 | 1.4E+00 | 6.4E-01 | Yes | Yes | Yes | No |
| Chromium | 7440-47-3 | 1.47E-04 | carcinogenic | | | 10 | 0.017 | 0.022 | 0.041 | 0.09 | 1.7E-04 | 2.2E-04 | 4.1E-04 | 9.0E-04 | 8.7E-01 | 6.7E-01 | 3.6E-01 | 1.6E-01 | No | No | No | No |
| Cobalt | 7440-48-4 | 8.83E-06 | chronic | | 20 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.0E-03 | 1.3E-03 | 2.5E-03 | 5.4E-03 | 8.7E-03 | 6.7E-03 | 3.6E-03 | 1.6E-03 | No | No | No | No |
| Manganese | 7439-96-5 | 4.00E-05 | chronic | | 200 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.0E-02 | 1.3E-02 | 2.5E-02 | 5.4E-02 | 3.9E-03 | 3.0E-03 | 1.6E-03 | 7.4E-04 | No | No | No | No |
| Mercury | 7439-97-6 | 2.73E-05 | chronic | | 10 | | 0.051 | 0.066 | 0.123 | 0.269 | 5.1E-04 | 6.6E-04 | 1.2E-03 | 2.7E-03 | 5.4E-02 | 4.1E-02 | 2.2E-02 | 1.0E-02 | No | No | No | No |
| Nickel | 7440-02-0 | 2.21E-04 | chronic | | 100 | | 0.051 | 0.066 | 0.123 | 0.269 | 5.1E-03 | 6.6E-03 | 1.2E-02 | 2.7E-02 | 4.3E-02 | 3.3E-02 | 1.8E-02 | 8.2E-03 | No | No | No | No |
| Selenium | 7782-49-2 | 2.52E-06 | chronic | | 200 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.0E-02 | 1.3E-02 | 2.5E-02 | 5.4E-02 | 2.5E-04 | 1.9E-04 | 1.0E-04 | 4.7E-05 | No | No | No | No |
| Ethylbenzene | 100-41-4 | 5.13E-02 | chronic | | 86838 | | 0.051 | 0.066 | 0.123 | 0.269 | 4.4E+00 | 5.7E+00 | 1.1E+01 | 2.3E+01 | 1.2E-02 | 9.0E-03 | 4.8E-03 | 2.2E-03 | No | No | No | No |
| Propylene Oxide | 75-56-9 | 4.65E-02 | chronic | | 4751 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.4E-01 | 3.1E-01 | 5.8E-01 | 1.3E+00 | 1.9E-01 | 1.5E-01 | 8.0E-02 | 3.6E-02 | No | No | No | No |

## Sevier Power Company
### Siemens #4 Calculations for HAPs

**Reference:** ACGIH 2011
**Source:** All Sources
**Type of Release Point:** Vertically Unrestricted

| HAP Name | CAS Number | Potential Emissions | Type of HAP | UDAQ published TLV/ TWA (1) | | | UDAQ's Emission Threshold Factor (ETF) for Vertically Restricted Sources (1) | | | | Emission Threshold Value (ETV) (2) | | | | Ratio of Potential Emissions to ETV (3) | | | | Modeling Required? | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (ug/m$^3$) | | | (m$^3$ lb / mg hr) | | | | (lb/hr) | | | | | | | | | | | |
| | | lb/hr | | acute | chronic | carcinogenic | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m | < 20 m | 21 - 50 m | 51 - 100 m | > 100 m |
| Benzene | 71-43-2 | 5.62E-02 | chronic | | 1597 | | 0.051 | 0.066 | 0.123 | 0.269 | 8.1E-02 | 1.1E-01 | 2.0E-01 | 4.3E-01 | 6.9E-01 | 5.3E-01 | 2.9E-01 | 1.3E-01 | No | No | No | No |
| Toluene | 108-88-3 | 4.76E-01 | chronic | | 75362 | | 0.051 | 0.066 | 0.123 | 0.269 | 3.8E+00 | 5.0E+00 | 9.3E+00 | 2.0E+01 | 1.2E-01 | 9.6E-02 | 5.1E-02 | 2.3E-02 | No | No | No | No |
| Xylene | 1330-20-7 | 2.35E-01 | chronic | | 434192 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.2E+01 | 2.9E+01 | 5.3E+01 | 1.2E+02 | 1.1E-02 | 8.2E-03 | 4.4E-03 | 2.0E-03 | No | No | No | No |
| 1,3 - Butadiene | 87-68-3 | 1.68E-03 | carcinogenic | | | 4425 | 0.017 | 0.022 | 0.041 | 0.09 | 7.5E-02 | 9.7E-02 | 1.8E-01 | 4.0E-01 | 2.2E-02 | 1.7E-02 | 9.3E-03 | 4.2E-03 | No | No | No | No |
| Formaldehyde | 50-00-0 | 3.98E-01 | acute | 368 | | | 0.038 | 0.051 | 0.092 | 0.18 | 1.4E-02 | 1.9E-02 | 3.4E-02 | 6.6E-02 | 2.8E+01 | 2.1E+01 | 1.2E+01 | 6.0E+00 | Yes | Yes | Yes | Yes |
| Acetaldehyde | 75-07-0 | 1.48E-01 | acute | 45041 | | | 0.038 | 0.051 | 0.092 | 0.18 | 1.7E+00 | 2.3E+00 | 4.1E+00 | 8.1E+00 | 8.6E-02 | 6.4E-02 | 3.6E-02 | 1.8E-02 | No | No | No | No |
| Acrolein | 107-02-8 | 2.36E-02 | chronic | | 229 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.2E-02 | 1.5E-02 | 2.8E-02 | 6.2E-02 | 2.0E+00 | 1.6E+00 | 8.4E-01 | 3.8E-01 | Yes | Yes | No | No |
| Naphthalene | 91-20-3 | 6.65E-03 | chronic | | 52429 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.7E+00 | 3.5E+00 | 6.4E+00 | 1.4E+01 | 2.5E-03 | 1.9E-03 | 1.0E-03 | 4.7E-04 | No | No | No | No |
| Hexane | 110-54-3 | 1.89E-01 | chronic | | 176237 | | 0.051 | 0.066 | 0.123 | 0.269 | 9.0E+00 | 1.2E+01 | 2.2E+01 | 4.7E+01 | 2.1E-02 | 1.6E-02 | 8.7E-03 | 4.0E-03 | No | No | No | No |
| Arsenic | 7440-38-2 | 2.10E-05 | chronic | | 10 | | 0.051 | 0.066 | 0.123 | 0.269 | 5.1E-04 | 6.6E-04 | 1.2E-03 | 2.7E-03 | 4.1E-02 | 3.2E-02 | 1.7E-02 | 7.8E-03 | No | No | No | No |
| Beryllium | 7440-41-7 | 1.26E-06 | chronic | | 0.05 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.6E-06 | 3.3E-06 | 6.2E-06 | 1.3E-05 | 4.9E-01 | 3.8E-01 | 2.1E-01 | 9.4E-02 | No | No | No | No |
| Cadmium | 7440-43-9 | 1.16E-04 | carcinogenic | | | 2 | 0.017 | 0.022 | 0.041 | 0.09 | 3.4E-05 | 4.4E-05 | 8.2E-05 | 1.8E-04 | 3.4E+00 | 2.6E+00 | 1.4E+00 | 6.4E-01 | Yes | Yes | Yes | No |
| Chromium | 7440-47-3 | 1.47E-04 | carcinogenic | | | 10 | 0.017 | 0.022 | 0.041 | 0.09 | 1.7E-04 | 2.2E-04 | 4.1E-04 | 9.0E-04 | 8.7E-01 | 6.7E-01 | 3.6E-01 | 1.6E-01 | No | No | No | No |
| Cobalt | 7440-48-4 | 8.83E-06 | chronic | | 20 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.0E-03 | 1.3E-03 | 2.5E-03 | 5.4E-03 | 8.7E-03 | 6.7E-03 | 3.6E-03 | 1.6E-03 | No | No | No | No |
| Manganese | 7439-96-5 | 4.00E-05 | chronic | | 200 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.0E-02 | 1.3E-02 | 2.5E-02 | 5.4E-02 | 3.9E-03 | 3.0E-03 | 1.6E-03 | 7.4E-04 | No | No | No | No |
| Mercury | 7439-97-6 | 2.73E-05 | chronic | | 10 | | 0.051 | 0.066 | 0.123 | 0.269 | 5.1E-04 | 6.6E-04 | 1.2E-03 | 2.7E-03 | 5.4E-02 | 4.1E-02 | 2.2E-02 | 1.0E-02 | No | No | No | No |
| Nickel | 7440-02-0 | 2.21E-04 | chronic | | 100 | | 0.051 | 0.066 | 0.123 | 0.269 | 5.1E-03 | 6.6E-03 | 1.2E-02 | 2.7E-02 | 4.3E-02 | 3.3E-02 | 1.8E-02 | 8.2E-03 | No | No | No | No |
| Selenium | 7782-49-2 | 2.52E-06 | chronic | | 200 | | 0.051 | 0.066 | 0.123 | 0.269 | 1.0E-02 | 1.3E-02 | 2.5E-02 | 5.4E-02 | 2.5E-04 | 1.9E-04 | 1.0E-04 | 4.7E-05 | No | No | No | No |
| Ethylbenzene | 100-41-4 | 1.16E-01 | chronic | | 86838 | | 0.051 | 0.066 | 0.123 | 0.269 | 4.4E+00 | 5.7E+00 | 1.1E+01 | 2.3E+01 | 2.6E-02 | 2.0E-02 | 1.1E-02 | 5.0E-03 | No | No | No | No |
| Propylene Oxide | 75-56-9 | 1.05E-01 | chronic | | 4751 | | 0.051 | 0.066 | 0.123 | 0.269 | 2.4E-01 | 3.1E-01 | 5.8E-01 | 1.3E+00 | 4.3E-01 | 3.4E-01 | 1.8E-01 | 8.2E-02 | No | No | No | No |

**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF FORMALDE IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 8TH HIGH VALUE IS | 0.40824 | ON 02020103: | AT ( 412200.00, 4303600.00, 1809.02, 2753.55, 0.00) | DC |
| FP | HIGH | 8TH HIGH VALUE IS | 0.62703 | ON 01093022: | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC |
| GEN | HIGH | 8TH HIGH VALUE IS | 0.04327 | ON 01102005: | AT ( 414150.00, 4300100.00, 1617.61, 2455.62, 0.00) | DC |
| AUX | HIGH | 8TH HIGH VALUE IS | 0.03334 | ON 02062010: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 8TH HIGH VALUE IS | 0.13979 | ON 02072905: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 8TH HIGH VALUE IS | 0.15724 | ON 02052503: | AT ( 414382.10, 4300428.20, 1616.60, 2455.62, 0.00) | DC |
| ALL | HIGH | 8TH HIGH VALUE IS | 0.69832 | ON 01093022: | AT ( 414450.00, 4300450.00, 1615.81, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF FORMALDE IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 0.15495c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.11783 | ON 02071308: | AT ( 415000.00, 4307500.00, 1770.74, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.27462 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.23738 | ON 01102124: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.01757 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.01388 | ON 02060508: | AT ( 414200.00, 4300100.00, 1616.92, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 0.01931 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.01844 | ON 02061916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 0.06358 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.06043 | ON 01092708: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 0.07188 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.05992 | ON 01102708: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.33906 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.27998 | ON 01102124: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF FORMALDE IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 0.05659 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.04894 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.13696 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.11795 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.00715m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00618 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| AUX | HIGH | 1ST HIGH VALUE IS | 0.01481 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.01402 | ON 02061924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 0.03039 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.02919 | ON 01092824: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 0.03490 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.03461m | ON 01111724: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.17091 | ON 01092824: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.15526 | ON 01092524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 151 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 5 Calm Hours Identified

A Total of 146 Missing Hours Identified ( 1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

```
SO W320     118  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
CN W305      17 WAKFLG:Stack height > or = EPA formula height for SRCID:          STK2
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF ACROLEIN IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|
| STACKS | HIGH 1ST HIGH VALUE IS | 0.05821 | ON 02012506: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH 1ST HIGH VALUE IS | 0.07358 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |
| GEN | HIGH 1ST HIGH VALUE IS | 0.00718 | ON 02053105: | AT ( 414270.70, 4300140.50, 1616.45, 2455.62, 0.00) | DC |
| ALL | HIGH 1ST HIGH VALUE IS | 0.07358 | ON 02072101: | AT ( 414294.50, 4300428.20, 1618.45, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF ACROLEIN IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 0.00922c | ON 02012508: | AT ( 412000.00, 4302800.00, 1743.05, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.02153 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.00176 | ON 02012808: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.02154 | ON 01092808: | AT ( 414400.00, 4300450.00, 1616.55, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF ACROLEIN IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| STACKS | HIGH | 1ST HIGH VALUE IS | 0.00337 | ON 01102724: | AT ( 416000.00, 4308000.00, 1759.90, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00291 | ON 01100724: | AT ( 415500.00, 4307500.00, 1749.18, 2753.55, 0.00) | DC |
| FP | HIGH | 1ST HIGH VALUE IS | 0.01074 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00925 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| GEN | HIGH | 1ST HIGH VALUE IS | 0.00071m | ON 01111824: | AT ( 414250.00, 4300100.00, 1616.26, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00062 | ON 02061124: | AT ( 414228.90, 4300165.00, 1616.93, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.01092 | ON 02051924: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00950 | ON 02041524: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs:  RegDFAULT CONC  ELEV

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of  0 Fatal Error Message(s)
A Total of  2 Warning Message(s)
A Total of  151 Informational Message(s)

A Total of  8784 Hours Were Processed

A Total of  5 Calm Hours Identified

A Total of  146 Missing Hours Identified (  1.66 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

********  WARNING MESSAGES  ********
SO W320  118  PPARM:Input Parameter May Be Out-of-Range for Parameter  VS
CN W305  17 WAKFLG:Stack height > or = EPA formula height for SRCID:  STK2

**MODELOPTs: RegDEFAULT CONC ELEV

*** MODEL SETUP OPTIONS SUMMARY ***

- - - -

**MODELOPTs: RegDFAULT CONC ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: SPC02.SFC Met Version: 11059
Profile file: SPC02.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 72572 Upper air station no.: 24127
Name: UNKNOWN Name: SALT_LAKE_CITY,UT
Year: 2002 Year: 2002

First 24 hours of scalar data

| YR | MO | DY | JDY | HR | H0 | U* | W* | DT/DZ | ZICNV | ZIMCH | M-O LEN | Z0 | BOWEN | ALBEDO | REF WS | WD | HT | REF TA | HT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 218 | 01 | -29.3 | 0.330 | -9.000 | -9.000 | -999. | 436. | 95.4 | 0.11 | 0.74 | 1.00 | 3.60 | 132. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 02 | -24.4 | 0.275 | -9.000 | -9.000 | -999. | 334. | 66.5 | 0.11 | 0.74 | 1.00 | 3.10 | 125. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 03 | -13.6 | 0.145 | -9.000 | -9.000 | -999. | 136. | 17.3 | 0.11 | 0.74 | 1.00 | 2.10 | 188. | 6.1 | 292.0 | 2.0 |
| 01 | 08 | 06 | 218 | 04 | -999.0 | -9.000 | -9.000 | -9.000 | -999. | -999. | -99999.0 | 0.11 | 0.74 | 1.00 | 0.00 | 0. | 6.1 | 293.1 | 2.0 |
| 01 | 08 | 06 | 218 | 05 | -4.7 | 0.074 | -9.000 | -9.000 | -999. | 46. | 6.7 | 0.11 | 0.74 | 1.00 | 1.50 | 124. | 6.1 | 291.4 | 2.0 |
| 01 | 08 | 06 | 218 | 06 | -16.2 | 0.227 | -9.000 | -9.000 | -999. | 248. | 56.1 | 0.11 | 0.74 | 1.00 | 2.60 | 156. | 6.1 | 290.9 | 2.0 |
| 01 | 08 | 06 | 218 | 07 | 9.4 | 0.361 | 0.246 | 0.005 | 49. | 499. | -390.0 | 0.11 | 0.74 | 0.40 | 3.60 | 143. | 6.1 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 08 | 53.8 | 0.332 | 0.587 | 0.007 | 117. | 441. | -53.1 | 0.11 | 0.74 | 0.25 | 3.10 | 136. | 6.1 | 297.0 | 2.0 |
| 01 | 08 | 06 | 218 | 09 | 97.6 | 0.343 | 0.891 | 0.006 | 226. | 462. | -32.3 | 0.11 | 0.74 | 0.20 | 3.10 | 163. | 6.1 | 300.4 | 2.0 |
| 01 | 08 | 06 | 218 | 10 | 134.5 | 0.261 | 1.103 | 0.014 | 310. | 309. | -10.3 | 0.11 | 0.74 | 0.19 | 2.10 | 224. | 6.1 | 303.1 | 2.0 |
| 01 | 08 | 06 | 218 | 11 | 163.0 | 0.266 | 1.272 | 0.009 | 396. | 315. | -9.0 | 0.11 | 0.74 | 0.18 | 2.10 | 302. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 12 | 179.5 | 0.213 | 1.426 | 0.005 | 503. | 227. | -4.2 | 0.11 | 0.74 | 0.18 | 1.50 | 296. | 6.1 | 305.9 | 2.0 |
| 01 | 08 | 06 | 218 | 13 | 187.0 | 0.359 | 1.561 | 0.005 | 633. | 496. | -19.3 | 0.11 | 0.74 | 0.18 | 3.10 | 216. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 14 | 182.6 | 0.448 | 1.930 | 0.005 | 1226. | 690. | -38.3 | 0.11 | 0.74 | 0.18 | 4.10 | 312. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 15 | 167.5 | 0.356 | 1.917 | 0.005 | 1310. | 494. | -21.0 | 0.11 | 0.74 | 0.18 | 3.10 | 296. | 6.1 | 308.1 | 2.0 |
| 01 | 08 | 06 | 218 | 16 | 141.4 | 0.262 | 1.842 | 0.005 | 1375. | 313. | -9.9 | 0.11 | 0.74 | 0.19 | 2.10 | 300. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 17 | 107.2 | 0.390 | 1.916 | 0.005 | 2051. | 561. | -43.3 | 0.11 | 0.74 | 0.20 | 3.60 | 5. | 6.1 | 307.0 | 2.0 |
| 01 | 08 | 06 | 218 | 18 | 96.8 | 0.412 | 2.015 | 0.005 | 2557. | 609. | -54.6 | 0.06 | 0.74 | 0.24 | 4.90 | 208. | 10.0 | 299.8 | 2.0 |
| 01 | 08 | 06 | 218 | 19 | 21.9 | 0.267 | 1.362 | 0.005 | 3487. | 329. | -65.4 | 0.06 | 0.74 | 0.37 | 3.20 | 186. | 10.0 | 298.2 | 2.0 |
| 01 | 08 | 06 | 218 | 20 | -7.3 | 0.093 | -9.000 | -9.000 | -999. | 100. | 8.4 | 0.06 | 0.74 | 0.75 | 2.40 | 229. | 10.0 | 295.4 | 2.0 |
| 01 | 08 | 06 | 218 | 21 | -3.1 | 0.066 | -9.000 | -9.000 | -999. | 39. | 6.8 | 0.06 | 0.74 | 1.00 | 1.70 | 204. | 10.0 | 293.5 | 2.0 |
| 01 | 08 | 06 | 218 | 22 | -1.6 | 0.047 | -9.000 | -9.000 | -999. | 23. | 4.8 | 0.06 | 0.74 | 1.00 | 1.20 | 224. | 10.0 | 292.4 | 2.0 |
| 01 | 08 | 06 | 218 | 23 | -2.4 | 0.057 | -9.000 | -9.000 | -999. | 31. | 5.7 | 0.05 | 0.74 | 1.00 | 1.50 | 326. | 10.0 | 291.1 | 2.0 |
| 01 | 08 | 06 | 218 | 24 | -1.1 | 0.039 | -9.000 | -9.000 | -999. | 18. | 4.0 | 0.06 | 0.74 | 1.00 | 1.00 | 38. | 10.0 | 290.1 | 2.0 |

First hour of profile data

| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 08 | 06 | 01 | 6.1 | 1 | 132. | 3.60 | 295.4 | -999.0 | -99.00 | -99.00 |

F indicates top of profile (=1) or below (=0)



**MODELOPTs: RegDFAULT CONC ELEV

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CADMIUM IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| AUX | HIGH | 1ST HIGH VALUE IS | 0.00096 | ON 02072106: | AT ( 413600.00, 4302600.00, 1679.02, 2753.55, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00066 | ON 02053004: | AT ( 413400.00, 4302600.00, 1684.32, 2753.55, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 0.00306 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00254 | ON 01100307: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 0.00347 | ON 02071203: | AT ( 414450.00, 4300300.00, 1614.81, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00284 | ON 01082302: | AT ( 414426.40, 4300311.40, 1615.33, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.00483 | ON 02062403: | AT ( 414228.60, 4300361.50, 1617.11, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00427 | ON 02070705: | AT ( 414228.60, 4300386.10, 1617.35, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CADMIUM IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| AUX | HIGH | 1ST HIGH VALUE IS | 0.00028 | ON 02012916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00027 | ON 02061916: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 0.00093 | ON 02071308: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00088 | ON 01092708: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 0.00105 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00088 | ON 01102708: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.00119 | ON 01092808: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |
| | HIGH | 2ND HIGH VALUE IS | 0.00106 | ON 01082708: | AT ( 414404.00, 4300428.20, 1616.27, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR



*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF CADMIUM IN MICROGRAMS/M**3 **

| NETWORK GROUP ID GRID-ID | | | AVERAGE CONC | DATE (YYMMDDHH) | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) | OF TYPE |
|---|---|---|---|---|---|---|
| AUX | HIGH | 1ST HIGH VALUE IS | 0.00022 | ON 02012924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |
| HEATER1 | HIGH | 1ST HIGH VALUE IS | 0.00044 | ON 01092724: | AT ( 414316.40, 4300428.20, 1618.03, 2455.62, 0.00) | DC |
| HEATER2 | HIGH | 1ST HIGH VALUE IS | 0.00051 | ON 01092824: | AT ( 414426.00, 4300428.20, 1615.97, 2455.62, 0.00) | DC |
| ALL | HIGH | 1ST HIGH VALUE IS | 0.00073 | ON 02020924: | AT ( 414228.70, 4300312.40, 1616.79, 2455.62, 0.00) | DC |

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

```
**MODELOPTs:  RegDFAULT CONC                                          ELEV


*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            1 Warning Message(s)
A Total of          151 Informational Message(s)

A Total of         8784 Hours Were Processed

A Total of            5 Calm Hours Identified

A Total of          146 Missing Hours Identified (  1.66 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
CN W305      38 WAKFLG:Stack height > or = EPA formula height for SRCID:           AUX
```

# Appendix L
# CALMET Control Settings

| Variable | Description | Value |
|---|---|---|
| **Input Group 1. General Run Control Parameters** | | |
| IPYR | Beginning year | 2001 |
| IBMO | Beginning month | 1 |
| IBDY | Beginning day | 2 |
| IBHR | Beginning hour | 1 |
| IBTZ | Base Time Zone | 7 |
| IRLG | Length of Run (hours) | 600 |
| IRTYPE | Run Type | 1 |
| LCALGRD | Compute special data fields required | T |
| ITEST | Flag to stop run after SETUP phase | 2 |
| MREG | Test options specified to see if they conform to regulatory values | 1 |
| **Input Group 2. Map Projection and Grid Control Parameters** | | |
| PMAP | Map projection | LCC |
| FEAST | False Easting (km) at the projection origin | 0 |
| FNORTH | False Northing (km) at the projection origin | 0 |
| IUTMZN | UTM zone | -999 |
| UTMHEM | Hemisphere for UTM projection | N |
| RLAT0 | Latitude (decimal degrees) of projection origin | 40N |
| RLON0 | Longitude (decimal degrees) of projection origin | 109.5N |
| XLAT1 | atching parallel(s) of latitude (decimal degrees) for projection | 38N |
| XLAT2 | Matching parallel(s) of latitude (decimal degrees) for projection | 42N |
| DATUM | Datum-region for output coordinates | WGS-84 |
| NX | Rectangular grid defined for projection PMAP | 131 |
| NY | Rectangular grid defined for projection PMAP | 131 |
| DGRIDKM | Grid spacing | 4 |
| XORIGKM | Reference grid coordinate of SOUTHWEST corner (X) | -455.75 |
| YORIGKM | Reference grid coordinate of SOUTHWEST corner (Y) | -509.125 |
| NZ | No. of vertical layers | 10 |
| ZFACE | Cell face heights in arbitrary vertical grid | 0, 20, 40, 80, 160, 320, 640, 1200, 2000, 3000, 3500 |
| **Input Group 3. Output Options** | | |
| LSAVE | Save met fielfs in unformatted output file | T |
| IFORMO | Type of unformatted output file | 1 |
| LPRINT | Print met fields | F |
| IPRINF | Print interval | 1 |
| IUVOUT | Specify which layers of U, V wind component | 10*0 |
| IWOUT | Specify which levels of the W wind component to print | 10*0 |
| ITOUT | Specify which levels of the 3-D temperature field to print | 10*0 |
| STABILITY | Print PGT stability class | 0 |
| USTAR | Print Friction velocity | 0 |
| MONIN | Print Monin-Obukhov length | 0 |
| MIXHT | Print Mixing height | 0 |
| WSTAR | Print Convective velocity scale | 0 |
| PRECIP | Print Precipitation rate | 0 |
| SENSHEAT | Print Sensible heat flux | 0 |
| CONVZI | Print Convective mixing ht. | 0 |
| LDB | Print input meteorological data and internal variables | F |
| NN1 | First time step for which debug data are printed | 1 |
| NN2 | Last time step for which debug data are printed | 1 |
| LDBCST | Print distance to land internal variables | F |
| IOUTD | Control variable for writing the test/debug wind fields to disk files | 0 |
| NZPRN2 | Number of levels, starting at the surface, to print | 0 |
| IPR0 | Print the INTERPOLATED wind components | 0 |
| IPR1 | Print the TERRAIN ADJUSTED surface wind components | 0 |
| IPR2 | Print the SMOOTHED wind components and the INITIAL DIVERGENCE fields | 0 |
| IPR3 | Print the FINAL wind speed and direction fields | 0 |
| IPR4 | Print the FINAL DIVERGENCE fields | 0 |
| IPR5 | Print the winds after KINEMATIC effects are added | 0 |
| IPR6 | Print the winds after the FROUDE NUMBER adjustment is made | 0 |
| IPR7 | Print the winds after SLOPE FLOWS area added | 0 |
| IPR8 | Print the FINAL wind field components | 0 |
| **Input Group 4. Meteorological data options** | | |
| NOOBS | No Observation Mode | 0 |
| NSSTA | Number of Surface Stations | 15 |
| NPSTA | Number of Precipitation stations | 0 |
| ICLOUD | Gridded Cloud Fields | 0 |
| IFORMS | Surface meteorological data file format | 2 |
| IFORMP | Precipitation data file format | 2 |
| IFORMC | Cloud Data format | 2 |

| Variable | Description | Value |
|---|---|---|
| **Input Group 5. Wind Field Options and Parameters** | | |
| IWFCOD | Model selection variable | 1 |
| IFRADJ | Compute Froude number adjustment effects | 1 |
| IKINE | Compute kinematic effects | 0 |
| IOBR | Use O'Brien procedure for adjustment of vertical velocity | 0 |
| ISLOPE | Compute slope flow effects | 1 |
| IEXTRP | Extrapolate surface wind observations to upper layers | -4 |
| ICALM | Extrapolate surface winds even if calm | 0 |
| BIAS | Layer-dependent biases modifying the weights of surface and upper air stations | -1, 0, 0, 0, 0, 0, 0, 0, 0, 0 |
| RMIN2 | Minimum distance from nearest upper air station to surface station for which extrapolation of surface winds at surface station will be allowed | -1 |
| IPROG14 | Use gridded prognostic wind field model output fields as input to the diagnostic wind field model | 14 |
| ISTEPPG | Timestep (hours) of the prognostic model input data | 1 |
| IGFMET | Use coarse CALMET fields as initial guess fields | 0 |
| LVARY | Use varying radius of influence | F |
| RMAX1 | Maximum radius of influence over land in the surface layer | 100 |
| RMAX2 | Maximum radius of influence over land aloft | 200 |
| RMAX3 | Maximum radius of influence over water | 200 |
| RMIN2 | Minimum radius of influence used in the wind field interpolation | 0.1 |
| TERRAD | Radius of influence of terrain features | 15 |
| R1 | Relative weighting of the first guess field and observations in the SURFACE layer | 50 |
| R2 | Relative weighting of the first guess field and observations in the layers ALOFT | 100 |
| RPROG | Relative weighting parameter of the prognostic wind field data | 0 |
| DIVLIM | Maximum acceptable divergence in the divergence minimization procedure | 5.0 E-06 |
| NITER | Maximum number of iterations in the divergence min. procedure | 50 |
| NSMTH | Number of passes in the smoothing procedure | 2, 4, 4, 4, 4, 4, 4, 4, 4, 4 |
| NINTR2 | Maximum numner of stations used in each layer for the interpolation of data to a grid point | 10*99 |
| CRITFN | Critical Froude number | 1 |
| ALPHA | Empirical factor controlling the influence of kinematic effects | 0.1 |
| NBAR | Number of barriers to interpolation of the wind fields | 0 |
| KBAR | Level up to which barriers apply | 10 |
| XBBAR | X coordinate of BEGINNING of each barrier | 0 |
| YBBAR | Y coordinate of BEGINNING of each barrier | 0 |
| XEBAR | X coordinate of ENDING of each barrier | 0 |
| YEBAR | Y coordinate of ENDING of each barrier | 0 |
| IDIOPT1 | Surface Termperature | 0 |
| ISURFT | Surface met. Station to use for the surface temperature | 1 |
| IDIOPT2 | Termperature lapse rate used in the computationa of terrain-induced circulations | 0 |
| IUPT | Upper air station to use for the domain-scale lapse rate | 1 |
| ZUPT | Depth through which the domain-scale lapse rate is computed | 200 |
| IDIOPT3 | Initial Guess Field Winds | 0 |
| IUPWND | Upper air station to use for the initial guess winds | -1 |
| ZUPWND | Bottom and top of layer through which the domain-sclae winds are computed | 1.0, 1000.0 |
| IDIOPT4 | Observed surface wind components for wind field module | 0 |
| IDIOPT5 | Observed upper air wind components for wind field module | 0 |
| LLBREZE | Use lake breeze module | F |
| NBOX | number of lake breeze regions | 0 |
| XG1 | X Grid line 1 defining the region of interest | 0 |
| XG2 | X Grid line 2 defining the region of interest | 0 |
| YG1 | Y Grid line 1 defining the region of interest | 0 |
| YG2 | Y Grid line 2 defining the region of interest | 0 |
| XBCST | X Point defining the coastline | 0 |
| YBCST | Y Point defining the coastline | 0 |
| XECST | X Point defining the coastline | 0 |
| YECST | Y Point defining the coastline | 0 |
| NLB | Number of stations in the region | 0 |
| METBXID | Station ID's in the region | 0 |
| **Input Group 6. Mixing Height, Temperature and Precipitation Parameters** | | |
| CONSTB | Neutral, mechanical equation | 1.41 |
| CONSTE | Convective mixing height equation | 0.15 |
| CONSTN | Stable mixing height equation | 2400 |
| CONSTW | Overwater mixing height equation | 0.16 |
| FCORIOL | Absolute value of Coriolis parameter | 1.0 E-04 |
| IAVEZI | Conduct Spatial averaging | 1 |
| MNMDAV | Max. search refius in averaging process | 1 |
| HAFANG | Half-angle of upwind looking cone for averaging | 30 |
| ILEVZI | Layer of winds used in upwind averaging | 1 |

| Variable | Description | Value |
|---|---|---|
| **Input Group 6. Mixing Height, Temperature and Precipitation Parameters Continued** | | |
| IMIXH | Method to compute the convective mixing height | -1 |
| THRESHL | Threshold buoyancy flux required to sustain convective mixing height growth overland | 0 |
| THRESHW | Threshold buoyancy flux required to sustain convective mixing height growth overwater | 0.05 |
| ITWPROG | Option for overwater lapse rates used in convective mixing height growth | 0 |
| ILUOC3D | Land Use category ocean in 3D.DAT datasets | 16 |
| DPTMIN | Minimum potential temperature lapse rate in the stable layer above the current convective mixing ht. | 0.001 |
| DZZI | Depth of layer above current conv. mixing height through which lapse rate is computed | 200 |
| ZIMIN | Minimum overland mixing height | 50 |
| ZIMAX | Maximum overland mixing height | 3000 |
| ZIMINW | Minimum overwater mixing height | 50 |
| ZIMAXW | Maximum overwater mixing height | 3000 |
| ICOARE | Overwater surface fluxes method and parameters | 0 |
| DSHELF | Coastal/Shallow water length scale | 0 |
| IWARM | COARE warm layer computation | 0 |
| ICOOL | COARE cool skin layer computation | 0 |
| ITPROG | 3D temperature from observations or from prognostic data | 0 |
| IRAD | Interpolation type | 1 |
| TRADKM | Radius of influence for temperature interpolation | 500 |
| NUMTS | Maximum Number of stations to include in temperature interpolation | 5 |
| IAVET | Conduct spatial averaging of temperatures | 1 |
| TGDEFB | Default temperature gradient below the mixing height over water | -0.0098 |
| TGDEFA | Default temperature gradient above the mixing height over water | -0.0045 |
| JWAT1 | Beginning land use categories for temperature interpolation over water | 55 |
| JWAT2 | Ending land use categories for temperature interpolation over water | 55 |
| NFLAGP | Method of interpolation | 2 |
| SIGMAP | Radius of influence | 100 |
| CUTP | Minimum Precip. Rate Cutoff | 0.01 |

# Appendix M
# CALPUFF Control Parameters and Technical Options

| Variable | Description | Value |
|---|---|---|
| **Input Group 1. General Run Control Parameters** | | |
| METRUN | Run all periods (1) or a subset (0)? | 0 |
| IBYR | Beginning year | 2001 |
| IBMO | Beginning month | 1 |
| IBDY | Beginning day | 2 |
| IBHR | Beginning hour | 1 |
| XBTZ | Base Time Zone | 7.0 |
| IRLG | Length of Run (hours) | 8735 |
| NSPEC | Number of chemical species modeled (for MESOPUFF 11 chemistry) | 6 |
| NSE | Number of species emitted | 4 |
| ITEST | Flag to stop run after SETUP phase | 2 |
| MRESTART | Restart options (0=restart) | 2 |
| NRESPD | Number of periods in restart cycle | 0 |
| METFM | Format of input meteorology (1 = CALMET) | 1 |
| MPRFFM | Meteorological Profile Data Period | 1 |
| AVET | Averaging time lateral dispersion parameters (minutes) | 60 |
| PGTIME | PG Averaging Time | 60 |
| **Input Group 2. Technical Options** | | |
| MGAUSS | Near-field vertical distribution (1=Gaussian) | 1 |
| MCTADJ | Terrain adjustments to plume path (3=Plume path) | 3 |
| MCTSG | Do we have subgrid hills (0=No) | 0 |
| MSLUG | Near-field puff treatment (0= No slugs) | 0 |
| MTRANS | Model transitional plume rise (1=Yes) | 1 |
| MTIP | Treat stack tip downwash (1=Yes) | 1 |
| MSHEAR | Treat vertical wind shear (0 = No) | 0 |
| MSPLIT | Allow puffs to split (0=No) | 0 |
| MCHEM | MESOPUFF-II Chemistry (1=Yes) | 1 |
| MAQCHEM | Aqueous phase transformation flag | 0 |
| MWET | Model wet deposition (1=Yes) | 0 |
| MDRY | Model dry deposition (1=Yes) | 0 |
| MTILT | Gravitational settling modeled | 0 |
| MDISP | Method for dispersion coefficients (3=PG&MP) | 3 |
| MTURBVW | Turbulence characterization (only if MDISP = 1 or 5) | 3 |
| MDISP2 | Backup coefficients (only if MDISP=1 or 5) | 3 |
| MTAULY | Method used for Lagrangian timescale for Sigma-y | 0 |
| MTAUADV | Method used for Advective-Decay timescale for Turbulence | 0 |
| MCTURB | Method used to compute turbulence sigma-v & sigma-w using micrometeorological variables | 1 |
| MROUGH | Adjust PG for surface roughness (0=No) | 0 |
| MPARTL | Model partial plume penetration (0=No) | 1 |
| MTINV | Elevated inversion strength(0=compute from data) | 0 |
| MPDF | Use PDF for convective dispersion (0=No) | 0 |
| MSGTIBL | Use TIBL module (0=No) | 0 |
| MBCON | Boundary conditions (concentration) modeled | 0 |
| MSOURCE | Individual source contributions saved | 0 |
| MFOG | 0 | |
| MREG | Regulatory default checks (1=Yes) | 1 |
| **Input Group 3. Species List** | | |
| CSPECn | Names of species modeled (for MESOPUFF II, must be $SO_2$, $SO_4$, $NO_X$, $HNO_3$, $NO_3$) | $SO_2$, $SO_4$, $NO_X$, $HNO_3$, $NO_3$, $PM_{10}$ |
| **Input Group 4. Grid Control Parameters** | | |
| PMAP | Map Projection | LCC |
| FEAST | False Easting (km) at the projection origin | 0 |
| FNORTH | False Northing (km) at the projection origin | 0 |
| IUTMZN | UTM zone (1 to 60) | 12 |
| UTMHEM | Hemisphere for UTM projection | N |
| RLAT0 | Latitude (decimal degrees) of projection origin | 40N |
| RLONG0 | Longitude (decimal degrees) of projection origin | 109.5W |
| XLAT1 | Matching parallel(s) of latitude (decimal degrees) for projection | 38N |
| XLAT2 | Matching parallel(s) of latitude (decimal degrees) for projection | 42N |
| DATUM | Datum-region for output coordinates | WGS-84 |
| NX | Number of east-west grids of input meteorology | 131 |
| NY | Number of north-south grids of input meteorology | 131 |
| NZ | Number of vertical layers of input meteorology | 10 |

| Variable | Description | Value |
|---|---|---|
| **Input Group 4. Grid Control Parameters Continued** | | |
| DGRIDKM | Meteorology grid spacing (km) | 4 |
| ZFACE | Vertical cell face heights of input meteorology | 0, 20, 40, 80, 160, 320, 640, 1200, 2000, 3000, 3500 |
| XORIGKM | Southwest corner (east-west) of input meteorology | -455.75 |
| YORIGIM | Southwest corner (north-south) of input meteorology | -509.125 |
| IBCOMP | Southwest X-index of computational domain | 1 |
| JBCOMP | Southwest Y-index of computational domain | 1 |
| IECOMP | Northeast X-index of computational domain | 131 |
| JECOMP | Northeast Y-index of computational domain | 131 |
| LSAMP | Use gridded receptors (T=Yes) | F |
| IBSAMP | Southwest X-index of receptor grid | 1 |
| JBSAMP | Southwest Y-index of receptor grid | 1 |
| IESAMP | Northeast X-index of receptor grid | 131 |
| JESAMP | Northeast Y-index of receptor grid | 131 |
| MESHDN | Nesting factor of the sampling grid | 1 |
| **Input Group 5. Output Options**. | | |
| ICON | Output Concentrations (1=Yes) | 1 |
| IDRY | Output dry deposition flux (1=Yes) | 0 |
| IWET | Output wet deposition flux (1=Yes) | 0 |
| IT2D | 2D Temperature | 0 |
| IRHO | 2D Density | 0 |
| IVIS | Output RH for visibility calculations (1=Yes) | 1 |
| LCOMPRS | Use compression option in output (T=Yes) | T |
| IQAPLOT | Create a standard series of output files | 1 |
| IMFLX | Mass flux across specified boundaries | 0 |
| IMBAL | Mass balance for each species reported hourly | 0 |
| ICPRT | Print concentrations (0=No) | 1 |
| IDPRT | Print dry deposition fluxes (0=No) | 0 |
| IWPRT | Print wet deposition fluzes (0=No) | 0 |
| ICFRQ | Concentration print interval (1=hourly) | 1 |
| IDFRQ | Dry flux print interval (1=hourly) | 1 |
| IWFRQ | Wet flux print interval (1=hourly) | 1 |
| IPRTU | Print output units | 3 |
| IMESG | Status messages to screen (1=Yes) | 2 |
| LDEBUG | Turn on debug tracking (F=no) | F |
| IPFDEB | First puff to track | 1 |
| NPFDEB | Number of puffs to track | 1 |
| NN1 | Met period to start output | 1 |
| NN2 | Met period to end output | 10 |
| **Input Group 6a, 6b, & 6c. Subgrid Scale Complex Terrain Inputs** | | |
| NHILL | Number of terrain features | 0 |
| NCTREC | Number of special complex terrain receptors | 0 |
| MHILL | Terrain and CTSG Receptor data for CTSG hills input in CTDM format | 0 |
| XHILL2M | Factor to convert horizontal dimensions in meters | 1 |
| ZHILL2M | Factor to convert vertical dimensions in meters | 1 |
| XCTDMKM | X-origin of CTDM system relative to CALPUFF coordinate system, in Kilometers | 0 |
| YCTDMKM | Y-origin of CTDM system relative to CALPUFF coordinate system, in Kilometers | 0 |
| **Input Group 7. Chemical Parameters for Dry Deposition of Gases** | | |
| Dry Gas Dep | Chemical parameters of gaseous deposition species | No Deposition Analysis Required Per FLAG 2010 Q/D Test |
| **Input Group 8. Size Parameters for Dry Deposition of Particles** | | |
| Dry Part. Dep | Chemical parameters of particulate deposition species | No Deposition Analysis Required Per FLAG 2010 Q/D Test |
| **Input Group 9. Miscellaneous Dry Deposition of Parameters** | | |
| RCUTC | Reference cuticle resistance (s/cm) | 30 |
| RGR | Reference ground resistance (s/cm) | 10 |
| REACTR | Reference reactivity | 8 |
| NINT | Number of particle-size intervals | 9 |
| IVEG | Vegetative state (1=active and unstressed) | 1 |
| **Input Group 10. Wet Deposition Parameters** | | |
| Wet Dep | Wet deposition parameters | No Deposition Analysis Required Per FLAG 2010 Q/D Test |

| Variable | Description | Value |
|---|---|---|
| **Input Group 11. Chemistry Parameters** | | |
| MOZ | Ozone background (1=read from ozone.dat) | 1 |
| BCKO3 | Ozone default (ppb) (Use only for missing data) | 12*80 |
| BCKNH3 | Ammonia background (ppb) | 12*10 |
| RNITE1 | Nighttime $SO_2$ loss rate (%/hr) | 0.2 |
| RNITE2 | Nighttime $NO_x$ loss rate (%/hr) | 2 |
| RNITE3 | Nighttime $HNO_3$ loss rate (%/hr) | 2 |
| MH202 | H2O2 data input option | 1 |
| BCKH202 | Monthly H2O2 concentrations | 12*1 |
| **Input Group 12. Misc. Dispersion and Computational Parameters** | | |
| SYTDEP | Horizontal size (m) to switch to time dependence | 550 |
| MHFTSZ | Use Heffter for vertical dispersion (0=No) | 0 |
| JSUP | PG Stability class above mixed layer | 5 |
| CONK1 | Stable dispersion constant | 0.01 |
| CONK2 | Neutral dispersion constant | 0.1 |
| TBD | Transition for downwash algorithms | 0.5 |
| IURB1 | Beginning urban landuse type | 10 |
| IURB2 | Ending urban landuse type | 19 |
| ILANDUIN | Land use category for modeling domain | 20 |
| Z0IN | Roughness length (m) for modeling domain | 0.25 |
| XLAIIN | Leaf area index for modeling domain | 3 |
| ELEVIN | Elevation above sea level (m) | 0 |
| XLATIN | Latitude (degrees) for met location | -999 |
| XLONIN | Longitude (degrees) for met location | -999 |
| ANEMHT | Anemometer height (m) | 10 |
| ISIGMAV | Form of lateral turbulance data in PROFILE.DAT file | 1 |
| IMIXCTFM | Choice of mixing heights | 0 |
| XMXLEN | Maximum length of a slug in units of DGRIDKM | 1 |
| XSAMLEN | Maximum travel distance of puff/slug during one sampling step (units of DGRIDKM) | 1 |
| MXNEW | Maximum number of puffs per hour | 99 |
| MXSAM | Maximum sampling steps per hour | 99 |
| NCOUNT | Number of iterations used when computing the transport wind | 2 |
| SYMIN | Minimum sigma y for new puff/slug | 1 |
| SZMIN | Minimum sigma z for a new puff/slug | 1 |
| CDIV | Divergence criteria | 0.0, 0.0 |
| WSCALM | Minimum wind speed allowed for non-calm conditions | 0.5 |
| XMAXZI | Maximum mixing height | 3000 |
| XMINZI | Minimum mixing height | 50 |
| WSCAT | Upper bounds 1$^{st}$ 5 wind speed classes (m/s) | 1.54, 3.09, 5.14, 8.23, 10.8 |
| PLX0 | Wind speed power-law exponents | 0.07, 0.07, 0.10, 0.15, 0.35, 0.55 |
| PTGO | Potential temperature gradients PG E and F (deg/km) | 0.020, 0.035 |
| PPC | Default plume path coefficients | 0.5, 0.5, 0.5, 0.5, 0.35, 0.35 |
| SL2PF | Maximum Sy/puff length | 10 |
| NSPLIT | Number of puffs when puffs split | 3 |
| IRESPLIT | Hours when puff are eligible to split | 17 |
| ZISPLIT | Previous hour's mixing height (minimum) (m) | 100 |
| ROLDMAX | Previous Max mixing height/current mixing height ratio, must be less then this value to allow puff split | 0.25 |
| NSPLITH | Number of puffs that result every time a puff is split | 5 |
| SYSPLITH | Minimum sigma-y (Grid Cells Units) of puff before it may be split | 1 |
| SHSPLITH | Minimum puff elongation rate (SYSPLITH/hr) due to wind shear, before it may be split | 2 |
| CNSPLITH | Minimum concentration (g/m^3) of each species in puff before it may be split | 1.0 E-07 |
| EPSSLUG | Convergence criterion for SLUG sampling integration | 1.0 E-04 |
| EPSAREA | Fractional convergence criterion for numerical AREA source integration | 1.0 E-06 |
| DSRISE | rajectory step-length (m) used for numerical rise integration | 1 |
| HTMINBC | Minimum height (m) to which BC puffs are mixed as they are emitted | 500 |
| RSAMPBC | Search radius (km) about a receptor for sampling nearest BC puff | 10 |
| MDEPBC | Near-Surface depletion adjustment to concentration profile used when sampling BC puffs | 1 |

# Appendix N
# Far-field Modeling Concentration Results for 2001 through 2003

**$NO_2$**

```
*****************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Arches

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                  OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                                 ! NDRECP =  115*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                           Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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  Visibility Processing is NOT Selected



  Output options
                      Units requested for output:   (ug/m**3)
```

```
 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                   1-hr averages:     T
                                   3-hr averages:     F
                                  24-hr averages:     F
                                 NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                   Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                   Echo tables for selected days:     F
                   Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                         Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2001 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8735

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2001\POST_2001_NOX_AR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2001\SPC2001.CON


 ------------------------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2001\2001_ARCH_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_AR.DAT

*****************************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                    2 RANK                    3 RANK                    4 RANK
      1       -9.046  -154.175   2.7369E-02 (2001,282,0800)  1.2509E-02 (2001,282,0900)  1.2247E-02 (2001,055,0700)  1.2173E-02 (2001,055,0600)
      2       -7.599  -154.176   2.6801E-02 (2001,282,0800)  1.3272E-02 (2001,282,0900)  1.2798E-02 (2001,055,0700)  1.2301E-02 (2001,055,0600)
      3       -6.152  -154.178   2.6110E-02 (2001,282,0800)  1.3998E-02 (2001,282,0900)  1.3918E-02 (2001,296,0500)  1.3295E-02 (2001,055,0700)
      4       -3.257  -154.179   2.4320E-02 (2001,282,0800)  1.5282E-02 (2001,282,0900)  1.3937E-02 (2001,055,0700)  1.1461E-02 (2001,055,0600)
      5      -10.491  -152.321   2.7877E-02 (2001,282,0800)  1.4932E-02 (2001,296,0500)  1.3059E-02 (2001,282,0700)  1.0966E-02 (2001,282,0900)
      6       -9.044  -152.322   2.7570E-02 (2001,282,0800)  1.4764E-02 (2001,296,0500)  1.1956E-02 (2001,282,0700)  1.1777E-02 (2001,282,0900)
      7       -7.597  -152.324   2.7094E-02 (2001,282,0800)  1.2569E-02 (2001,282,0900)  1.2095E-02 (2001,296,0500)  1.1218E-02 (2001,055,0700)
      8       -6.150  -152.325   2.6447E-02 (2001,282,0800)  1.3332E-02 (2001,282,0900)  1.1690E-02 (2001,055,0700)  1.0572E-02 (2001,055,0600)
      9       -4.703  -152.326   2.5689E-02 (2001,282,0800)  1.4043E-02 (2001,282,0900)  1.2111E-02 (2001,055,0700)  1.1858E-02 (2001,296,0500)
     10       -3.256  -152.327   2.4789E-02 (2001,282,0800)  1.4695E-02 (2001,282,0900)  1.3814E-02 (2001,296,0500)  1.2475E-02 (2001,055,0700)
     11       -1.809  -152.328   2.3806E-02 (2001,282,0800)  1.5279E-02 (2001,282,0900)  1.3507E-02 (2001,296,0500)  1.2779E-02 (2001,055,0700)
     12       -0.362  -152.328   2.2741E-02 (2001,282,0800)  1.5777E-02 (2001,282,0900)  1.2890E-02 (2001,055,0700)  9.9281E-03 (2001,055,0600)
     13      -11.936  -150.466   2.7762E-02 (2001,282,0800)  1.5538E-02 (2001,282,0700)  1.2871E-02 (2001,296,0500)  9.3836E-03 (2001,282,0900)
     14      -10.489  -150.468   2.7742E-02 (2001,282,0800)  1.4309E-02 (2001,282,0700)  1.0341E-02 (2001,296,0500)  1.0204E-02 (2001,282,0900)
     15       -9.042  -150.470   2.7523E-02 (2001,282,0800)  1.3111E-02 (2001,282,0700)  1.1026E-02 (2001,282,0900)  1.0189E-02 (2001,296,0500)
     16       -7.595  -150.472   2.7144E-02 (2001,282,0800)  1.1960E-02 (2001,282,0700)  1.1832E-02 (2001,282,0900)  1.0043E-02 (2001,296,0500)
     17       -6.149  -150.473   2.6605E-02 (2001,282,0800)  1.2608E-02 (2001,282,0900)  1.0862E-02 (2001,282,0700)  1.0195E-02 (2001,055,0700)
     18       -4.702  -150.474   2.5895E-02 (2001,282,0800)  1.3346E-02 (2001,282,0900)  1.2344E-02 (2001,296,0500)  1.0598E-02 (2001,055,0700)
     19       -3.255  -150.475   2.5067E-02 (2001,282,0800)  1.4114E-02 (2001,296,0500)  1.4031E-02 (2001,282,0900)  1.0956E-02 (2001,055,0700)
     20       -1.808  -150.475   2.4123E-02 (2001,282,0800)  1.4645E-02 (2001,282,0900)  1.3773E-02 (2001,296,0500)  1.1268E-02 (2001,055,0700)
     21        1.085  -150.475   2.1973E-02 (2001,282,0800)  1.5632E-02 (2001,282,0900)  1.1731E-02 (2001,055,0700)  1.1095E-02 (2001,296,0500)
     22      -11.933  -148.614   2.7325E-02 (2001,282,0800)  1.6834E-02 (2001,282,0700)  1.0976E-02 (2001,296,0500)  8.7455E-03 (2001,020,0800)
     23      -10.486  -148.616   2.7408E-02 (2001,282,0800)  1.5503E-02 (2001,282,0700)  1.3219E-02 (2001,296,0500)  9.4533E-03 (2001,282,0900)
     24       -9.040  -148.618   2.7303E-02 (2001,282,0800)  1.5739E-02 (2001,296,0500)  1.4230E-02 (2001,282,0700)  1.0264E-02 (2001,282,0900)
     25       -7.594  -148.619   2.6993E-02 (2001,282,0800)  1.2987E-02 (2001,282,0700)  1.2775E-02 (2001,296,0500)  1.1066E-02 (2001,282,0900)
     26       -6.147  -148.621   2.6517E-02 (2001,282,0800)  1.2542E-02 (2001,296,0500)  1.1851E-02 (2001,282,0900)  1.1811E-02 (2001,282,0700)
     27       -4.701  -148.622   2.5889E-02 (2001,282,0800)  1.4740E-02 (2001,296,0500)  1.2597E-02 (2001,282,0900)  1.0696E-02 (2001,282,0700)
     28       -3.254  -148.622   2.5117E-02 (2001,282,0800)  1.4364E-02 (2001,296,0500)  1.3300E-02 (2001,282,0900)  9.9608E-03 (2001,296,0600)
     29       -1.808  -148.623   2.4222E-02 (2001,282,0800)  1.3983E-02 (2001,296,0500)  1.3934E-02 (2001,282,0900)  1.0230E-02 (2001,296,0600)
     30       -0.362  -148.623   2.3222E-02 (2001,282,0800)  1.4505E-02 (2001,282,0900)  1.3545E-02 (2001,296,0500)  1.0442E-02 (2001,296,0600)
     31      -11.930  -146.762   2.6695E-02 (2001,282,0800)  1.8046E-02 (2001,282,0700)  1.3863E-02 (2001,296,0500)  9.6199E-03 (2001,147,0500)
     32      -10.484  -146.764   2.6858E-02 (2001,282,0800)  1.6639E-02 (2001,282,0700)  1.6547E-02 (2001,296,0500)  9.3163E-03 (2001,296,0400)
     33       -9.038  -146.765   2.6829E-02 (2001,282,0800)  1.6211E-02 (2001,296,0500)  1.5277E-02 (2001,282,0700)  9.6151E-03 (2001,296,0600)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 34 | -7.592 | -146.767 | 2.6610E-02 (2001,282,0800) | 1.5816E-02 (2001,296,0500) | 1.3964E-02 (2001,282,0700) | 1.0298E-02 (2001,282,0900) |
| 35 | -6.146 | -146.768 | 2.6209E-02 (2001,282,0800) | 1.5423E-02 (2001,296,0500) | 1.2718E-02 (2001,282,0700) | 1.1072E-02 (2001,282,0900) |
| 36 | -4.700 | -146.769 | 2.5642E-02 (2001,282,0800) | 1.5012E-02 (2001,296,0500) | 1.1816E-02 (2001,282,0900) | 1.1540E-02 (2001,282,0700) |
| 37 | -3.254 | -146.770 | 2.4924E-02 (2001,282,0800) | 1.4593E-02 (2001,296,0500) | 1.2520E-02 (2001,282,0900) | 1.0885E-02 (2001,296,0600) |
| 38 | -1.808 | -146.770 | 2.4090E-02 (2001,282,0800) | 1.4147E-02 (2001,296,0500) | 1.3177E-02 (2001,282,0900) | 1.1137E-02 (2001,296,0600) |
| 39 | -0.362 | -146.771 | 2.3132E-02 (2001,282,0800) | 1.3765E-02 (2001,282,0900) | 9.1929E-03 (2001,296,0500) | 8.8087E-03 (2001,055,0700) |
| 40 | -10.481 | -144.911 | 2.6083E-02 (2001,282,0800) | 1.7683E-02 (2001,282,0700) | 1.7061E-02 (2001,296,0500) | 1.0210E-02 (2001,296,0600) |
| 41 | -9.036 | -144.913 | 2.6138E-02 (2001,282,0800) | 1.6641E-02 (2001,296,0500) | 1.6257E-02 (2001,282,0700) | 1.0590E-02 (2001,296,0600) |
| 42 | -7.590 | -144.915 | 2.5988E-02 (2001,282,0800) | 1.6201E-02 (2001,296,0500) | 1.4895E-02 (2001,282,0700) | 1.0947E-02 (2001,296,0600) |
| 43 | -6.144 | -144.916 | 2.5657E-02 (2001,282,0800) | 1.5731E-02 (2001,296,0500) | 1.3597E-02 (2001,282,0700) | 1.1276E-02 (2001,296,0600) |
| 44 | -4.699 | -144.917 | 2.5158E-02 (2001,282,0800) | 1.5258E-02 (2001,296,0500) | 1.2370E-02 (2001,282,0700) | 1.1578E-02 (2001,296,0600) |
| 45 | -3.253 | -144.918 | 2.4516E-02 (2001,282,0800) | 1.4763E-02 (2001,296,0500) | 1.1858E-02 (2001,296,0600) | 1.1726E-02 (2001,282,0900) |
| 46 | -1.807 | -144.918 | 2.3721E-02 (2001,282,0800) | 1.4245E-02 (2001,296,0500) | 1.2376E-02 (2001,282,0900) | 1.2055E-02 (2001,296,0600) |
| 47 | -10.479 | -143.059 | 2.5117E-02 (2001,282,0800) | 1.8645E-02 (2001,282,0700) | 1.7571E-02 (2001,296,0500) | 1.1249E-02 (2001,296,0600) |
| 48 | -9.033 | -143.061 | 2.5216E-02 (2001,282,0800) | 1.7169E-02 (2001,282,0700) | 1.7076E-02 (2001,296,0500) | 1.1646E-02 (2001,296,0600) |
| 49 | -7.588 | -143.062 | 2.5141E-02 (2001,282,0800) | 1.6540E-02 (2001,296,0500) | 1.5769E-02 (2001,282,0700) | 1.1994E-02 (2001,296,0600) |
| 50 | -6.143 | -143.064 | 2.4884E-02 (2001,282,0800) | 1.5992E-02 (2001,296,0500) | 1.4412E-02 (2001,282,0700) | 1.2304E-02 (2001,296,0600) |
| 51 | -4.697 | -143.065 | 2.4450E-02 (2001,282,0800) | 1.5442E-02 (2001,296,0500) | 1.3144E-02 (2001,282,0700) | 1.2585E-02 (2001,296,0600) |
| 52 | -3.252 | -143.065 | 2.3881E-02 (2001,282,0800) | 1.4891E-02 (2001,296,0500) | 1.2831E-02 (2001,296,0600) | 1.1939E-02 (2001,282,0700) |
| 53 | -1.807 | -143.066 | 2.3183E-02 (2001,282,0800) | 1.2010E-02 (2001,296,0500) | 1.1555E-02 (2001,282,0900) | 1.0917E-02 (2001,296,0600) |
| 54 | -10.476 | -141.207 | 2.3941E-02 (2001,282,0800) | 1.9474E-02 (2001,282,0700) | 1.8066E-02 (2001,296,0500) | 1.2388E-02 (2001,296,0600) |
| 55 | -9.031 | -141.209 | 2.4108E-02 (2001,282,0800) | 1.7959E-02 (2001,282,0700) | 1.7469E-02 (2001,296,0500) | 1.2768E-02 (2001,296,0600) |
| 56 | -7.586 | -141.210 | 2.4090E-02 (2001,282,0800) | 1.6824E-02 (2001,296,0500) | 1.6521E-02 (2001,282,0700) | 1.3088E-02 (2001,296,0600) |
| 57 | -6.141 | -141.211 | 2.3902E-02 (2001,282,0800) | 1.6215E-02 (2001,296,0500) | 1.5136E-02 (2001,282,0700) | 1.3398E-02 (2001,296,0600) |
| 58 | -4.696 | -141.212 | 2.3562E-02 (2001,282,0800) | 1.3831E-02 (2001,282,0700) | 1.3070E-02 (2001,296,0500) | 1.1572E-02 (2001,296,0600) |
| 59 | -3.251 | -141.213 | 2.3060E-02 (2001,282,0800) | 1.2604E-02 (2001,282,0700) | 1.2540E-02 (2001,296,0500) | 1.1727E-02 (2001,296,0600) |
| 60 | -1.806 | -141.214 | 2.2446E-02 (2001,282,0800) | 1.2058E-02 (2001,296,0500) | 1.1881E-02 (2001,296,0600) | 1.1459E-02 (2001,282,0700) |
| 61 | -0.361 | -141.214 | 2.1720E-02 (2001,282,0800) | 1.2017E-02 (2001,296,0600) | 1.1574E-02 (2001,296,0500) | 1.1302E-02 (2001,282,0900) |
| 62 | -14.808 | -139.347 | 2.4868E-02 (2001,282,0700) | 2.0903E-02 (2001,282,0800) | 2.0484E-02 (2001,296,0500) | 1.5313E-02 (2001,147,0500) |
| 63 | -13.363 | -139.350 | 2.3283E-02 (2001,282,0700) | 2.1637E-02 (2001,282,0800) | 1.9847E-02 (2001,296,0500) | 1.4366E-02 (2001,147,0500) |
| 64 | -11.918 | -139.352 | 2.2203E-02 (2001,282,0800) | 2.1685E-02 (2001,282,0700) | 1.9191E-02 (2001,296,0500) | 1.3415E-02 (2001,147,0500) |
| 65 | -10.474 | -139.354 | 2.2601E-02 (2001,282,0800) | 2.0132E-02 (2001,282,0700) | 1.8504E-02 (2001,296,0500) | 1.3567E-02 (2001,296,0600) |
| 66 | -9.029 | -139.356 | 2.2819E-02 (2001,282,0800) | 1.8613E-02 (2001,282,0700) | 1.7789E-02 (2001,296,0500) | 1.3925E-02 (2001,296,0600) |
| 67 | -7.584 | -139.358 | 2.2872E-02 (2001,282,0800) | 1.7149E-02 (2001,282,0700) | 1.7105E-02 (2001,296,0500) | 1.4273E-02 (2001,296,0600) |
| 68 | -6.140 | -139.359 | 2.2759E-02 (2001,282,0800) | 1.6426E-02 (2001,296,0500) | 1.5754E-02 (2001,282,0700) | 1.4588E-02 (2001,296,0600) |
| 69 | -4.695 | -139.360 | 2.2488E-02 (2001,282,0800) | 1.5755E-02 (2001,296,0500) | 1.4864E-02 (2001,296,0600) | 1.4431E-02 (2001,282,0700) |
| 70 | -3.250 | -139.361 | 2.2085E-02 (2001,282,0800) | 1.5058E-02 (2001,296,0600) | 1.5051E-02 (2001,296,0500) | 1.3185E-02 (2001,282,0700) |
| 71 | -1.806 | -139.361 | 2.1562E-02 (2001,282,0800) | 1.5228E-02 (2001,296,0600) | 1.4400E-02 (2001,296,0500) | 1.2033E-02 (2001,282,0700) |
| 72 | -0.361 | -139.361 | 2.0924E-02 (2001,282,0800) | 1.5371E-02 (2001,296,0600) | 1.3746E-02 (2001,296,0500) | 1.0957E-02 (2001,282,0700) |
| 73 | 1.083 | -139.361 | 2.0206E-02 (2001,282,0800) | 1.5443E-02 (2001,296,0600) | 1.3110E-02 (2001,296,0500) | 1.0981E-02 (2001,282,0900) |
| 74 | -14.804 | -137.495 | 2.5352E-02 (2001,282,0700) | 2.1245E-02 (2001,296,0500) | 1.9386E-02 (2001,282,0800) | 1.6219E-02 (2001,147,0500) |
| 75 | -13.360 | -137.498 | 2.3769E-02 (2001,282,0700) | 2.0495E-02 (2001,296,0500) | 2.0120E-02 (2001,282,0800) | 1.5192E-02 (2001,147,0500) |
| 76 | -11.915 | -137.500 | 2.2193E-02 (2001,282,0700) | 2.0704E-02 (2001,282,0800) | 1.9695E-02 (2001,296,0500) | 1.4389E-02 (2001,296,0600) |
| 77 | -10.471 | -137.502 | 2.1136E-02 (2001,282,0800) | 2.0636E-02 (2001,282,0700) | 1.8915E-02 (2001,296,0500) | 1.4821E-02 (2001,296,0600) |
| 78 | -9.027 | -137.504 | 2.1404E-02 (2001,282,0800) | 1.9119E-02 (2001,282,0700) | 1.8146E-02 (2001,296,0500) | 1.5221E-02 (2001,296,0600) |
| 79 | -7.583 | -137.506 | 2.1517E-02 (2001,282,0800) | 1.7664E-02 (2001,282,0700) | 1.7390E-02 (2001,296,0500) | 1.5586E-02 (2001,296,0600) |
| 80 | -6.138 | -137.507 | 2.1482E-02 (2001,282,0800) | 1.6641E-02 (2001,296,0500) | 1.6269E-02 (2001,282,0700) | 1.5888E-02 (2001,296,0600) |
| 81 | -4.694 | -137.508 | 2.1298E-02 (2001,282,0800) | 1.6089E-02 (2001,296,0600) | 1.5860E-02 (2001,296,0500) | 1.4950E-02 (2001,282,0700) |
| 82 | -3.250 | -137.509 | 2.0980E-02 (2001,282,0800) | 1.6262E-02 (2001,296,0600) | 1.5111E-02 (2001,296,0500) | 1.3708E-02 (2001,282,0700) |
| 83 | -1.805 | -137.509 | 2.0553E-02 (2001,282,0800) | 1.6395E-02 (2001,296,0600) | 1.4379E-02 (2001,296,0500) | 1.2559E-02 (2001,282,0700) |
| 84 | -16.245 | -135.640 | 2.7158E-02 (2001,282,0700) | 2.2765E-02 (2001,296,0500) | 1.8072E-02 (2001,147,0500) | 1.6994E-02 (2001,282,0800) |
| 85 | -14.801 | -135.643 | 2.5618E-02 (2001,282,0700) | 2.1944E-02 (2001,296,0500) | 1.7840E-02 (2001,282,0800) | 1.6987E-02 (2001,147,0500) |
| 86 | -13.357 | -135.645 | 2.4062E-02 (2001,282,0700) | 2.1058E-02 (2001,296,0500) | 1.8565E-02 (2001,282,0800) | 1.5901E-02 (2001,147,0500) |
| 87 | -11.913 | -135.648 | 2.2509E-02 (2001,282,0700) | 2.0187E-02 (2001,296,0500) | 1.9157E-02 (2001,282,0800) | 1.5743E-02 (2001,296,0600) |
| 88 | -10.469 | -135.650 | 2.0982E-02 (2001,282,0700) | 1.9612E-02 (2001,282,0800) | 1.9306E-02 (2001,296,0500) | 1.6181E-02 (2001,296,0600) |
| 89 | -9.025 | -135.652 | 1.9925E-02 (2001,282,0800) | 1.9486E-02 (2001,282,0700) | 1.8462E-02 (2001,296,0500) | 1.6586E-02 (2001,296,0600) |
| 90 | -7.581 | -135.653 | 2.0094E-02 (2001,282,0800) | 1.8057E-02 (2001,282,0700) | 1.7620E-02 (2001,296,0500) | 1.6939E-02 (2001,296,0600) |
| 91 | -6.137 | -135.655 | 2.0124E-02 (2001,282,0800) | 1.7159E-02 (2001,296,0600) | 1.6743E-02 (2001,296,0500) | 1.6683E-02 (2001,282,0700) |
| 92 | -4.693 | -135.656 | 2.0022E-02 (2001,282,0800) | 1.7362E-02 (2001,296,0600) | 1.5907E-02 (2001,296,0500) | 1.5386E-02 (2001,282,0700) |
| 93 | -3.249 | -135.656 | 1.9800E-02 (2001,282,0800) | 1.7507E-02 (2001,296,0600) | 1.5109E-02 (2001,296,0500) | 1.4173E-02 (2001,282,0700) |
| 94 | -1.805 | -135.657 | 1.9456E-02 (2001,282,0800) | 1.5171E-02 (2001,296,0600) | 1.3036E-02 (2001,282,0700) | 1.2101E-02 (2001,296,0500) |
| 95 | -16.241 | -133.788 | 2.7154E-02 (2001,282,0700) | 2.3574E-02 (2001,296,0500) | 1.8729E-02 (2001,147,0500) | 1.6289E-02 (2001,304,0800) |
| 96 | -14.797 | -133.791 | 2.5659E-02 (2001,282,0700) | 2.2574E-02 (2001,296,0500) | 1.7603E-02 (2001,147,0500) | 1.6270E-02 (2001,282,0800) |
| 97 | -13.353 | -133.793 | 2.4146E-02 (2001,282,0700) | 2.1599E-02 (2001,296,0500) | 1.6982E-02 (2001,282,0800) | 1.6685E-02 (2001,296,0600) |
| 98 | -11.910 | -133.796 | 2.2647E-02 (2001,282,0700) | 2.0633E-02 (2001,296,0500) | 1.7576E-02 (2001,282,0800) | 1.7187E-02 (2001,296,0600) |
| 99 | -10.466 | -133.798 | 2.1166E-02 (2001,282,0700) | 1.9719E-02 (2001,296,0500) | 1.8048E-02 (2001,282,0800) | 1.7676E-02 (2001,296,0600) |
| 100 | -9.023 | -133.799 | 1.9725E-02 (2001,282,0700) | 1.8739E-02 (2001,296,0500) | 1.8399E-02 (2001,282,0800) | 1.8027E-02 (2001,296,0600) |
| 101 | -7.579 | -133.801 | 1.8624E-02 (2001,282,0800) | 1.8334E-02 (2001,282,0700) | 1.8287E-02 (2001,296,0600) | 1.7750E-02 (2001,296,0500) |
| 102 | -4.692 | -133.803 | 1.8694E-02 (2001,282,0800) | 1.8691E-02 (2001,296,0600) | 1.5932E-02 (2001,296,0500) | 1.5760E-02 (2001,282,0700) |
| 103 | -3.248 | -133.804 | 1.8557E-02 (2001,282,0800) | 1.6413E-02 (2001,296,0600) | 1.4582E-02 (2001,282,0700) | 1.2813E-02 (2001,296,0500) |
| 104 | -14.793 | -131.938 | 2.5494E-02 (2001,282,0700) | 2.3141E-02 (2001,296,0500) | 1.8076E-02 (2001,304,0800) | 1.8056E-02 (2001,147,0500) |
| 105 | -13.350 | -131.941 | 2.4056E-02 (2001,282,0700) | 2.2109E-02 (2001,296,0500) | 1.8222E-02 (2001,296,0600) | 1.7672E-02 (2001,304,0800) |
| 106 | -11.907 | -131.943 | 2.2630E-02 (2001,282,0700) | 2.1069E-02 (2001,296,0500) | 1.8759E-02 (2001,296,0600) | 1.7191E-02 (2001,304,0800) |
| 107 | -10.464 | -131.945 | 2.1215E-02 (2001,282,0700) | 1.9946E-02 (2001,296,0500) | 1.9106E-02 (2001,296,0600) | 1.6488E-02 (2001,282,0800) |
| 108 | -9.020 | -131.947 | 1.9848E-02 (2001,282,0700) | 1.9431E-02 (2001,296,0600) | 1.8866E-02 (2001,296,0500) | 1.6873E-02 (2001,282,0800) |
| 109 | -16.233 | -130.083 | 2.6476E-02 (2001,282,0700) | 2.4838E-02 (2001,296,0500) | 2.1498E-02 (2001,304,0800) | 1.9530E-02 (2001,147,0500) |
| 110 | -14.790 | -130.086 | 2.5146E-02 (2001,282,0700) | 2.3655E-02 (2001,296,0500) | 2.0887E-02 (2001,304,0800) | 1.9220E-02 (2001,296,0600) |
| 111 | -13.347 | -130.089 | 2.3806E-02 (2001,282,0700) | 2.2485E-02 (2001,296,0500) | 2.0109E-02 (2001,304,0800) | 1.9766E-02 (2001,296,0600) |
| 112 | -11.904 | -130.091 | 2.2469E-02 (2001,282,0700) | 2.1261E-02 (2001,296,0500) | 2.0204E-02 (2001,296,0600) | 1.8819E-02 (2001,304,0800) |
| 113 | -17.671 | -128.228 | 2.7053E-02 (2001,282,0700) | 2.6622E-02 (2001,296,0500) | 2.4923E-02 (2001,304,0800) | 2.0833E-02 (2001,147,0500) |
| 114 | -16.229 | -128.231 | 2.5868E-02 (2001,282,0700) | 2.5277E-02 (2001,296,0500) | 2.3830E-02 (2001,304,0800) | 2.0156E-02 (2001,296,0600) |
| 115 | -14.786 | -128.234 | 2.4648E-02 (2001,282,0700) | 2.3983E-02 (2001,296,0500) | 2.2875E-02 (2001,304,0800) | 2.0759E-02 (2001,296,0600) |

**********
CALPOST Version 5.6394 Level 070622
**********

8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1 | -9.046 | -154.175 | 8.0744E-05 | 58 | -4.696 | -141.212 | 7.5734E-05 |
| 2 | -7.599 | -154.176 | 7.8883E-05 | 59 | -3.251 | -141.213 | 7.2892E-05 |
| 3 | -6.152 | -154.178 | 7.7448E-05 | 60 | -1.806 | -141.214 | 7.0431E-05 |
| 4 | -3.257 | -154.179 | 6.9150E-05 | 61 | -0.361 | -141.214 | 6.8124E-05 |
| 5 | -10.491 | -152.321 | 8.6602E-05 | 62 | -14.808 | -139.347 | 1.0237E-04 |
| 6 | -9.044 | -152.322 | 8.3139E-05 | 63 | -13.363 | -139.350 | 9.8698E-05 |
| 7 | -7.597 | -152.324 | 7.8437E-05 | 64 | -11.918 | -139.352 | 9.5867E-05 |
| 8 | -6.150 | -152.325 | 7.4492E-05 | 65 | -10.474 | -139.354 | 9.1886E-05 |
| 9 | -4.703 | -152.326 | 7.4034E-05 | 66 | -9.029 | -139.356 | 8.7410E-05 |
| 10 | -3.256 | -152.327 | 7.2626E-05 | 67 | -7.584 | -139.358 | 8.4283E-05 |
| 11 | -1.809 | -152.328 | 7.1160E-05 | 68 | -6.140 | -139.359 | 8.2072E-05 |
| 12 | -0.362 | -152.328 | 6.4614E-05 | 69 | -4.695 | -139.360 | 7.9646E-05 |
| 13 | -11.936 | -150.466 | 8.7175E-05 | 70 | -3.250 | -139.361 | 7.5809E-05 |
| 14 | -10.489 | -150.468 | 8.2213E-05 | 71 | -1.806 | -139.361 | 7.3262E-05 |
| 15 | -9.042 | -150.470 | 7.9463E-05 | 72 | -0.361 | -139.361 | 7.1244E-05 |
| 16 | -7.595 | -150.472 | 7.7118E-05 | 73 | 1.083 | -139.361 | 6.8632E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | -6.149 | -150.473 | 7.4514E-05 | 74 | -14.804 | -137.495 | 1.0498E-04 |
| 18 | -4.702 | -150.474 | 7.4141E-05 | 75 | -13.360 | -137.498 | 1.0108E-04 |
| 19 | -3.255 | -150.475 | 7.3922E-05 | 76 | -11.915 | -137.500 | 9.6427E-05 |
| 20 | -1.808 | -150.475 | 7.2863E-05 | 77 | -10.471 | -137.502 | 9.2761E-05 |
| 21 | 1.085 | -150.475 | 6.5213E-05 | 78 | -9.027 | -137.504 | 8.9807E-05 |
| 22 | -11.933 | -148.614 | 8.5402E-05 | 79 | -7.583 | -137.506 | 8.7286E-05 |
| 23 | -10.486 | -148.616 | 8.4573E-05 | 80 | -6.138 | -137.507 | 8.4575E-05 |
| 24 | -9.040 | -148.618 | 8.3566E-05 | 81 | -4.694 | -137.508 | 8.0357E-05 |
| 25 | -7.594 | -148.619 | 7.8757E-05 | 82 | -3.250 | -137.509 | 7.7052E-05 |
| 26 | -6.147 | -148.621 | 7.6241E-05 | 83 | -1.805 | -137.509 | 7.3311E-05 |
| 27 | -4.701 | -148.622 | 7.5761E-05 | 84 | -16.245 | -135.640 | 1.1028E-04 |
| 28 | -3.254 | -148.622 | 7.4275E-05 | 85 | -14.801 | -135.643 | 1.0668E-04 |
| 29 | -1.808 | -148.623 | 7.3000E-05 | 86 | -13.357 | -135.645 | 1.0210E-04 |
| 30 | -0.362 | -148.623 | 6.8219E-05 | 87 | -11.913 | -135.648 | 9.8137E-05 |
| 31 | -11.930 | -146.762 | 8.7683E-05 | 88 | -10.469 | -135.650 | 9.4452E-05 |
| 32 | -10.484 | -146.764 | 8.6177E-05 | 89 | -9.025 | -135.652 | 9.1651E-05 |
| 33 | -9.038 | -146.765 | 8.4467E-05 | 90 | -7.581 | -135.653 | 8.8867E-05 |
| 34 | -7.592 | -146.767 | 8.1254E-05 | 91 | -6.137 | -135.655 | 8.4176E-05 |
| 35 | -6.146 | -146.768 | 7.8790E-05 | 92 | -4.693 | -135.656 | 8.0637E-05 |
| 36 | -4.700 | -146.769 | 7.7170E-05 | 93 | -3.249 | -135.656 | 7.7473E-05 |
| 37 | -3.254 | -146.770 | 7.5618E-05 | 94 | -1.805 | -135.657 | 7.2452E-05 |
| 38 | -1.808 | -146.770 | 7.3459E-05 | 95 | -16.241 | -133.788 | 1.1359E-04 |
| 39 | -0.362 | -146.771 | 6.5624E-05 | 96 | -14.797 | -133.791 | 1.0812E-04 |
| 40 | -10.481 | -144.911 | 8.7995E-05 | 97 | -13.353 | -133.793 | 1.0369E-04 |
| 41 | -9.036 | -144.913 | 8.5473E-05 | 98 | -11.910 | -133.796 | 1.0013E-04 |
| 42 | -7.590 | -144.915 | 8.3092E-05 | 99 | -10.466 | -133.798 | 9.7682E-05 |
| 43 | -6.144 | -144.916 | 8.0445E-05 | 100 | -9.023 | -133.799 | 9.3518E-05 |
| 44 | -4.699 | -144.917 | 7.8207E-05 | 101 | -7.579 | -133.801 | 8.8637E-05 |
| 45 | -3.253 | -144.918 | 7.6026E-05 | 102 | -4.692 | -133.803 | 8.1216E-05 |
| 46 | -1.807 | -144.918 | 7.1919E-05 | 103 | -3.248 | -133.804 | 7.6277E-05 |
| 47 | -10.479 | -143.059 | 8.9422E-05 | 104 | -14.793 | -131.938 | 1.0962E-04 |
| 48 | -9.033 | -143.061 | 8.6933E-05 | 105 | -13.350 | -131.941 | 1.0634E-04 |
| 49 | -7.588 | -143.062 | 8.3929E-05 | 106 | -11.907 | -131.943 | 1.0327E-04 |
| 50 | -6.143 | -143.064 | 8.0463E-05 | 107 | -10.464 | -131.945 | 9.7505E-05 |
| 51 | -4.697 | -143.065 | 7.7758E-05 | 108 | -9.020 | -131.947 | 9.2882E-05 |
| 52 | -3.252 | -143.065 | 7.5076E-05 | 109 | -16.233 | -130.083 | 1.1678E-04 |
| 53 | -1.807 | -143.066 | 7.0022E-05 | 110 | -14.790 | -130.086 | 1.1219E-04 |
| 54 | -10.476 | -141.207 | 9.1303E-05 | 111 | -13.347 | -130.089 | 1.0759E-04 |
| 55 | -9.031 | -141.209 | 8.8036E-05 | 112 | -11.904 | -130.091 | 1.0206E-04 |
| 56 | -7.586 | -141.210 | 8.3315E-05 | 113 | -17.671 | -128.228 | 1.2419E-04 |
| 57 | -6.141 | -141.211 | 8.0452E-05 | 114 | -16.229 | -128.231 | 1.1777E-04 |
| | | | | 115 | -14.786 | -128.234 | 1.1224E-04 |

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CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 5 | -10.491 | -152.321 | DISCRETE | 2.7877E-02 (2001,282,0800) | RANK 1 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 2.6622E-02 (2001,296,0500) | RANK 2 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 2.4923E-02 (2001,304,0800) | RANK 3 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 2.0833E-02 (2001,147,0500) | RANK 4 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 1.2419E-04 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Bryce Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  115*0, 213*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************




  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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1 1 1 1 1 1 1 1

  Visibility Processing is NOT Selected
```

```
 Output options
                    Units requested for output:   (ug/m**3)

 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                  1-hr averages:     T
                                  3-hr averages:     F
                                 24-hr averages:     F
                               NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                  Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                  Echo tables for selected days:     F
                  Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                               Plot files created:     T
                        Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2001 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8735

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2001\POST_2001_NOX_BR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2001\SPC2001.CON


 ------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2001\2001_BRYCE_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_BR.DAT

*************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                     2 RANK                     3 RANK                     4 RANK
    116     -243.891  -280.107   6.3444E-02 (2001,124,0500)  5.9319E-02 (2001,122,0400)  5.5994E-02 (2001,124,0600)  4.0769E-02 (2001,124,0700)
    117     -243.156  -280.129   6.4956E-02 (2001,124,0500)  6.0103E-02 (2001,122,0400)  5.6930E-02 (2001,124,0600)  4.0980E-02 (2001,124,0700)
    118     -242.420  -280.152   6.6289E-02 (2001,124,0500)  6.0502E-02 (2001,122,0400)  5.7714E-02 (2001,124,0600)  4.1090E-02 (2001,124,0700)
    119     -241.685  -280.175   6.7462E-02 (2001,124,0500)  6.0504E-02 (2001,122,0400)  5.8336E-02 (2001,124,0600)  4.1069E-02 (2001,124,0700)
    120     -243.862  -279.180   6.3881E-02 (2001,124,0500)  5.9046E-02 (2001,122,0400)  5.5605E-02 (2001,124,0600)  4.0957E-02 (2001,019,0300)
    121     -243.127  -279.203   6.5441E-02 (2001,124,0500)  5.9899E-02 (2001,122,0400)  5.6556E-02 (2001,124,0600)  4.1007E-02 (2001,124,0700)
    122     -242.392  -279.226   6.6837E-02 (2001,124,0500)  6.0349E-02 (2001,122,0400)  5.7332E-02 (2001,124,0600)  4.1087E-02 (2001,124,0700)
    123     -241.656  -279.248   6.8054E-02 (2001,124,0500)  6.0394E-02 (2001,122,0400)  5.7946E-02 (2001,124,0600)  4.1049E-02 (2001,124,0700)
    124     -240.921  -279.271   6.9105E-02 (2001,124,0500)  6.0036E-02 (2001,122,0400)  5.8392E-02 (2001,124,0600)  4.0892E-02 (2001,124,0700)
    125     -243.834  -278.254   6.4153E-02 (2001,124,0500)  5.8710E-02 (2001,122,0400)  5.5297E-02 (2001,124,0600)  4.1241E-02 (2001,019,0300)
    126     -243.098  -278.277   6.5762E-02 (2001,124,0500)  5.9610E-02 (2001,122,0400)  5.6216E-02 (2001,124,0600)  4.0981E-02 (2001,124,0700)
    127     -242.363  -278.299   6.7204E-02 (2001,124,0500)  6.0111E-02 (2001,122,0400)  5.6977E-02 (2001,124,0600)  4.1044E-02 (2001,124,0700)
    128     -241.628  -278.322   6.8464E-02 (2001,124,0500)  6.0219E-02 (2001,122,0400)  5.7576E-02 (2001,124,0600)  4.0985E-02 (2001,124,0700)
    129     -240.892  -278.345   6.9555E-02 (2001,124,0500)  5.9926E-02 (2001,122,0400)  5.8005E-02 (2001,124,0600)  4.0807E-02 (2001,124,0700)
    130     -240.157  -278.367   7.0417E-02 (2001,124,0500)  5.9222E-02 (2001,122,0400)  5.8263E-02 (2001,124,0600)  4.0511E-02 (2001,124,0700)
    131     -243.805  -277.328   6.4238E-02 (2001,124,0500)  5.8271E-02 (2001,122,0400)  5.5063E-02 (2001,124,0600)  4.1454E-02 (2001,019,0300)
    132     -243.070  -277.350   6.5892E-02 (2001,124,0500)  5.9234E-02 (2001,122,0400)  5.5965E-02 (2001,124,0600)  4.0929E-02 (2001,124,0700)
    133     -242.335  -277.373   6.7376E-02 (2001,124,0500)  5.9811E-02 (2001,122,0400)  5.6740E-02 (2001,124,0600)  4.0973E-02 (2001,124,0700)
    134     -241.599  -277.396   6.8676E-02 (2001,124,0500)  5.9975E-02 (2001,122,0400)  5.7318E-02 (2001,124,0600)  4.1608E-02 (2001,124,0400)
    135     -240.864  -277.418   6.9780E-02 (2001,124,0500)  5.9723E-02 (2001,122,0400)  5.7726E-02 (2001,124,0600)  4.2216E-02 (2001,124,0400)
    136     -240.129  -277.441   7.0677E-02 (2001,124,0500)  5.9086E-02 (2001,122,0400)  5.7893E-02 (2001,124,0600)  4.2699E-02 (2001,124,0400)
    137     -243.776  -276.401   6.4103E-02 (2001,124,0500)  5.7766E-02 (2001,122,0400)  5.4890E-02 (2001,124,0600)  4.1636E-02 (2001,019,0300)
    138     -243.041  -276.424   6.5797E-02 (2001,124,0500)  5.8786E-02 (2001,122,0400)  5.5774E-02 (2001,124,0600)  4.2168E-02 (2001,124,0400)
    139     -242.306  -276.447   6.7320E-02 (2001,124,0500)  5.9417E-02 (2001,122,0400)  5.6498E-02 (2001,124,0600)  4.3073E-02 (2001,124,0400)
    140     -241.571  -276.469   6.8657E-02 (2001,124,0500)  5.9653E-02 (2001,122,0400)  5.7054E-02 (2001,124,0600)  4.3859E-02 (2001,124,0400)
    141     -240.836  -276.492   6.9796E-02 (2001,124,0500)  5.9474E-02 (2001,122,0400)  5.7436E-02 (2001,124,0600)  4.4533E-02 (2001,124,0400)
    142     -240.101  -276.514   7.0726E-02 (2001,124,0500)  5.8890E-02 (2001,122,0400)  5.7643E-02 (2001,124,0600)  4.5058E-02 (2001,124,0400)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 143 | -243.747 | -275.475 | 6.3814E-02 (2001,124,0500) | 5.7177E-02 (2001,122,0400) | 5.4766E-02 (2001,124,0600) | 4.3236E-02 (2001,124,0400) |
| 144 | -243.012 | -275.498 | 6.5543E-02 (2001,124,0500) | 5.8252E-02 (2001,122,0400) | 5.5628E-02 (2001,124,0600) | 4.4344E-02 (2001,124,0400) |
| 145 | -242.277 | -275.520 | 6.7101E-02 (2001,124,0500) | 5.8956E-02 (2001,122,0400) | 5.6350E-02 (2001,124,0600) | 4.5319E-02 (2001,124,0400) |
| 146 | -241.542 | -275.543 | 6.8472E-02 (2001,124,0500) | 5.9255E-02 (2001,122,0400) | 5.6879E-02 (2001,124,0600) | 4.6166E-02 (2001,124,0400) |
| 147 | -240.807 | -275.565 | 6.9644E-02 (2001,124,0500) | 5.9153E-02 (2001,122,0400) | 5.7234E-02 (2001,124,0600) | 4.6879E-02 (2001,124,0400) |
| 148 | -240.072 | -275.588 | 7.0602E-02 (2001,124,0500) | 5.8621E-02 (2001,122,0400) | 5.7432E-02 (2001,124,0600) | 4.7449E-02 (2001,124,0400) |
| 149 | -244.454 | -274.526 | 6.1411E-02 (2001,124,0500) | 5.5016E-02 (2001,122,0400) | 5.3741E-02 (2001,124,0600) | 4.4052E-02 (2001,124,0400) |
| 150 | -243.719 | -274.548 | 6.3325E-02 (2001,124,0500) | 5.6497E-02 (2001,122,0400) | 5.4751E-02 (2001,124,0600) | 4.5352E-02 (2001,124,0400) |
| 151 | -242.984 | -274.571 | 6.5085E-02 (2001,124,0500) | 5.7633E-02 (2001,122,0400) | 5.5589E-02 (2001,124,0600) | 4.6521E-02 (2001,124,0400) |
| 152 | -244.425 | -273.599 | 6.0776E-02 (2001,124,0500) | 5.4204E-02 (2001,122,0400) | 5.3887E-02 (2001,124,0600) | 4.6070E-02 (2001,124,0400) |
| 153 | -243.690 | -273.622 | 6.2717E-02 (2001,124,0500) | 5.5761E-02 (2001,122,0400) | 5.4863E-02 (2001,124,0600) | 4.7454E-02 (2001,124,0400) |
| 154 | -242.955 | -273.645 | 6.4506E-02 (2001,124,0500) | 5.6970E-02 (2001,122,0400) | 5.5674E-02 (2001,124,0600) | 4.8704E-02 (2001,124,0400) |
| 155 | -244.396 | -272.673 | 5.9923E-02 (2001,124,0500) | 5.4113E-02 (2001,124,0600) | 5.3379E-02 (2001,122,0400) | 4.8068E-02 (2001,124,0400) |
| 156 | -243.661 | -272.696 | 6.1885E-02 (2001,124,0500) | 5.5062E-02 (2001,124,0600) | 5.5003E-02 (2001,122,0400) | 4.9526E-02 (2001,124,0400) |
| 157 | -242.927 | -272.719 | 6.3695E-02 (2001,124,0500) | 5.6281E-02 (2001,122,0400) | 5.5843E-02 (2001,124,0600) | 5.0860E-02 (2001,124,0400) |
| 158 | -244.367 | -271.747 | 5.8961E-02 (2001,124,0500) | 5.4411E-02 (2001,124,0600) | 5.2508E-02 (2001,122,0400) | 4.9999E-02 (2001,124,0400) |
| 159 | -243.633 | -271.769 | 6.0937E-02 (2001,124,0500) | 5.5331E-02 (2001,124,0600) | 5.4164E-02 (2001,122,0400) | 5.1547E-02 (2001,124,0400) |
| 160 | -242.898 | -271.792 | 6.2763E-02 (2001,124,0500) | 5.6078E-02 (2001,124,0600) | 5.5501E-02 (2001,122,0400) | 5.2982E-02 (2001,124,0400) |
| 161 | -244.339 | -270.820 | 5.7842E-02 (2001,124,0500) | 5.4808E-02 (2001,124,0600) | 5.1901E-02 (2001,124,0400) | 5.1548E-02 (2001,122,0400) |
| 162 | -243.604 | -270.843 | 5.9828E-02 (2001,124,0500) | 5.5709E-02 (2001,124,0600) | 5.3541E-02 (2001,124,0400) | 5.3262E-02 (2001,122,0400) |
| 163 | -242.869 | -270.866 | 6.1666E-02 (2001,124,0500) | 5.6433E-02 (2001,124,0600) | 5.5045E-02 (2001,124,0400) | 5.4677E-02 (2001,122,0400) |
| 164 | -242.135 | -270.889 | 6.3337E-02 (2001,124,0500) | 5.6959E-02 (2001,124,0600) | 5.6418E-02 (2001,124,0400) | 5.5740E-02 (2001,122,0400) |
| 165 | -244.310 | -269.894 | 5.6657E-02 (2001,124,0500) | 5.5319E-02 (2001,124,0600) | 5.3738E-02 (2001,124,0400) | 5.0579E-02 (2001,122,0400) |
| 166 | -243.575 | -269.917 | 5.8647E-02 (2001,124,0500) | 5.6198E-02 (2001,124,0600) | 5.5488E-02 (2001,124,0400) | 5.2358E-02 (2001,122,0400) |
| 167 | -242.841 | -269.940 | 6.0501E-02 (2001,124,0500) | 5.7101E-02 (2001,124,0400) | 5.6872E-02 (2001,124,0600) | 5.3841E-02 (2001,122,0400) |
| 168 | -242.106 | -269.962 | 6.2181E-02 (2001,124,0500) | 5.8554E-02 (2001,124,0400) | 5.7355E-02 (2001,124,0600) | 5.4989E-02 (2001,122,0400) |
| 169 | -242.812 | -269.013 | 5.9277E-02 (2001,124,0500) | 5.9050E-02 (2001,124,0400) | 5.7430E-02 (2001,124,0600) | 5.2948E-02 (2001,122,0400) |
| 170 | -242.078 | -269.036 | 6.0959E-02 (2001,124,0500) | 6.0570E-02 (2001,124,0400) | 5.7868E-02 (2001,124,0600) | 5.4176E-02 (2001,122,0400) |
| 171 | -241.343 | -269.059 | 6.2463E-02 (2001,124,0500) | 6.1910E-02 (2001,124,0400) | 5.8104E-02 (2001,124,0600) | 5.5042E-02 (2001,122,0400) |
| 172 | -240.609 | -269.081 | 6.3772E-02 (2001,124,0500) | 6.3058E-02 (2001,124,0400) | 5.8139E-02 (2001,124,0600) | 5.5546E-02 (2001,122,0400) |
| 173 | -239.874 | -269.104 | 6.4871E-02 (2001,124,0500) | 6.4000E-02 (2001,124,0400) | 5.7972E-02 (2001,124,0600) | 5.5668E-02 (2001,122,0400) |
| 174 | -242.049 | -268.110 | 6.2517E-02 (2001,124,0400) | 5.9632E-02 (2001,124,0500) | 5.8400E-02 (2001,124,0600) | 5.3322E-02 (2001,122,0400) |
| 175 | -241.315 | -268.132 | 6.3934E-02 (2001,124,0400) | 6.1118E-02 (2001,124,0500) | 5.8582E-02 (2001,124,0600) | 5.4283E-02 (2001,122,0400) |
| 176 | -240.580 | -268.155 | 6.5151E-02 (2001,124,0400) | 6.2430E-02 (2001,124,0500) | 5.8556E-02 (2001,124,0600) | 5.4880E-02 (2001,122,0400) |
| 177 | -239.846 | -268.177 | 6.6153E-02 (2001,124,0400) | 6.3536E-02 (2001,124,0500) | 5.8350E-02 (2001,124,0600) | 5.5116E-02 (2001,122,0400) |
| 178 | -239.112 | -268.200 | 6.6931E-02 (2001,124,0400) | 6.4423E-02 (2001,124,0500) | 5.7918E-02 (2001,124,0600) | 5.5771E-02 (2001,100,0300) |
| 179 | -242.020 | -267.183 | 6.4347E-02 (2001,124,0400) | 5.9013E-02 (2001,124,0600) | 5.8268E-02 (2001,124,0500) | 5.2433E-02 (2001,122,0400) |
| 180 | -241.286 | -267.206 | 6.5841E-02 (2001,124,0400) | 5.9769E-02 (2001,124,0500) | 5.9140E-02 (2001,124,0600) | 5.3473E-02 (2001,122,0400) |
| 181 | -240.552 | -267.228 | 6.7126E-02 (2001,124,0400) | 6.1081E-02 (2001,124,0500) | 5.9053E-02 (2001,124,0600) | 5.4163E-02 (2001,122,0400) |
| 182 | -239.818 | -267.251 | 6.8188E-02 (2001,124,0400) | 6.2187E-02 (2001,124,0500) | 5.8780E-02 (2001,124,0600) | 5.5035E-02 (2001,100,0300) |
| 183 | -239.083 | -267.273 | 6.9033E-02 (2001,124,0400) | 6.3078E-02 (2001,124,0500) | 5.8278E-02 (2001,124,0600) | 5.7231E-02 (2001,100,0300) |
| 184 | -241.258 | -266.280 | 6.7646E-02 (2001,124,0400) | 5.9723E-02 (2001,124,0600) | 5.8412E-02 (2001,124,0500) | 5.2622E-02 (2001,122,0400) |
| 185 | -240.524 | -266.302 | 6.9000E-02 (2001,124,0400) | 5.9719E-02 (2001,124,0500) | 5.9575E-02 (2001,124,0600) | 5.3920E-02 (2001,100,0300) |
| 186 | -239.789 | -266.325 | 7.0123E-02 (2001,124,0400) | 6.0824E-02 (2001,124,0500) | 5.9234E-02 (2001,124,0600) | 5.6298E-02 (2001,100,0300) |
| 187 | -239.055 | -266.347 | 7.1003E-02 (2001,124,0400) | 6.1697E-02 (2001,124,0500) | 5.8661E-02 (2001,124,0600) | 5.8578E-02 (2001,100,0300) |
| 188 | -238.321 | -266.369 | 7.1630E-02 (2001,124,0400) | 6.2365E-02 (2001,124,0500) | 6.0712E-02 (2001,100,0300) | 5.7885E-02 (2001,124,0600) |
| 189 | -237.587 | -266.392 | 7.1997E-02 (2001,124,0400) | 6.2802E-02 (2001,124,0500) | 6.2684E-02 (2001,100,0300) | 5.6917E-02 (2001,124,0600) |
| 190 | -236.853 | -266.414 | 7.2098E-02 (2001,124,0400) | 6.4484E-02 (2001,100,0300) | 6.3002E-02 (2001,124,0500) | 5.6169E-02 (2001,122,0300) |
| 191 | -236.118 | -266.436 | 7.1952E-02 (2001,124,0400) | 6.6118E-02 (2001,100,0300) | 6.2964E-02 (2001,124,0500) | 6.1625E-02 (2001,122,0300) |
| 192 | -235.384 | -266.458 | 7.1521E-02 (2001,124,0400) | 6.7535E-02 (2001,100,0300) | 6.6966E-02 (2001,122,0300) | 6.2688E-02 (2001,124,0500) |
| 193 | -234.650 | -266.480 | 7.2066E-02 (2001,122,0300) | 7.0828E-02 (2001,124,0400) | 6.8731E-02 (2001,100,0300) | 6.2158E-02 (2001,124,0500) |
| 194 | -233.916 | -266.502 | 7.6816E-02 (2001,122,0300) | 6.9860E-02 (2001,124,0400) | 6.9697E-02 (2001,100,0300) | 6.1391E-02 (2001,124,0500) |
| 195 | -233.181 | -266.524 | 8.1113E-02 (2001,122,0300) | 7.0443E-02 (2001,100,0300) | 6.8670E-02 (2001,124,0400) | 6.0415E-02 (2001,124,0500) |
| 196 | -232.447 | -266.545 | 8.4789E-02 (2001,122,0300) | 7.0941E-02 (2001,100,0300) | 6.7248E-02 (2001,124,0400) | 5.9888E-02 (2001,331,0700) |
| 197 | -231.713 | -266.567 | 8.7742E-02 (2001,122,0300) | 7.1195E-02 (2001,100,0300) | 6.5611E-02 (2001,124,0400) | 6.3756E-02 (2001,331,0700) |
| 198 | -241.229 | -265.353 | 6.9326E-02 (2001,124,0400) | 6.0338E-02 (2001,124,0600) | 5.7088E-02 (2001,124,0500) | 5.2405E-02 (2001,100,0300) |
| 199 | -240.495 | -265.376 | 7.0749E-02 (2001,124,0400) | 6.0128E-02 (2001,124,0600) | 5.8386E-02 (2001,124,0500) | 5.4975E-02 (2001,100,0300) |
| 200 | -239.761 | -265.398 | 7.1934E-02 (2001,124,0400) | 5.9697E-02 (2001,124,0600) | 5.9484E-02 (2001,124,0500) | 5.7431E-02 (2001,100,0300) |
| 201 | -239.027 | -265.421 | 7.2867E-02 (2001,124,0400) | 6.0351E-02 (2001,124,0500) | 5.9781E-02 (2001,100,0300) | 5.9051E-02 (2001,124,0600) |
| 202 | -238.293 | -265.443 | 7.3538E-02 (2001,124,0400) | 6.1996E-02 (2001,100,0300) | 6.0974E-02 (2001,124,0500) | 5.8199E-02 (2001,124,0600) |
| 203 | -237.559 | -265.465 | 7.3938E-02 (2001,124,0400) | 6.4036E-02 (2001,100,0300) | 6.1413E-02 (2001,124,0500) | 5.7152E-02 (2001,124,0600) |
| 204 | -236.825 | -265.487 | 7.4062E-02 (2001,124,0400) | 6.5898E-02 (2001,100,0300) | 6.1617E-02 (2001,124,0500) | 5.5917E-02 (2001,124,0600) |
| 205 | -236.090 | -265.509 | 7.3908E-02 (2001,124,0400) | 6.7588E-02 (2001,100,0300) | 6.1585E-02 (2001,124,0500) | 6.0951E-02 (2001,122,0300) |
| 206 | -235.356 | -265.532 | 7.3478E-02 (2001,124,0400) | 6.9061E-02 (2001,100,0300) | 6.6533E-02 (2001,122,0300) | 6.1299E-02 (2001,124,0500) |
| 207 | -234.622 | -265.553 | 7.2777E-02 (2001,124,0400) | 7.1900E-02 (2001,122,0300) | 7.0320E-02 (2001,100,0300) | 6.0801E-02 (2001,124,0500) |
| 208 | -233.888 | -265.575 | 7.6904E-02 (2001,122,0300) | 7.1811E-02 (2001,124,0400) | 7.1316E-02 (2001,100,0300) | 6.0076E-02 (2001,124,0500) |
| 209 | -233.154 | -265.597 | 8.1439E-02 (2001,122,0300) | 7.2066E-02 (2001,100,0300) | 7.0591E-02 (2001,124,0400) | 5.9179E-02 (2001,331,0700) |
| 210 | -232.420 | -265.619 | 8.5420E-02 (2001,122,0300) | 7.2565E-02 (2001,100,0300) | 6.9130E-02 (2001,124,0400) | 6.3318E-02 (2001,331,0700) |
| 211 | -231.686 | -265.641 | 8.8666E-02 (2001,122,0300) | 7.2809E-02 (2001,100,0300) | 6.7443E-02 (2001,124,0400) | 6.7275E-02 (2001,331,0700) |
| 212 | -240.467 | -264.449 | 7.2361E-02 (2001,124,0400) | 6.0654E-02 (2001,124,0600) | 5.7083E-02 (2001,124,0500) | 5.5874E-02 (2001,100,0300) |
| 213 | -239.733 | -264.472 | 7.3609E-02 (2001,124,0400) | 6.0155E-02 (2001,124,0600) | 5.8420E-02 (2001,100,0300) | 5.8169E-02 (2001,124,0500) |
| 214 | -238.999 | -264.494 | 7.4596E-02 (2001,124,0400) | 6.0847E-02 (2001,100,0300) | 5.9428E-02 (2001,124,0600) | 5.9046E-02 (2001,124,0500) |
| 215 | -238.265 | -264.517 | 7.5311E-02 (2001,124,0400) | 6.3134E-02 (2001,100,0300) | 5.9658E-02 (2001,124,0500) | 5.8528E-02 (2001,124,0600) |
| 216 | -237.531 | -264.539 | 7.5746E-02 (2001,124,0400) | 6.5251E-02 (2001,100,0300) | 6.0091E-02 (2001,124,0500) | 5.7418E-02 (2001,124,0600) |
| 217 | -236.797 | -264.561 | 7.5895E-02 (2001,124,0400) | 6.7204E-02 (2001,100,0300) | 6.0293E-02 (2001,124,0500) | 5.6112E-02 (2001,124,0600) |
| 218 | -236.063 | -264.583 | 7.5756E-02 (2001,124,0400) | 6.8928E-02 (2001,100,0300) | 6.0261E-02 (2001,124,0500) | 6.0125E-02 (2001,122,0300) |
| 219 | -235.329 | -264.605 | 7.5331E-02 (2001,124,0400) | 7.0440E-02 (2001,100,0300) | 6.5859E-02 (2001,122,0300) | 5.9977E-02 (2001,124,0500) |
| 220 | -234.595 | -264.627 | 7.4623E-02 (2001,124,0400) | 7.1710E-02 (2001,100,0300) | 7.1428E-02 (2001,122,0300) | 5.9484E-02 (2001,124,0500) |
| 221 | -233.860 | -264.649 | 7.6687E-02 (2001,122,0300) | 7.3640E-02 (2001,124,0400) | 7.2760E-02 (2001,100,0300) | 5.8767E-02 (2001,124,0500) |
| 222 | -233.126 | -264.671 | 8.1516E-02 (2001,122,0300) | 7.3530E-02 (2001,100,0300) | 7.2392E-02 (2001,124,0400) | 6.2628E-02 (2001,331,0700) |
| 223 | -232.392 | -264.693 | 8.5774E-02 (2001,122,0300) | 7.4039E-02 (2001,100,0300) | 7.0895E-02 (2001,124,0400) | 6.6782E-02 (2001,331,0700) |
| 224 | -231.658 | -264.714 | 8.9342E-02 (2001,122,0300) | 7.4291E-02 (2001,100,0300) | 7.0772E-02 (2001,331,0700) | 6.9163E-02 (2001,124,0400) |
| 225 | -238.971 | -263.568 | 7.6152E-02 (2001,124,0400) | 6.1787E-02 (2001,100,0300) | 5.9866E-02 (2001,124,0600) | 5.7754E-02 (2001,124,0500) |
| 226 | -238.237 | -263.590 | 7.6912E-02 (2001,124,0400) | 6.4138E-02 (2001,100,0300) | 5.8893E-02 (2001,124,0600) | 5.8400E-02 (2001,124,0500) |
| 227 | -237.503 | -263.613 | 7.7400E-02 (2001,124,0400) | 6.6313E-02 (2001,100,0300) | 5.8802E-02 (2001,124,0500) | 5.7695E-02 (2001,124,0600) |
| 228 | -236.769 | -263.635 | 7.7576E-02 (2001,124,0400) | 6.8324E-02 (2001,100,0300) | 5.8996E-02 (2001,124,0500) | 5.6313E-02 (2001,124,0600) |
| 229 | -236.035 | -263.657 | 7.7454E-02 (2001,124,0400) | 7.0103E-02 (2001,100,0300) | 5.9021E-02 (2001,122,0300) | 5.8959E-02 (2001,124,0500) |
| 230 | -235.301 | -263.679 | 7.7034E-02 (2001,124,0400) | 7.1670E-02 (2001,100,0300) | 6.4919E-02 (2001,122,0300) | 5.8691E-02 (2001,124,0500) |
| 231 | -234.567 | -263.701 | 7.6322E-02 (2001,124,0400) | 7.2990E-02 (2001,100,0300) | 7.0704E-02 (2001,122,0300) | 5.8153E-02 (2001,124,0500) |
| 232 | -233.833 | -263.723 | 7.6203E-02 (2001,122,0300) | 7.5325E-02 (2001,124,0400) | 7.4056E-02 (2001,100,0300) | 6.1590E-02 (2001,331,0700) |
| 233 | -233.099 | -263.745 | 8.1320E-02 (2001,122,0300) | 7.4847E-02 (2001,100,0300) | 7.4054E-02 (2001,124,0400) | 6.5996E-02 (2001,331,0700) |
| 234 | -232.365 | -263.766 | 8.5875E-02 (2001,122,0300) | 7.5376E-02 (2001,100,0300) | 7.2524E-02 (2001,124,0400) | 7.0183E-02 (2001,331,0700) |
| 235 | -231.631 | -263.788 | 8.9780E-02 (2001,122,0300) | 7.5629E-02 (2001,100,0300) | 7.4128E-02 (2001,331,0700) | 7.0751E-02 (2001,124,0400) |
| 236 | -238.208 | -262.664 | 7.8387E-02 (2001,124,0400) | 6.4987E-02 (2001,100,0300) | 5.9192E-02 (2001,124,0600) | 5.7176E-02 (2001,124,0500) |
| 237 | -237.475 | -262.686 | 7.8895E-02 (2001,124,0400) | 6.7228E-02 (2001,100,0300) | 5.7923E-02 (2001,124,0600) | 5.7584E-02 (2001,124,0500) |
| 238 | -236.741 | -262.708 | 7.9097E-02 (2001,124,0400) | 6.9294E-02 (2001,100,0300) | 5.7764E-02 (2001,124,0500) | 5.6468E-02 (2001,124,0600) |
| 239 | -236.007 | -262.731 | 7.8992E-02 (2001,124,0400) | 7.1136E-02 (2001,100,0300) | 5.7717E-02 (2001,124,0500) | 5.7689E-02 (2001,122,0300) |
| 240 | -235.273 | -262.753 | 7.8557E-02 (2001,124,0400) | 7.2761E-02 (2001,100,0300) | 6.3733E-02 (2001,122,0300) | 5.7422E-02 (2001,124,0500) |
| 241 | -234.539 | -262.775 | 7.7844E-02 (2001,124,0400) | 7.4112E-02 (2001,100,0300) | 6.9712E-02 (2001,122,0300) | 6.0261E-02 (2001,331,0700) |
| 242 | -233.805 | -262.796 | 7.6837E-02 (2001,124,0400) | 7.5466E-02 (2001,122,0300) | 7.5200E-02 (2001,100,0300) | 6.4901E-02 (2001,331,0700) |
| 243 | -233.071 | -262.818 | 8.0846E-02 (2001,122,0300) | 7.6014E-02 (2001,100,0300) | 7.5547E-02 (2001,124,0400) | 6.9368E-02 (2001,331,0700) |
| 244 | -232.338 | -262.840 | 8.5731E-02 (2001,122,0300) | 7.6572E-02 (2001,100,0300) | 7.3988E-02 (2001,124,0400) | 7.3587E-02 (2001,331,0700) |
| 245 | -238.180 | -261.738 | 7.9651E-02 (2001,124,0400) | 6.5683E-02 (2001,100,0300) | 5.9463E-02 (2001,124,0600) | 5.7133E-02 (2001,322,2300) |
| 246 | -237.447 | -261.760 | 8.0196E-02 (2001,124,0400) | 6.8000E-02 (2001,100,0300) | 5.8125E-02 (2001,124,0600) | 5.6435E-02 (2001,124,0500) |
| 247 | -236.713 | -261.782 | 8.0450E-02 (2001,124,0400) | 7.0110E-02 (2001,100,0300) | 5.6598E-02 (2001,124,0500) | 5.6595E-02 (2001,124,0600) |
| 248 | -235.979 | -261.804 | 8.0365E-02 (2001,124,0400) | 7.2016E-02 (2001,100,0300) | 5.6514E-02 (2001,124,0500) | 5.6145E-02 (2001,122,0300) |
| 249 | -235.245 | -261.826 | 7.9965E-02 (2001,124,0400) | 7.3674E-02 (2001,100,0300) | 6.2334E-02 (2001,122,0300) | 5.8642E-02 (2001,331,0700) |
| 250 | -234.511 | -261.848 | 7.9253E-02 (2001,124,0400) | 7.5086E-02 (2001,100,0300) | 6.8475E-02 (2001,122,0300) | 6.3532E-02 (2001,331,0700) |
| 251 | -233.778 | -261.870 | 7.8238E-02 (2001,124,0400) | 7.6218E-02 (2001,100,0300) | 7.4484E-02 (2001,122,0300) | 6.8243E-02 (2001,331,0700) |
| 252 | -233.044 | -261.892 | 8.0158E-02 (2001,122,0300) | 7.7078E-02 (2001,100,0300) | 7.6908E-02 (2001,124,0400) | 7.2734E-02 (2001,331,0700) |
| 253 | -232.310 | -261.914 | 8.5334E-02 (2001,122,0300) | 7.7629E-02 (2001,100,0300) | 7.6938E-02 (2001,331,0700) | 7.5323E-02 (2001,124,0400) |
| 254 | -235.951 | -260.878 | 8.1567E-02 (2001,124,0400) | 7.2735E-02 (2001,100,0300) | 5.6736E-02 (2001,331,0700) | 5.5421E-02 (2001,124,0500) |
| 255 | -235.217 | -260.900 | 8.1180E-02 (2001,124,0400) | 7.4456E-02 (2001,100,0300) | 6.1815E-02 (2001,331,0700) | 6.0727E-02 (2001,122,0300) |
| 256 | -234.484 | -260.922 | 8.0471E-02 (2001,124,0400) | 7.5903E-02 (2001,100,0300) | 6.7051E-02 (2001,122,0300) | 6.6783E-02 (2001,331,0700) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 257 | -233.750 | -260.944 | 7.9451E-02 (2001,124,0400) | 7.7080E-02 (2001,100,0300) | 7.3250E-02 (2001,122,0300) | 7.1551E-02 (2001,331,0700) |
| 258 | -233.016 | -260.966 | 7.9157E-02 (2001,122,0300) | 7.8131E-02 (2001,124,0400) | 7.7957E-02 (2001,100,0300) | 7.6071E-02 (2001,331,0700) |
| 259 | -232.283 | -260.987 | 8.4639E-02 (2001,122,0300) | 8.0219E-02 (2001,331,0700) | 7.8546E-02 (2001,100,0300) | 7.6525E-02 (2001,124,0400) |
| 260 | -231.549 | -261.009 | 8.9539E-02 (2001,122,0300) | 8.3952E-02 (2001,331,0700) | 7.8812E-02 (2001,100,0300) | 7.4651E-02 (2001,124,0400) |
| 261 | -230.815 | -261.031 | 9.3666E-02 (2001,122,0300) | 8.7284E-02 (2001,331,0700) | 7.8771E-02 (2001,100,0300) | 7.2532E-02 (2001,124,0400) |
| 262 | -235.923 | -259.952 | 8.2562E-02 (2001,124,0400) | 7.3323E-02 (2001,100,0300) | 5.9801E-02 (2001,331,0700) | 5.5489E-02 (2001,322,2300) |
| 263 | -235.190 | -259.974 | 8.2190E-02 (2001,124,0400) | 7.5098E-02 (2001,100,0300) | 6.5025E-02 (2001,331,0700) | 5.8927E-02 (2001,122,0300) |
| 264 | -234.456 | -259.996 | 8.1490E-02 (2001,124,0400) | 7.6600E-02 (2001,100,0300) | 7.0045E-02 (2001,331,0700) | 6.5370E-02 (2001,122,0300) |
| 265 | -233.723 | -260.018 | 8.0469E-02 (2001,124,0400) | 7.7800E-02 (2001,100,0300) | 7.4848E-02 (2001,331,0700) | 7.1746E-02 (2001,122,0300) |
| 266 | -232.989 | -260.039 | 7.9329E-02 (2001,331,0700) | 7.9139E-02 (2001,124,0400) | 7.8702E-02 (2001,100,0300) | 7.7921E-02 (2001,122,0300) |
| 267 | -232.255 | -260.061 | 8.3671E-02 (2001,122,0300) | 8.3439E-02 (2001,331,0700) | 7.9294E-02 (2001,100,0300) | 7.7517E-02 (2001,124,0400) |
| 268 | -231.522 | -260.083 | 8.8885E-02 (2001,122,0300) | 8.7081E-02 (2001,331,0700) | 7.9581E-02 (2001,100,0300) | 7.5620E-02 (2001,124,0400) |
| 269 | -230.788 | -260.104 | 9.3376E-02 (2001,122,0300) | 9.0234E-02 (2001,331,0700) | 7.9573E-02 (2001,100,0300) | 7.3469E-02 (2001,124,0400) |
| 270 | -230.054 | -260.126 | 9.7028E-02 (2001,122,0300) | 9.2866E-02 (2001,331,0700) | 7.9224E-02 (2001,100,0300) | 7.1091E-02 (2001,124,0400) |
| 271 | -235.895 | -259.025 | 8.3362E-02 (2001,124,0400) | 7.3753E-02 (2001,100,0300) | 6.2891E-02 (2001,331,0700) | 5.9290E-02 (2001,322,2300) |
| 272 | -235.162 | -259.047 | 8.3008E-02 (2001,124,0400) | 7.5573E-02 (2001,100,0300) | 6.8171E-02 (2001,331,0700) | 5.7577E-02 (2001,331,0800) |
| 273 | -234.428 | -259.069 | 8.2318E-02 (2001,124,0400) | 7.7117E-02 (2001,100,0300) | 7.3293E-02 (2001,331,0700) | 6.3478E-02 (2001,122,0300) |
| 274 | -233.695 | -259.091 | 8.1299E-02 (2001,124,0400) | 7.8371E-02 (2001,100,0300) | 7.8091E-02 (2001,331,0700) | 7.0019E-02 (2001,122,0300) |
| 275 | -232.961 | -259.113 | 8.2517E-02 (2001,331,0700) | 7.9965E-02 (2001,124,0400) | 7.9319E-02 (2001,100,0300) | 7.6385E-02 (2001,122,0300) |
| 276 | -232.228 | -259.135 | 8.6502E-02 (2001,331,0700) | 8.2432E-02 (2001,122,0300) | 7.9940E-02 (2001,100,0300) | 7.8329E-02 (2001,124,0400) |
| 277 | -231.494 | -259.156 | 9.0004E-02 (2001,331,0700) | 8.7961E-02 (2001,122,0300) | 8.0263E-02 (2001,100,0300) | 7.6414E-02 (2001,124,0400) |
| 278 | -230.761 | -259.178 | 9.2970E-02 (2001,331,0700) | 9.2832E-02 (2001,122,0300) | 8.0236E-02 (2001,100,0300) | 7.4239E-02 (2001,124,0400) |
| 279 | -230.027 | -259.200 | 9.6872E-02 (2001,122,0300) | 9.5360E-02 (2001,331,0700) | 7.9916E-02 (2001,100,0300) | 7.1830E-02 (2001,124,0400) |
| 280 | -229.294 | -259.221 | 9.9943E-02 (2001,122,0300) | 9.7163E-02 (2001,331,0700) | 7.9251E-02 (2001,100,0300) | 7.1004E-02 (2001,100,0400) |
| 281 | -235.134 | -258.121 | 8.3628E-02 (2001,124,0400) | 7.5935E-02 (2001,100,0300) | 7.1380E-02 (2001,331,0700) | 5.9037E-02 (2001,322,2300) |
| 282 | -234.401 | -258.143 | 8.2950E-02 (2001,124,0400) | 7.7536E-02 (2001,100,0300) | 7.6513E-02 (2001,331,0700) | 6.1382E-02 (2001,122,0300) |
| 283 | -233.667 | -258.165 | 8.1937E-02 (2001,124,0400) | 8.1283E-02 (2001,331,0700) | 7.8849E-02 (2001,100,0300) | 6.8047E-02 (2001,122,0300) |
| 284 | -232.934 | -258.187 | 8.5635E-02 (2001,331,0700) | 8.0602E-02 (2001,124,0400) | 7.9860E-02 (2001,100,0300) | 7.4612E-02 (2001,122,0300) |
| 285 | -232.200 | -258.208 | 8.9492E-02 (2001,331,0700) | 8.0920E-02 (2001,122,0300) | 8.0518E-02 (2001,100,0300) | 7.8961E-02 (2001,124,0400) |
| 286 | -231.467 | -258.230 | 9.2844E-02 (2001,331,0700) | 8.6795E-02 (2001,122,0300) | 8.0843E-02 (2001,100,0300) | 7.7032E-02 (2001,124,0400) |
| 287 | -230.734 | -258.252 | 9.5576E-02 (2001,331,0700) | 9.2049E-02 (2001,122,0300) | 8.0833E-02 (2001,100,0300) | 7.4838E-02 (2001,124,0400) |
| 288 | -230.000 | -258.273 | 9.7704E-02 (2001,331,0700) | 9.6462E-02 (2001,122,0300) | 8.0491E-02 (2001,100,0300) | 7.2405E-02 (2001,124,0400) |
| 289 | -229.267 | -258.295 | 9.9935E-02 (2001,122,0300) | 9.9208E-02 (2001,331,0700) | 7.9831E-02 (2001,100,0300) | 7.1465E-02 (2001,100,0400) |
| 290 | -234.373 | -257.217 | 8.3467E-02 (2001,124,0400) | 7.9709E-02 (2001,331,0700) | 7.7843E-02 (2001,100,0300) | 6.0175E-02 (2001,331,0800) |
| 291 | -233.640 | -257.239 | 8.4440E-02 (2001,331,0700) | 8.2463E-02 (2001,124,0400) | 7.9191E-02 (2001,100,0300) | 6.5865E-02 (2001,122,0300) |
| 292 | -232.906 | -257.260 | 8.8708E-02 (2001,331,0700) | 8.1130E-02 (2001,124,0400) | 8.0256E-02 (2001,100,0300) | 7.2648E-02 (2001,122,0300) |
| 293 | -232.173 | -257.282 | 9.2419E-02 (2001,331,0700) | 8.0962E-02 (2001,100,0300) | 7.9460E-02 (2001,124,0400) | 7.9210E-02 (2001,122,0300) |
| 294 | -231.440 | -257.304 | 9.5520E-02 (2001,331,0700) | 8.5352E-02 (2001,122,0300) | 8.1328E-02 (2001,100,0300) | 7.7521E-02 (2001,124,0400) |
| 295 | -230.706 | -257.326 | 9.8015E-02 (2001,331,0700) | 9.0934E-02 (2001,122,0300) | 8.1342E-02 (2001,100,0300) | 7.5285E-02 (2001,124,0400) |
| 296 | -229.973 | -257.347 | 9.9824E-02 (2001,331,0700) | 9.5742E-02 (2001,122,0300) | 8.1014E-02 (2001,100,0300) | 7.2833E-02 (2001,124,0400) |
| 297 | -229.240 | -257.369 | 1.0096E-01 (2001,331,0700) | 9.9673E-02 (2001,122,0300) | 8.0348E-02 (2001,100,0300) | 7.1904E-02 (2001,100,0400) |
| 298 | -232.879 | -256.334 | 9.1605E-02 (2001,331,0700) | 8.1416E-02 (2001,124,0400) | 8.0546E-02 (2001,100,0300) | 7.0441E-02 (2001,122,0300) |
| 299 | -232.146 | -256.356 | 9.5128E-02 (2001,331,0700) | 8.1289E-02 (2001,100,0300) | 7.9769E-02 (2001,124,0400) | 7.7196E-02 (2001,122,0300) |
| 300 | -231.412 | -256.378 | 9.7982E-02 (2001,331,0700) | 8.3627E-02 (2001,122,0300) | 8.1707E-02 (2001,100,0300) | 7.7825E-02 (2001,124,0400) |
| 301 | -230.679 | -256.399 | 1.0015E-01 (2001,331,0700) | 8.9559E-02 (2001,122,0300) | 8.1764E-02 (2001,100,0300) | 7.5606E-02 (2001,124,0400) |
| 302 | -229.946 | -256.421 | 1.0167E-01 (2001,331,0700) | 9.4784E-02 (2001,122,0300) | 8.1458E-02 (2001,100,0300) | 7.3138E-02 (2001,124,0400) |
| 303 | -229.213 | -256.442 | 1.0248E-01 (2001,331,0700) | 9.9135E-02 (2001,122,0300) | 8.0825E-02 (2001,100,0300) | 7.2277E-02 (2001,100,0400) |
| 304 | -232.118 | -255.430 | 9.7640E-02 (2001,331,0700) | 8.1601E-02 (2001,100,0300) | 7.9870E-02 (2001,124,0400) | 7.4934E-02 (2001,122,0300) |
| 305 | -231.385 | -255.451 | 1.0025E-01 (2001,331,0700) | 8.2058E-02 (2001,100,0300) | 8.1644E-02 (2001,122,0300) | 7.7927E-02 (2001,124,0400) |
| 306 | -230.652 | -255.473 | 1.0212E-01 (2001,331,0700) | 8.7890E-02 (2001,122,0300) | 8.2154E-02 (2001,100,0300) | 7.5704E-02 (2001,124,0400) |
| 307 | -229.919 | -255.494 | 1.0327E-01 (2001,331,0700) | 9.3502E-02 (2001,122,0300) | 8.1888E-02 (2001,100,0300) | 7.3229E-02 (2001,124,0400) |
| 308 | -229.185 | -255.516 | 1.0371E-01 (2001,331,0700) | 9.8303E-02 (2001,122,0300) | 8.1273E-02 (2001,100,0300) | 7.2544E-02 (2001,100,0400) |
| 309 | -228.452 | -255.537 | 1.0341E-01 (2001,331,0700) | 1.0208E-01 (2001,122,0300) | 8.0293E-02 (2001,100,0300) | 7.6092E-02 (2001,100,0400) |
| 310 | -227.719 | -255.559 | 1.0474E-01 (2001,122,0300) | 1.0249E-01 (2001,331,0700) | 7.9500E-02 (2001,100,0400) | 7.8979E-02 (2001,100,0300) |
| 311 | -232.091 | -254.503 | 9.9955E-02 (2001,331,0700) | 8.1863E-02 (2001,100,0300) | 7.9795E-02 (2001,124,0400) | 7.2449E-02 (2001,122,0300) |
| 312 | -231.358 | -254.525 | 1.0226E-01 (2001,331,0700) | 8.2380E-02 (2001,100,0300) | 7.9384E-02 (2001,122,0300) | 7.7858E-02 (2001,124,0400) |
| 313 | -230.625 | -254.547 | 1.0380E-01 (2001,331,0700) | 8.5948E-02 (2001,122,0300) | 8.2526E-02 (2001,100,0300) | 7.5637E-02 (2001,124,0400) |
| 314 | -229.891 | -254.568 | 1.0456E-01 (2001,331,0700) | 9.1957E-02 (2001,122,0300) | 8.2302E-02 (2001,100,0300) | 7.3159E-02 (2001,124,0400) |
| 315 | -229.158 | -254.590 | 1.0459E-01 (2001,331,0700) | 9.7212E-02 (2001,122,0300) | 8.1710E-02 (2001,100,0300) | 7.2736E-02 (2001,100,0400) |
| 316 | -228.425 | -254.611 | 1.0393E-01 (2001,331,0700) | 1.0149E-01 (2001,122,0300) | 8.0775E-02 (2001,100,0300) | 7.6518E-02 (2001,100,0400) |
| 317 | -227.692 | -254.632 | 1.0465E-01 (2001,122,0300) | 1.0258E-01 (2001,331,0700) | 8.0102E-02 (2001,100,0400) | 7.9471E-02 (2001,100,0300) |
| 318 | -232.063 | -253.577 | 1.0214E-01 (2001,331,0700) | 8.2077E-02 (2001,100,0300) | 7.9565E-02 (2001,124,0400) | 6.9757E-02 (2001,122,0300) |
| 319 | -231.330 | -253.599 | 1.0408E-01 (2001,331,0700) | 8.2670E-02 (2001,100,0300) | 7.7616E-02 (2001,124,0400) | 7.6903E-02 (2001,122,0300) |
| 320 | -230.597 | -253.620 | 1.0520E-01 (2001,331,0700) | 8.3776E-02 (2001,122,0300) | 8.2894E-02 (2001,100,0300) | 7.5402E-02 (2001,124,0400) |
| 321 | -229.864 | -253.642 | 1.0557E-01 (2001,331,0700) | 9.0137E-02 (2001,122,0300) | 8.2712E-02 (2001,100,0300) | 7.2929E-02 (2001,124,0400) |
| 322 | -229.131 | -253.663 | 1.0514E-01 (2001,331,0700) | 9.5797E-02 (2001,122,0300) | 8.2163E-02 (2001,100,0300) | 7.2870E-02 (2001,100,0400) |
| 323 | -228.398 | -253.685 | 1.0401E-01 (2001,331,0700) | 1.0056E-01 (2001,122,0300) | 8.1245E-02 (2001,100,0300) | 7.6813E-02 (2001,100,0400) |
| 324 | -227.665 | -253.706 | 1.0426E-01 (2001,122,0300) | 1.0226E-01 (2001,331,0700) | 8.0610E-02 (2001,100,0400) | 7.9970E-02 (2001,100,0300) |
| 325 | -229.837 | -252.716 | 1.0626E-01 (2001,331,0700) | 8.8002E-02 (2001,122,0300) | 8.3131E-02 (2001,100,0300) | 7.2566E-02 (2001,124,0400) |
| 326 | -229.104 | -252.737 | 1.0542E-01 (2001,331,0700) | 9.4075E-02 (2001,122,0300) | 8.2622E-02 (2001,100,0300) | 7.2831E-02 (2001,100,0400) |
| 327 | -228.371 | -252.759 | 1.0382E-01 (2001,331,0700) | 9.9320E-02 (2001,122,0300) | 8.1731E-02 (2001,100,0300) | 7.6946E-02 (2001,100,0400) |
| 328 | -227.638 | -252.780 | 1.0356E-01 (2001,122,0300) | 1.0162E-01 (2001,331,0700) | 8.0940E-02 (2001,100,0400) | 8.0470E-02 (2001,100,0300) |

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CALPOST Version 5.6394 Level 070622
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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 116 | -243.891 | -280.107 | 2.0044E-04 | 222 | -233.126 | -264.671 | 3.0883E-04 |
| 117 | -243.156 | -280.129 | 2.0176E-04 | 223 | -232.392 | -264.693 | 3.1473E-04 |
| 118 | -242.420 | -280.152 | 2.0335E-04 | 224 | -231.658 | -264.714 | 3.2035E-04 |
| 119 | -241.685 | -280.175 | 2.0522E-04 | 225 | -238.971 | -263.568 | 2.7808E-04 |
| 120 | -243.862 | -279.180 | 2.0329E-04 | 226 | -238.237 | -263.590 | 2.8090E-04 |
| 121 | -243.127 | -279.203 | 2.0453E-04 | 227 | -237.503 | -263.613 | 2.8415E-04 |
| 122 | -242.392 | -279.226 | 2.0600E-04 | 228 | -236.769 | -263.635 | 2.8792E-04 |
| 123 | -241.656 | -279.248 | 2.0779E-04 | 229 | -236.035 | -263.657 | 2.9224E-04 |
| 124 | -240.921 | -279.271 | 2.0995E-04 | 230 | -235.301 | -263.679 | 2.9688E-04 |
| 125 | -243.834 | -278.254 | 2.0629E-04 | 231 | -234.567 | -263.701 | 3.0206E-04 |
| 126 | -243.098 | -278.277 | 2.0745E-04 | 232 | -233.833 | -263.723 | 3.0760E-04 |
| 127 | -242.363 | -278.299 | 2.0886E-04 | 233 | -233.099 | -263.745 | 3.1336E-04 |
| 128 | -241.628 | -278.322 | 2.1060E-04 | 234 | -232.365 | -263.766 | 3.1932E-04 |
| 129 | -240.892 | -278.345 | 2.1264E-04 | 235 | -231.631 | -263.788 | 3.2531E-04 |
| 130 | -240.157 | -278.367 | 2.1510E-04 | 236 | -238.208 | -262.664 | 2.8584E-04 |
| 131 | -243.805 | -277.328 | 2.0934E-04 | 237 | -237.475 | -262.686 | 2.8903E-04 |
| 132 | -243.070 | -277.350 | 2.1046E-04 | 238 | -236.741 | -262.708 | 2.9285E-04 |
| 133 | -242.335 | -277.373 | 2.1185E-04 | 239 | -236.007 | -262.731 | 2.9703E-04 |
| 134 | -241.599 | -277.396 | 2.1355E-04 | 240 | -235.273 | -262.753 | 3.0164E-04 |
| 135 | -240.864 | -277.418 | 2.1559E-04 | 241 | -234.539 | -262.775 | 3.0661E-04 |
| 136 | -240.129 | -277.441 | 2.1794E-04 | 242 | -233.805 | -262.796 | 3.1204E-04 |
| 137 | -243.776 | -276.401 | 2.1247E-04 | 243 | -233.071 | -262.818 | 3.1786E-04 |
| 138 | -243.041 | -276.424 | 2.1354E-04 | 244 | -232.338 | -262.840 | 3.2387E-04 |
| 139 | -242.306 | -276.447 | 2.1492E-04 | 245 | -238.180 | -261.738 | 2.9081E-04 |
| 140 | -241.571 | -276.469 | 2.1660E-04 | 246 | -237.447 | -261.760 | 2.9397E-04 |
| 141 | -240.836 | -276.492 | 2.1860E-04 | 247 | -236.713 | -261.782 | 2.9769E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 142 | -240.101 | -276.514 | 2.2096E-04 | 248 | -235.979 | -261.804 | 3.0188E-04 |
| 143 | -243.747 | -275.475 | 2.1579E-04 | 249 | -235.245 | -261.826 | 3.0645E-04 |
| 144 | -243.012 | -275.498 | 2.1684E-04 | 250 | -234.511 | -261.848 | 3.1140E-04 |
| 145 | -242.277 | -275.520 | 2.1813E-04 | 251 | -233.778 | -261.870 | 3.1664E-04 |
| 146 | -241.542 | -275.543 | 2.1977E-04 | 252 | -233.044 | -261.892 | 3.2230E-04 |
| 147 | -240.807 | -275.565 | 2.2172E-04 | 253 | -232.310 | -261.914 | 3.2835E-04 |
| 148 | -240.072 | -275.588 | 2.2409E-04 | 254 | -235.951 | -260.878 | 3.0678E-04 |
| 149 | -244.454 | -274.526 | 2.1850E-04 | 255 | -235.217 | -260.900 | 3.1134E-04 |
| 150 | -243.719 | -274.548 | 2.1923E-04 | 256 | -234.484 | -260.922 | 3.1628E-04 |
| 151 | -242.984 | -274.571 | 2.2023E-04 | 257 | -233.750 | -260.944 | 3.2142E-04 |
| 152 | -244.425 | -273.599 | 2.2205E-04 | 258 | -233.016 | -260.966 | 3.2698E-04 |
| 153 | -243.690 | -273.622 | 2.2272E-04 | 259 | -232.283 | -260.987 | 3.3284E-04 |
| 154 | -242.955 | -273.645 | 2.2373E-04 | 260 | -231.549 | -261.009 | 3.3898E-04 |
| 155 | -244.396 | -272.673 | 2.2571E-04 | 261 | -230.815 | -261.031 | 3.4505E-04 |
| 156 | -243.661 | -272.696 | 2.2636E-04 | 262 | -235.923 | -259.952 | 3.1165E-04 |
| 157 | -242.927 | -272.719 | 2.2726E-04 | 263 | -235.190 | -259.974 | 3.1615E-04 |
| 158 | -244.367 | -271.747 | 2.2952E-04 | 264 | -234.456 | -259.996 | 3.2103E-04 |
| 159 | -243.633 | -271.769 | 2.3006E-04 | 265 | -233.723 | -260.018 | 3.2621E-04 |
| 160 | -242.898 | -271.792 | 2.3091E-04 | 266 | -232.989 | -260.039 | 3.3174E-04 |
| 161 | -244.339 | -270.820 | 2.3348E-04 | 267 | -232.255 | -260.061 | 3.3759E-04 |
| 162 | -243.604 | -270.843 | 2.3387E-04 | 268 | -231.522 | -260.083 | 3.4362E-04 |
| 163 | -242.869 | -270.866 | 2.3473E-04 | 269 | -230.788 | -260.104 | 3.4972E-04 |
| 164 | -242.135 | -270.889 | 2.3581E-04 | 270 | -230.054 | -260.126 | 3.5557E-04 |
| 165 | -244.310 | -269.894 | 2.3771E-04 | 271 | -235.895 | -259.025 | 3.1656E-04 |
| 166 | -243.575 | -269.917 | 2.3811E-04 | 272 | -235.162 | -259.047 | 3.2104E-04 |
| 167 | -242.841 | -269.940 | 2.3877E-04 | 273 | -234.428 | -259.069 | 3.2582E-04 |
| 168 | -242.106 | -269.962 | 2.3970E-04 | 274 | -233.695 | -259.091 | 3.3105E-04 |
| 169 | -242.812 | -269.013 | 2.4296E-04 | 275 | -232.961 | -259.113 | 3.3667E-04 |
| 170 | -242.078 | -269.036 | 2.4378E-04 | 276 | -232.228 | -259.135 | 3.4237E-04 |
| 171 | -241.343 | -269.059 | 2.4513E-04 | 277 | -231.494 | -259.156 | 3.4839E-04 |
| 172 | -240.609 | -269.081 | 2.4690E-04 | 278 | -230.761 | -259.178 | 3.5449E-04 |
| 173 | -239.874 | -269.104 | 2.4906E-04 | 279 | -230.027 | -259.200 | 3.6066E-04 |
| 174 | -242.049 | -268.110 | 2.4803E-04 | 280 | -229.294 | -259.221 | 3.6692E-04 |
| 175 | -241.315 | -268.132 | 2.4928E-04 | 281 | -235.134 | -258.121 | 3.2593E-04 |
| 176 | -240.580 | -268.155 | 2.5097E-04 | 282 | -234.401 | -258.143 | 3.3074E-04 |
| 177 | -239.846 | -268.177 | 2.5312E-04 | 283 | -233.667 | -258.165 | 3.3592E-04 |
| 178 | -239.112 | -268.200 | 2.5569E-04 | 284 | -232.934 | -258.187 | 3.4149E-04 |
| 179 | -242.020 | -267.183 | 2.5241E-04 | 285 | -232.200 | -258.208 | 3.4725E-04 |
| 180 | -241.286 | -267.206 | 2.5359E-04 | 286 | -231.467 | -258.230 | 3.5316E-04 |
| 181 | -240.552 | -267.228 | 2.5527E-04 | 287 | -230.734 | -258.252 | 3.5917E-04 |
| 182 | -239.818 | -267.251 | 2.5738E-04 | 288 | -230.000 | -258.273 | 3.6525E-04 |
| 183 | -239.083 | -267.273 | 2.5990E-04 | 289 | -229.267 | -258.295 | 3.7140E-04 |
| 184 | -241.258 | -266.280 | 2.5806E-04 | 290 | -234.373 | -257.217 | 3.3594E-04 |
| 185 | -240.524 | -266.302 | 2.5964E-04 | 291 | -233.640 | -257.239 | 3.4108E-04 |
| 186 | -239.789 | -266.325 | 2.6176E-04 | 292 | -232.906 | -257.260 | 3.4654E-04 |
| 187 | -239.055 | -266.347 | 2.6419E-04 | 293 | -232.173 | -257.282 | 3.5220E-04 |
| 188 | -238.321 | -266.369 | 2.6708E-04 | 294 | -231.440 | -257.304 | 3.5805E-04 |
| 189 | -237.587 | -266.392 | 2.7053E-04 | 295 | -230.706 | -257.326 | 3.6408E-04 |
| 190 | -236.853 | -266.414 | 2.7451E-04 | 296 | -229.973 | -257.347 | 3.7016E-04 |
| 191 | -236.118 | -266.436 | 2.7887E-04 | 297 | -229.240 | -257.369 | 3.7623E-04 |
| 192 | -235.384 | -266.458 | 2.8362E-04 | 298 | -232.879 | -256.334 | 3.5161E-04 |
| 193 | -234.650 | -266.480 | 2.8876E-04 | 299 | -232.146 | -256.356 | 3.5719E-04 |
| 194 | -233.916 | -266.502 | 2.9422E-04 | 300 | -231.412 | -256.378 | 3.6309E-04 |
| 195 | -233.181 | -266.524 | 2.9997E-04 | 301 | -230.679 | -256.399 | 3.6918E-04 |
| 196 | -232.447 | -266.545 | 3.0553E-04 | 302 | -229.946 | -256.421 | 3.7528E-04 |
| 197 | -231.713 | -266.567 | 3.1153E-04 | 303 | -229.213 | -256.442 | 3.8078E-04 |
| 198 | -241.229 | -265.353 | 2.6256E-04 | 304 | -232.118 | -255.430 | 3.6231E-04 |
| 199 | -240.495 | -265.376 | 2.6409E-04 | 305 | -231.385 | -255.451 | 3.6819E-04 |
| 200 | -239.761 | -265.398 | 2.6611E-04 | 306 | -230.652 | -255.473 | 3.7432E-04 |
| 201 | -239.027 | -265.421 | 2.6854E-04 | 307 | -229.919 | -255.494 | 3.8035E-04 |
| 202 | -238.293 | -265.443 | 2.7146E-04 | 308 | -229.185 | -255.516 | 3.8640E-04 |
| 203 | -237.559 | -265.465 | 2.7485E-04 | 309 | -228.452 | -255.537 | 3.9234E-04 |
| 204 | -236.825 | -265.487 | 2.7873E-04 | 310 | -227.719 | -255.559 | 3.9760E-04 |
| 205 | -236.090 | -265.509 | 2.8312E-04 | 311 | -232.091 | -254.503 | 3.6759E-04 |
| 206 | -235.356 | -265.532 | 2.8793E-04 | 312 | -231.358 | -254.525 | 3.7345E-04 |
| 207 | -234.622 | -265.553 | 2.9310E-04 | 313 | -230.625 | -254.547 | 3.7948E-04 |
| 208 | -233.888 | -265.575 | 2.9856E-04 | 314 | -229.891 | -254.568 | 3.8553E-04 |
| 209 | -233.154 | -265.597 | 3.0432E-04 | 315 | -229.158 | -254.590 | 3.9162E-04 |
| 210 | -232.420 | -265.619 | 3.1005E-04 | 316 | -228.425 | -254.611 | 3.9760E-04 |
| 211 | -231.686 | -265.641 | 3.1606E-04 | 317 | -227.692 | -254.632 | 4.0339E-04 |
| 212 | -240.467 | -264.449 | 2.6884E-04 | 318 | -232.063 | -253.577 | 3.7293E-04 |
| 213 | -239.733 | -264.472 | 2.7077E-04 | 319 | -231.330 | -253.599 | 3.7866E-04 |
| 214 | -238.999 | -264.494 | 2.7316E-04 | 320 | -230.597 | -253.620 | 3.8457E-04 |
| 215 | -238.265 | -264.517 | 2.7613E-04 | 321 | -229.864 | -253.642 | 3.9066E-04 |
| 216 | -237.531 | -264.539 | 2.7945E-04 | 322 | -229.131 | -253.663 | 3.9670E-04 |
| 217 | -236.797 | -264.561 | 2.8324E-04 | 323 | -228.398 | -253.685 | 4.0270E-04 |
| 218 | -236.063 | -264.583 | 2.8748E-04 | 324 | -227.665 | -253.706 | 4.0862E-04 |
| 219 | -235.329 | -264.605 | 2.9234E-04 | 325 | -229.837 | -252.716 | 3.9570E-04 |
| 220 | -234.595 | -264.627 | 2.9760E-04 | 326 | -229.104 | -252.737 | 4.0179E-04 |
| 221 | -233.860 | -264.649 | 3.0314E-04 | 327 | -228.371 | -252.759 | 4.0783E-04 |
| | | | | 328 | -227.638 | -252.780 | 4.1383E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 325 | -229.837 | -252.716 | DISCRETE | 1.0626E-01 (2001,331,0700) | RANK 1 | 1 | HOUR |
| 317 | -227.692 | -254.632 | DISCRETE | 1.0258E-01 (2001,331,0700) | RANK 2 | 1 | HOUR |
| 325 | -229.837 | -252.716 | DISCRETE | 8.3131E-02 (2001,100,0300) | RANK 3 | 1 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 8.0470E-02 (2001,100,0300) | RANK 4 | 1 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 4.1383E-04 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Canyonlands

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  328*0, 506*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

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| | | | | | | |
|---|---|---|---|---|---|---|
| 344 | -22.263 | -220.844 | 2.7894E-02 (2001,341,0700) | 2.3807E-02 (2001,029,0800) | 2.2136E-02 (2001,029,0900) | 1.7331E-02 (2001,029,1000) |
| 345 | -20.803 | -220.848 | 2.7619E-02 (2001,341,0700) | 2.2730E-02 (2001,029,0800) | 2.1530E-02 (2001,029,0900) | 1.6692E-02 (2001,029,1000) |
| 346 | -19.344 | -220.851 | 2.7241E-02 (2001,341,0700) | 2.1611E-02 (2001,029,0800) | 2.0918E-02 (2001,029,0900) | 1.6057E-02 (2001,029,1000) |
| 347 | -17.884 | -220.855 | 2.6759E-02 (2001,341,0700) | 2.0436E-02 (2001,029,0800) | 2.0332E-02 (2001,029,0900) | 1.5418E-02 (2001,029,1000) |
| 348 | -16.424 | -220.858 | 2.6190E-02 (2001,341,0700) | 1.9740E-02 (2001,029,0900) | 1.9222E-02 (2001,029,0800) | 1.4767E-02 (2001,029,1000) |
| 349 | -14.964 | -220.861 | 2.5546E-02 (2001,341,0700) | 1.9124E-02 (2001,029,0900) | 1.7997E-02 (2001,029,0800) | 1.4143E-02 (2001,029,1000) |
| 350 | -25.177 | -218.982 | 2.7573E-02 (2001,341,0700) | 2.4406E-02 (2001,029,0800) | 2.2781E-02 (2001,029,0900) | 1.8951E-02 (2001,341,0600) |
| 351 | -23.718 | -218.986 | 2.7538E-02 (2001,341,0700) | 2.3393E-02 (2001,029,0800) | 2.1980E-02 (2001,029,0900) | 1.7618E-02 (2001,341,0600) |
| 352 | -22.258 | -218.991 | 2.7385E-02 (2001,341,0700) | 2.2322E-02 (2001,029,0800) | 2.1237E-02 (2001,029,0900) | 1.6659E-02 (2001,029,1000) |
| 353 | -20.799 | -218.995 | 2.7136E-02 (2001,341,0700) | 2.1199E-02 (2001,029,0800) | 2.0534E-02 (2001,029,0900) | 1.5978E-02 (2001,029,1000) |
| 354 | -19.339 | -218.998 | 2.6785E-02 (2001,341,0700) | 2.0044E-02 (2001,029,0800) | 1.9827E-02 (2001,029,0900) | 1.5286E-02 (2001,029,1000) |
| 355 | -17.879 | -219.002 | 2.6329E-02 (2001,341,0700) | 1.9166E-02 (2001,029,0900) | 1.8869E-02 (2001,029,0800) | 1.4618E-02 (2001,029,1000) |
| 356 | -16.420 | -219.005 | 2.5816E-02 (2001,341,0700) | 1.8505E-02 (2001,029,0900) | 1.7670E-02 (2001,029,0800) | 1.3960E-02 (2001,029,1000) |
| 357 | -26.630 | -217.124 | 2.6688E-02 (2001,341,0700) | 2.3954E-02 (2001,029,0800) | 2.2605E-02 (2001,029,0900) | 2.1326E-02 (2001,341,0600) |
| 358 | -25.171 | -217.129 | 2.6772E-02 (2001,341,0700) | 2.2881E-02 (2001,029,0800) | 2.1678E-02 (2001,029,0900) | 1.9932E-02 (2001,341,0600) |
| 359 | -23.712 | -217.133 | 2.6744E-02 (2001,341,0700) | 2.1776E-02 (2001,029,0800) | 2.0808E-02 (2001,029,0900) | 1.8558E-02 (2001,341,0600) |
| 360 | -22.253 | -217.138 | 2.6627E-02 (2001,341,0700) | 2.0657E-02 (2001,029,0800) | 1.9994E-02 (2001,029,0900) | 1.7218E-02 (2001,341,0600) |
| 361 | -20.794 | -217.142 | 2.6395E-02 (2001,341,0700) | 1.9503E-02 (2001,029,0800) | 1.9221E-02 (2001,029,0900) | 1.5935E-02 (2001,341,0600) |
| 362 | -19.334 | -217.145 | 2.6084E-02 (2001,341,0700) | 1.8463E-02 (2001,029,0900) | 1.8343E-02 (2001,029,0800) | 1.4705E-02 (2001,341,0600) |
| 363 | -17.875 | -217.149 | 2.5683E-02 (2001,341,0700) | 1.7754E-02 (2001,029,0900) | 1.7186E-02 (2001,029,0800) | 1.3618E-02 (2001,029,1000) |
| 364 | -16.416 | -217.152 | 2.5220E-02 (2001,341,0700) | 1.7055E-02 (2001,029,0900) | 1.6023E-02 (2001,029,0800) | 1.2962E-02 (2001,029,1000) |
| 365 | -47.048 | -215.175 | 3.6994E-02 (2001,029,0900) | 3.5967E-02 (2001,029,0800) | 3.4877E-02 (2001,341,0600) | 3.1918E-02 (2001,029,0700) |
| 366 | -45.589 | -215.183 | 3.6380E-02 (2001,029,0900) | 3.5171E-02 (2001,029,0800) | 3.5060E-02 (2001,341,0600) | 3.0870E-02 (2001,029,0700) |
| 367 | -44.130 | -215.192 | 3.5541E-02 (2001,029,0900) | 3.4973E-02 (2001,341,0600) | 3.4335E-02 (2001,029,0800) | 2.9603E-02 (2001,029,0700) |
| 368 | -42.671 | -215.200 | 3.4640E-02 (2001,341,0600) | 3.4568E-02 (2001,029,0900) | 3.3477E-02 (2001,029,0800) | 2.8207E-02 (2001,029,0700) |
| 369 | -41.212 | -215.208 | 3.4155E-02 (2001,341,0600) | 3.3443E-02 (2001,029,0900) | 3.2581E-02 (2001,029,0800) | 2.6646E-02 (2001,029,0700) |
| 370 | -39.754 | -215.215 | 3.3464E-02 (2001,341,0600) | 3.2215E-02 (2001,029,0900) | 3.1654E-02 (2001,029,0800) | 2.4972E-02 (2001,029,0700) |
| 371 | -38.295 | -215.223 | 3.2608E-02 (2001,341,0600) | 3.0936E-02 (2001,029,0900) | 3.0718E-02 (2001,029,0800) | 2.3262E-02 (2001,029,0700) |
| 372 | -36.836 | -215.230 | 3.1606E-02 (2001,341,0600) | 2.9748E-02 (2001,029,0800) | 2.9625E-02 (2001,029,0900) | 2.2518E-02 (2001,341,0700) |
| 373 | -35.377 | -215.236 | 3.0472E-02 (2001,341,0600) | 2.8742E-02 (2001,029,0800) | 2.8287E-02 (2001,029,0900) | 2.3187E-02 (2001,341,0700) |
| 374 | -33.918 | -215.243 | 2.9237E-02 (2001,341,0600) | 2.7729E-02 (2001,029,0800) | 2.6982E-02 (2001,029,0900) | 2.3793E-02 (2001,341,0700) |
| 375 | -32.459 | -215.249 | 2.7911E-02 (2001,341,0600) | 2.6671E-02 (2001,029,0800) | 2.5716E-02 (2001,029,0900) | 2.4312E-02 (2001,341,0700) |
| 376 | -31.001 | -215.255 | 2.6526E-02 (2001,341,0600) | 2.5609E-02 (2001,029,0800) | 2.4779E-02 (2001,341,0700) | 2.4484E-02 (2001,029,0900) |
| 377 | -29.542 | -215.261 | 2.5159E-02 (2001,341,0700) | 2.5109E-02 (2001,341,0600) | 2.4525E-02 (2001,029,0800) | 2.3329E-02 (2001,029,0900) |
| 378 | -28.083 | -215.266 | 2.5450E-02 (2001,341,0700) | 2.3670E-02 (2001,341,0600) | 2.3403E-02 (2001,029,0800) | 2.2226E-02 (2001,029,0900) |
| 379 | -26.624 | -215.271 | 2.5627E-02 (2001,341,0700) | 2.2286E-02 (2001,029,0800) | 2.2218E-02 (2001,341,0600) | 2.1190E-02 (2001,029,0900) |
| 380 | -25.165 | -215.276 | 2.5715E-02 (2001,341,0700) | 2.1148E-02 (2001,029,0800) | 2.0796E-02 (2001,341,0600) | 2.0220E-02 (2001,029,0900) |
| 381 | -23.706 | -215.280 | 2.5707E-02 (2001,341,0700) | 1.9998E-02 (2001,029,0800) | 1.9400E-02 (2001,341,0600) | 1.9304E-02 (2001,029,0900) |
| 382 | -22.247 | -215.285 | 2.5623E-02 (2001,341,0700) | 1.8852E-02 (2001,029,0800) | 1.8458E-02 (2001,029,0900) | 1.8042E-02 (2001,341,0600) |
| 383 | -20.789 | -215.289 | 2.5423E-02 (2001,341,0700) | 1.7697E-02 (2001,029,0800) | 1.7658E-02 (2001,029,0900) | 1.6738E-02 (2001,341,0600) |
| 384 | -19.330 | -215.293 | 2.5175E-02 (2001,341,0700) | 1.6876E-02 (2001,029,0900) | 1.6558E-02 (2001,029,0800) | 1.5495E-02 (2001,341,0600) |
| 385 | -17.871 | -215.296 | 2.4837E-02 (2001,341,0700) | 1.6151E-02 (2001,029,0900) | 1.5440E-02 (2001,029,0800) | 1.4314E-02 (2001,341,0600) |
| 386 | -16.412 | -215.299 | 2.4439E-02 (2001,341,0700) | 1.5441E-02 (2001,029,0900) | 1.4329E-02 (2001,029,0800) | 1.3191E-02 (2001,341,0600) |
| 387 | -51.412 | -213.294 | 3.9578E-02 (2001,029,0800) | 3.7740E-02 (2001,029,0900) | 3.5129E-02 (2001,341,0600) | 3.3091E-02 (2001,029,0700) |
| 388 | -49.953 | -213.304 | 3.8658E-02 (2001,029,0800) | 3.7581E-02 (2001,029,0900) | 3.5731E-02 (2001,341,0600) | 3.2430E-02 (2001,029,0700) |
| 389 | -48.495 | -213.313 | 3.7673E-02 (2001,029,0800) | 3.7149E-02 (2001,029,0900) | 3.6132E-02 (2001,341,0600) | 3.1551E-02 (2001,029,0700) |
| 390 | -47.037 | -213.322 | 3.6631E-02 (2001,029,0800) | 3.6499E-02 (2001,029,0900) | 3.6276E-02 (2001,341,0600) | 3.0462E-02 (2001,029,0700) |
| 391 | -45.578 | -213.330 | 3.6390E-02 (2001,341,0600) | 3.5640E-02 (2001,029,0900) | 3.5572E-02 (2001,029,0800) | 2.9219E-02 (2001,029,0700) |
| 392 | -44.120 | -213.339 | 3.6229E-02 (2001,341,0600) | 3.4612E-02 (2001,029,0900) | 3.4464E-02 (2001,029,0800) | 2.7798E-02 (2001,029,0700) |
| 393 | -42.661 | -213.347 | 3.5808E-02 (2001,341,0600) | 3.3438E-02 (2001,029,0900) | 3.3337E-02 (2001,029,0800) | 2.6261E-02 (2001,029,0700) |
| 394 | -41.203 | -213.355 | 3.5260E-02 (2001,341,0600) | 3.2208E-02 (2001,029,0800) | 3.2189E-02 (2001,029,0900) | 2.4654E-02 (2001,029,0700) |
| 395 | -39.744 | -213.362 | 3.4500E-02 (2001,341,0600) | 3.1050E-02 (2001,029,0800) | 3.0845E-02 (2001,029,0900) | 2.2933E-02 (2001,029,0700) |
| 396 | -38.286 | -213.370 | 3.3591E-02 (2001,341,0600) | 2.9897E-02 (2001,029,0800) | 2.9460E-02 (2001,029,0900) | 2.1241E-02 (2001,029,0700) |
| 397 | -36.827 | -213.377 | 3.2539E-02 (2001,341,0600) | 2.8727E-02 (2001,029,0800) | 2.8067E-02 (2001,029,0900) | 2.1365E-02 (2001,341,0700) |
| 398 | -35.369 | -213.383 | 3.1349E-02 (2001,341,0600) | 2.7553E-02 (2001,029,0800) | 2.6693E-02 (2001,029,0900) | 2.1985E-02 (2001,341,0700) |
| 399 | -33.910 | -213.390 | 3.0082E-02 (2001,341,0600) | 2.6362E-02 (2001,029,0800) | 2.5332E-02 (2001,029,0900) | 2.2549E-02 (2001,341,0700) |
| 400 | -32.452 | -213.396 | 2.8731E-02 (2001,341,0600) | 2.5172E-02 (2001,029,0800) | 2.4023E-02 (2001,029,0900) | 2.3061E-02 (2001,341,0700) |
| 401 | -30.993 | -213.402 | 2.7332E-02 (2001,341,0600) | 2.3982E-02 (2001,029,0800) | 2.3519E-02 (2001,341,0700) | 2.2787E-02 (2001,029,0900) |
| 402 | -29.535 | -213.408 | 2.5879E-02 (2001,341,0600) | 2.3860E-02 (2001,341,0700) | 2.2802E-02 (2001,029,0800) | 2.1593E-02 (2001,029,0900) |
| 403 | -28.076 | -213.413 | 2.4430E-02 (2001,341,0600) | 2.4148E-02 (2001,341,0700) | 2.1604E-02 (2001,029,0800) | 2.0480E-02 (2001,029,0900) |
| 404 | -26.618 | -213.418 | 2.4330E-02 (2001,341,0700) | 2.2970E-02 (2001,341,0600) | 2.0436E-02 (2001,029,0800) | 1.9436E-02 (2001,029,0900) |
| 405 | -25.159 | -213.423 | 2.4422E-02 (2001,341,0700) | 2.1532E-02 (2001,341,0600) | 1.9258E-02 (2001,029,0800) | 1.8460E-02 (2001,029,0900) |
| 406 | -23.701 | -213.428 | 2.4443E-02 (2001,341,0700) | 2.0137E-02 (2001,341,0600) | 1.8094E-02 (2001,029,0800) | 1.7551E-02 (2001,029,0900) |
| 407 | -22.242 | -213.432 | 2.4394E-02 (2001,341,0700) | 1.8773E-02 (2001,341,0600) | 1.6962E-02 (2001,029,0800) | 1.6704E-02 (2001,029,0900) |
| 408 | -20.784 | -213.436 | 2.4254E-02 (2001,341,0700) | 1.7464E-02 (2001,341,0600) | 1.5905E-02 (2001,029,0900) | 1.5831E-02 (2001,029,0800) |
| 409 | -19.325 | -213.440 | 2.4059E-02 (2001,341,0700) | 1.6223E-02 (2001,341,0600) | 1.5131E-02 (2001,029,0900) | 1.4732E-02 (2001,029,0800) |
| 410 | -17.867 | -213.443 | 2.3806E-02 (2001,341,0700) | 1.5046E-02 (2001,341,0600) | 1.4417E-02 (2001,029,0900) | 1.3667E-02 (2001,029,0800) |
| 411 | -16.408 | -213.446 | 2.3483E-02 (2001,341,0700) | 1.3924E-02 (2001,341,0600) | 1.3726E-02 (2001,029,0900) | 1.2714E-02 (2001,055,0800) |
| 412 | -51.400 | -211.441 | 4.0096E-02 (2001,029,0800) | 3.7045E-02 (2001,029,0900) | 3.6301E-02 (2001,341,0600) | 3.2191E-02 (2001,029,0700) |
| 413 | -49.942 | -211.451 | 3.8894E-02 (2001,029,0800) | 3.6840E-02 (2001,341,0600) | 3.6562E-02 (2001,029,0900) | 3.1193E-02 (2001,029,0700) |
| 414 | -48.483 | -211.460 | 3.7648E-02 (2001,029,0800) | 3.7220E-02 (2001,341,0600) | 3.5868E-02 (2001,029,0900) | 3.0046E-02 (2001,029,0700) |
| 415 | -47.025 | -211.469 | 3.7366E-02 (2001,341,0600) | 3.6367E-02 (2001,029,0800) | 3.4993E-02 (2001,029,0900) | 2.8709E-02 (2001,029,0700) |
| 416 | -45.567 | -211.478 | 3.7206E-02 (2001,341,0600) | 3.5071E-02 (2001,029,0800) | 3.3949E-02 (2001,029,0900) | 2.7280E-02 (2001,029,0700) |
| 417 | -44.109 | -211.486 | 3.7018E-02 (2001,341,0600) | 3.3762E-02 (2001,029,0800) | 3.2760E-02 (2001,029,0900) | 2.5746E-02 (2001,029,0700) |
| 418 | -42.651 | -211.494 | 3.6524E-02 (2001,341,0600) | 3.2447E-02 (2001,029,0800) | 3.1468E-02 (2001,029,0900) | 2.4103E-02 (2001,029,0700) |
| 419 | -41.193 | -211.502 | 3.5968E-02 (2001,341,0600) | 3.1137E-02 (2001,029,0800) | 3.0130E-02 (2001,029,0900) | 2.2472E-02 (2001,029,0700) |
| 420 | -39.735 | -211.510 | 3.5150E-02 (2001,341,0600) | 2.9824E-02 (2001,029,0800) | 2.8733E-02 (2001,029,0900) | 2.0768E-02 (2001,029,0700) |
| 421 | -38.277 | -211.517 | 3.4206E-02 (2001,341,0600) | 2.8508E-02 (2001,029,0800) | 2.7311E-02 (2001,029,0900) | 1.9763E-02 (2001,055,0700) |
| 422 | -36.818 | -211.524 | 3.3130E-02 (2001,341,0600) | 2.7203E-02 (2001,029,0800) | 2.5913E-02 (2001,029,0900) | 1.9994E-02 (2001,341,0700) |
| 423 | -35.360 | -211.531 | 3.1933E-02 (2001,341,0600) | 2.5907E-02 (2001,029,0800) | 2.4539E-02 (2001,029,0900) | 2.0567E-02 (2001,341,0700) |
| 424 | -33.902 | -211.537 | 3.0642E-02 (2001,341,0600) | 2.4616E-02 (2001,029,0800) | 2.3181E-02 (2001,029,0900) | 2.1110E-02 (2001,341,0700) |
| 425 | -32.444 | -211.543 | 2.9290E-02 (2001,341,0600) | 2.3350E-02 (2001,029,0800) | 2.1907E-02 (2001,029,0900) | 2.1598E-02 (2001,341,0700) |
| 426 | -30.986 | -211.549 | 2.7885E-02 (2001,341,0600) | 2.2083E-02 (2001,029,0800) | 2.2001E-02 (2001,341,0700) | 2.0687E-02 (2001,029,0900) |
| 427 | -29.528 | -211.555 | 2.6444E-02 (2001,341,0600) | 2.2367E-02 (2001,341,0700) | 2.0852E-02 (2001,029,0800) | 1.9526E-02 (2001,029,0900) |
| 428 | -28.070 | -211.560 | 2.4999E-02 (2001,341,0600) | 2.2632E-02 (2001,341,0700) | 1.9628E-02 (2001,029,0800) | 1.8440E-02 (2001,029,0900) |
| 429 | -26.611 | -211.565 | 2.3556E-02 (2001,341,0600) | 2.2826E-02 (2001,341,0700) | 1.8444E-02 (2001,029,0800) | 1.7433E-02 (2001,029,0900) |
| 430 | -25.153 | -211.570 | 2.2951E-02 (2001,341,0700) | 2.2148E-02 (2001,341,0600) | 1.7273E-02 (2001,029,0800) | 1.6482E-02 (2001,029,0900) |
| 431 | -23.695 | -211.575 | 2.3004E-02 (2001,341,0700) | 2.0760E-02 (2001,341,0600) | 1.6120E-02 (2001,029,0800) | 1.5609E-02 (2001,029,0900) |
| 432 | -22.237 | -211.579 | 2.3002E-02 (2001,341,0700) | 1.9409E-02 (2001,341,0600) | 1.5298E-02 (2001,055,0800) | 1.5028E-02 (2001,029,0800) |
| 433 | -20.779 | -211.583 | 2.2919E-02 (2001,341,0700) | 1.8132E-02 (2001,341,0600) | 1.5041E-02 (2001,055,0800) | 1.4305E-02 (2001,055,0700) |
| 434 | -19.321 | -211.587 | 2.2803E-02 (2001,341,0700) | 1.6891E-02 (2001,341,0600) | 1.4839E-02 (2001,055,0800) | 1.3866E-02 (2001,055,0700) |
| 435 | -17.862 | -211.590 | 2.2624E-02 (2001,341,0700) | 1.5706E-02 (2001,341,0600) | 1.4586E-02 (2001,055,0800) | 1.3419E-02 (2001,055,0700) |
| 436 | -16.404 | -211.594 | 2.2385E-02 (2001,341,0700) | 1.4600E-02 (2001,341,0600) | 1.4274E-02 (2001,055,0800) | 1.2992E-02 (2001,055,0700) |
| 437 | -48.472 | -209.607 | 3.7696E-02 (2001,341,0600) | 3.6589E-02 (2001,029,0800) | 3.3616E-02 (2001,029,0900) | 2.8232E-02 (2001,029,0700) |
| 438 | -47.014 | -209.616 | 3.7779E-02 (2001,341,0600) | 3.5146E-02 (2001,029,0800) | 3.2574E-02 (2001,029,0900) | 2.6722E-02 (2001,029,0700) |
| 439 | -45.556 | -209.625 | 3.7677E-02 (2001,341,0600) | 3.3702E-02 (2001,029,0800) | 3.1402E-02 (2001,029,0900) | 2.5136E-02 (2001,029,0700) |
| 440 | -44.099 | -209.633 | 3.7349E-02 (2001,341,0600) | 3.2249E-02 (2001,029,0800) | 3.0134E-02 (2001,029,0900) | 2.3527E-02 (2001,029,0700) |
| 441 | -42.641 | -209.641 | 3.6888E-02 (2001,341,0600) | 3.0811E-02 (2001,029,0800) | 2.8786E-02 (2001,029,0900) | 2.2972E-02 (2001,055,0700) |
| 442 | -41.183 | -209.649 | 3.6181E-02 (2001,341,0600) | 2.9391E-02 (2001,029,0800) | 2.7413E-02 (2001,029,0900) | 2.2582E-02 (2001,055,0700) |
| 443 | -39.725 | -209.657 | 3.5376E-02 (2001,341,0600) | 2.7990E-02 (2001,029,0800) | 2.6023E-02 (2001,029,0900) | 2.2405E-02 (2001,055,0700) |
| 444 | -38.267 | -209.664 | 3.4440E-02 (2001,341,0600) | 2.6594E-02 (2001,029,0800) | 2.4638E-02 (2001,029,0900) | 2.2217E-02 (2001,055,0700) |
| 445 | -36.810 | -209.671 | 3.3351E-02 (2001,341,0600) | 2.5226E-02 (2001,029,0800) | 2.3275E-02 (2001,029,0900) | 2.1824E-02 (2001,055,0700) |
| 446 | -35.352 | -209.678 | 3.2189E-02 (2001,341,0600) | 2.3876E-02 (2001,029,0800) | 2.1961E-02 (2001,029,0900) | 2.1503E-02 (2001,055,0700) |
| 447 | -33.894 | -209.684 | 3.0909E-02 (2001,341,0600) | 2.2548E-02 (2001,029,0800) | 2.1033E-02 (2001,055,0700) | 2.0670E-02 (2001,029,0900) |
| 448 | -32.436 | -209.690 | 2.9573E-02 (2001,341,0600) | 2.1249E-02 (2001,029,0800) | 2.0571E-02 (2001,055,0700) | 1.9945E-02 (2001,341,0700) |
| 449 | -30.978 | -209.696 | 2.8211E-02 (2001,341,0600) | 2.0351E-02 (2001,341,0700) | 2.0065E-02 (2001,055,0700) | 1.9972E-02 (2001,029,0800) |
| 450 | -29.521 | -209.702 | 2.6793E-02 (2001,341,0600) | 2.0681E-02 (2001,341,0700) | 1.9517E-02 (2001,055,0700) | 1.8743E-02 (2001,029,0800) |
| 451 | -28.063 | -209.707 | 2.5381E-02 (2001,341,0600) | 2.0957E-02 (2001,341,0700) | 1.8955E-02 (2001,055,0700) | 1.7698E-02 (2001,055,0800) |
| 452 | -26.605 | -209.713 | 2.3987E-02 (2001,341,0600) | 2.1173E-02 (2001,341,0700) | 1.8386E-02 (2001,055,0700) | 1.7525E-02 (2001,055,0800) |
| 453 | -25.147 | -209.717 | 2.2608E-02 (2001,341,0600) | 2.1322E-02 (2001,341,0700) | 1.7832E-02 (2001,055,0700) | 1.7326E-02 (2001,055,0800) |
| 454 | -23.689 | -209.722 | 2.1411E-02 (2001,341,0700) | 2.1264E-02 (2001,341,0600) | 1.7275E-02 (2001,055,0700) | 1.7141E-02 (2001,055,0800) |
| 455 | -22.232 | -209.726 | 2.1464E-02 (2001,341,0700) | 1.9951E-02 (2001,341,0600) | 1.6918E-02 (2001,055,0800) | 1.6752E-02 (2001,055,0700) |
| 456 | -20.774 | -209.730 | 2.1456E-02 (2001,341,0700) | 1.8690E-02 (2001,341,0600) | 1.6683E-02 (2001,055,0800) | 1.6237E-02 (2001,055,0700) |
| 457 | -19.316 | -209.734 | 2.1405E-02 (2001,341,0700) | 1.7476E-02 (2001,341,0600) | 1.6423E-02 (2001,055,0800) | 1.5741E-02 (2001,055,0700) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 458 | -17.858 | -209.737 | 2.1313E-02 (2001,341,0700) | 1.6317E-02 (2001,341,0600) | 1.6146E-02 (2001,055,0800) | 1.5283E-02 (2001,055,0700) |
| 459 | -16.400 | -209.741 | 2.1167E-02 (2001,341,0700) | 1.5869E-02 (2001,055,0800) | 1.5217E-02 (2001,341,0600) | 1.4836E-02 (2001,055,0700) |
| 460 | -48.460 | -207.754 | 3.7697E-02 (2001,341,0600) | 3.4528E-02 (2001,029,0800) | 3.0572E-02 (2001,029,0900) | 2.7822E-02 (2001,341,0500) |
| 461 | -47.003 | -207.763 | 3.7736E-02 (2001,341,0600) | 3.3005E-02 (2001,029,0800) | 2.9408E-02 (2001,029,0900) | 2.6757E-02 (2001,055,0600) |
| 462 | -45.546 | -207.772 | 3.7576E-02 (2001,341,0600) | 3.1493E-02 (2001,029,0800) | 2.8177E-02 (2001,029,0900) | 2.6009E-02 (2001,055,0600) |
| 463 | -44.088 | -207.780 | 3.7255E-02 (2001,341,0600) | 3.0003E-02 (2001,029,0800) | 2.6894E-02 (2001,029,0900) | 2.5702E-02 (2001,055,0700) |
| 464 | -42.631 | -207.789 | 3.6769E-02 (2001,341,0600) | 2.8524E-02 (2001,029,0800) | 2.5600E-02 (2001,055,0700) | 2.5567E-02 (2001,029,0900) |
| 465 | -41.173 | -207.796 | 3.6068E-02 (2001,341,0600) | 2.7082E-02 (2001,029,0800) | 2.5266E-02 (2001,055,0700) | 2.4224E-02 (2001,029,0900) |
| 466 | -39.716 | -207.804 | 3.5212E-02 (2001,341,0600) | 2.5653E-02 (2001,029,0800) | 2.4794E-02 (2001,055,0700) | 2.2909E-02 (2001,029,0900) |
| 467 | -38.258 | -207.811 | 3.4279E-02 (2001,341,0600) | 2.4520E-02 (2001,055,0700) | 2.4242E-02 (2001,029,0800) | 2.2179E-02 (2001,055,0600) |
| 468 | -36.801 | -207.818 | 3.3238E-02 (2001,341,0600) | 2.4195E-02 (2001,055,0700) | 2.2878E-02 (2001,029,0800) | 2.1502E-02 (2001,055,0600) |
| 469 | -35.343 | -207.825 | 3.2089E-02 (2001,341,0600) | 2.3728E-02 (2001,055,0700) | 2.1540E-02 (2001,029,0800) | 2.0811E-02 (2001,055,0600) |
| 470 | -33.886 | -207.831 | 3.0870E-02 (2001,341,0600) | 2.3312E-02 (2001,055,0700) | 2.0227E-02 (2001,029,0800) | 2.0183E-02 (2001,055,0600) |
| 471 | -32.429 | -207.838 | 2.9587E-02 (2001,341,0600) | 2.2816E-02 (2001,055,0700) | 1.9600E-02 (2001,055,0800) | 1.9569E-02 (2001,055,0600) |
| 472 | -30.971 | -207.844 | 2.8278E-02 (2001,341,0600) | 2.2256E-02 (2001,055,0700) | 1.9560E-02 (2001,055,0800) | 1.9008E-02 (2001,055,0600) |
| 473 | -29.514 | -207.849 | 2.6918E-02 (2001,341,0600) | 2.1644E-02 (2001,055,0700) | 1.9383E-02 (2001,055,0800) | 1.8888E-02 (2001,341,0700) |
| 474 | -28.056 | -207.855 | 2.5575E-02 (2001,341,0600) | 2.1056E-02 (2001,055,0700) | 1.9278E-02 (2001,055,0800) | 1.9171E-02 (2001,341,0700) |
| 475 | -26.599 | -207.860 | 2.4238E-02 (2001,341,0600) | 2.0472E-02 (2001,055,0700) | 1.9406E-02 (2001,341,0700) | 1.9132E-02 (2001,055,0800) |
| 476 | -25.141 | -207.865 | 2.2927E-02 (2001,341,0600) | 1.9889E-02 (2001,055,0700) | 1.9585E-02 (2001,341,0700) | 1.8967E-02 (2001,055,0800) |
| 477 | -23.684 | -207.869 | 2.1623E-02 (2001,341,0600) | 1.9736E-02 (2001,341,0700) | 1.9308E-02 (2001,055,0700) | 1.8748E-02 (2001,055,0800) |
| 478 | -22.226 | -207.873 | 2.0367E-02 (2001,341,0600) | 1.9848E-02 (2001,341,0700) | 1.8756E-02 (2001,055,0700) | 1.8517E-02 (2001,055,0800) |
| 479 | -20.769 | -207.877 | 1.9913E-02 (2001,341,0700) | 1.9145E-02 (2001,341,0600) | 1.8295E-02 (2001,055,0800) | 1.8224E-02 (2001,055,0700) |
| 480 | -19.311 | -207.881 | 1.9931E-02 (2001,341,0700) | 1.8035E-02 (2001,055,0800) | 1.7969E-02 (2001,341,0600) | 1.7729E-02 (2001,055,0700) |
| 481 | -48.449 | -205.902 | 3.7131E-02 (2001,341,0600) | 3.1616E-02 (2001,029,0800) | 3.0008E-02 (2001,055,0600) | 2.9692E-02 (2001,341,0500) |
| 482 | -46.992 | -205.911 | 3.7129E-02 (2001,341,0600) | 3.0091E-02 (2001,029,0800) | 2.9272E-02 (2001,055,0600) | 2.8300E-02 (2001,055,0700) |
| 483 | -45.535 | -205.919 | 3.6971E-02 (2001,341,0600) | 2.8608E-02 (2001,029,0800) | 2.8514E-02 (2001,055,0600) | 2.8174E-02 (2001,055,0700) |
| 484 | -44.078 | -205.928 | 3.6626E-02 (2001,341,0600) | 2.8023E-02 (2001,055,0700) | 2.7735E-02 (2001,055,0600) | 2.7140E-02 (2001,029,0800) |
| 485 | -42.621 | -205.936 | 3.6132E-02 (2001,341,0600) | 2.7875E-02 (2001,055,0700) | 2.6969E-02 (2001,055,0600) | 2.5704E-02 (2001,029,0800) |
| 486 | -41.163 | -205.944 | 3.5475E-02 (2001,341,0600) | 2.7588E-02 (2001,055,0700) | 2.6175E-02 (2001,055,0600) | 2.4307E-02 (2001,029,0800) |
| 487 | -39.706 | -205.951 | 3.4670E-02 (2001,341,0600) | 2.7218E-02 (2001,055,0700) | 2.5391E-02 (2001,055,0600) | 2.3518E-02 (2001,055,0400) |
| 488 | -38.249 | -205.958 | 3.3773E-02 (2001,341,0600) | 2.6799E-02 (2001,055,0700) | 2.4636E-02 (2001,055,0600) | 2.2893E-02 (2001,055,0400) |
| 489 | -36.792 | -205.965 | 3.2765E-02 (2001,341,0600) | 2.6416E-02 (2001,055,0700) | 2.3954E-02 (2001,055,0600) | 2.2240E-02 (2001,055,0400) |
| 490 | -35.335 | -205.972 | 3.1684E-02 (2001,341,0600) | 2.5908E-02 (2001,055,0700) | 2.3257E-02 (2001,055,0600) | 2.1505E-02 (2001,055,0400) |
| 491 | -33.878 | -205.979 | 3.0526E-02 (2001,341,0600) | 2.5408E-02 (2001,055,0700) | 2.2630E-02 (2001,055,0600) | 2.0862E-02 (2001,055,0800) |
| 492 | -32.421 | -205.985 | 2.9334E-02 (2001,341,0600) | 2.4899E-02 (2001,055,0700) | 2.2050E-02 (2001,055,0600) | 2.0981E-02 (2001,055,0800) |
| 493 | -30.964 | -205.991 | 2.8096E-02 (2001,341,0600) | 2.4321E-02 (2001,055,0700) | 2.1477E-02 (2001,055,0600) | 2.0941E-02 (2001,055,0800) |
| 494 | -29.507 | -205.996 | 2.6834E-02 (2001,341,0600) | 2.3723E-02 (2001,055,0700) | 2.0944E-02 (2001,055,0600) | 2.0882E-02 (2001,055,0800) |
| 495 | -28.049 | -206.002 | 2.5583E-02 (2001,341,0600) | 2.3114E-02 (2001,055,0700) | 2.0794E-02 (2001,055,0800) | 2.0436E-02 (2001,055,0600) |
| 496 | -26.592 | -206.007 | 2.4324E-02 (2001,341,0600) | 2.2513E-02 (2001,055,0700) | 2.0649E-02 (2001,055,0800) | 1.9954E-02 (2001,055,0600) |
| 497 | -25.135 | -206.012 | 2.3079E-02 (2001,341,0600) | 2.1898E-02 (2001,055,0700) | 2.0477E-02 (2001,055,0800) | 1.9501E-02 (2001,055,0600) |
| 498 | -23.678 | -206.016 | 2.1857E-02 (2001,341,0600) | 2.1331E-02 (2001,055,0700) | 2.0281E-02 (2001,055,0800) | 1.9048E-02 (2001,055,0600) |
| 499 | -22.221 | -206.021 | 2.0768E-02 (2001,055,0700) | 2.0657E-02 (2001,341,0600) | 2.0055E-02 (2001,055,0800) | 1.8634E-02 (2001,055,0600) |
| 500 | -20.764 | -206.025 | 2.0246E-02 (2001,055,0700) | 1.9837E-02 (2001,055,0800) | 1.9492E-02 (2001,341,0600) | 1.8304E-02 (2001,341,0700) |
| 501 | -19.307 | -206.028 | 1.9734E-02 (2001,055,0700) | 1.9561E-02 (2001,055,0800) | 1.8399E-02 (2001,341,0700) | 1.8380E-02 (2001,341,0600) |
| 502 | -46.981 | -204.058 | 3.6027E-02 (2001,341,0600) | 3.1538E-02 (2001,055,0600) | 3.0557E-02 (2001,055,0300) | 3.0395E-02 (2001,055,0700) |
| 503 | -45.524 | -204.066 | 3.5847E-02 (2001,341,0600) | 3.0725E-02 (2001,055,0600) | 3.0234E-02 (2001,055,0700) | 2.9752E-02 (2001,055,0400) |
| 504 | -44.067 | -204.075 | 3.5525E-02 (2001,341,0600) | 3.0071E-02 (2001,055,0700) | 2.9960E-02 (2001,055,0600) | 2.9285E-02 (2001,055,0400) |
| 505 | -42.610 | -204.083 | 3.5046E-02 (2001,341,0600) | 2.9846E-02 (2001,055,0700) | 2.9185E-02 (2001,055,0600) | 2.8743E-02 (2001,055,0400) |
| 506 | -41.154 | -204.091 | 3.4440E-02 (2001,341,0600) | 2.9623E-02 (2001,055,0700) | 2.8440E-02 (2001,055,0600) | 2.8121E-02 (2001,055,0400) |
| 507 | -39.697 | -204.098 | 3.3709E-02 (2001,341,0600) | 2.9225E-02 (2001,055,0700) | 2.7691E-02 (2001,055,0600) | 2.7412E-02 (2001,055,0400) |
| 508 | -38.240 | -204.106 | 3.2847E-02 (2001,341,0600) | 2.8671E-02 (2001,055,0700) | 2.6827E-02 (2001,055,0600) | 2.4693E-02 (2001,055,0400) |
| 509 | -36.783 | -204.113 | 3.1924E-02 (2001,341,0600) | 2.8195E-02 (2001,055,0700) | 2.5952E-02 (2001,055,0600) | 2.2754E-02 (2001,055,0500) |
| 510 | -35.327 | -204.119 | 3.0968E-02 (2001,341,0600) | 2.7885E-02 (2001,055,0700) | 2.5678E-02 (2001,055,0600) | 2.4892E-02 (2001,055,0400) |
| 511 | -33.870 | -204.126 | 2.9913E-02 (2001,341,0600) | 2.7345E-02 (2001,055,0700) | 2.5080E-02 (2001,055,0600) | 2.3966E-02 (2001,055,0400) |
| 512 | -32.413 | -204.132 | 2.8820E-02 (2001,341,0600) | 2.6813E-02 (2001,055,0700) | 2.4539E-02 (2001,055,0600) | 2.3491E-02 (2001,055,0500) |
| 513 | -30.956 | -204.138 | 2.7681E-02 (2001,341,0600) | 2.6226E-02 (2001,055,0700) | 2.3997E-02 (2001,055,0600) | 2.3038E-02 (2001,055,0500) |
| 514 | -29.500 | -204.144 | 2.6545E-02 (2001,341,0600) | 2.5619E-02 (2001,055,0700) | 2.3495E-02 (2001,055,0600) | 2.2544E-02 (2001,055,0500) |
| 515 | -28.043 | -204.149 | 2.5385E-02 (2001,341,0600) | 2.5024E-02 (2001,055,0700) | 2.3008E-02 (2001,055,0600) | 2.2095E-02 (2001,055,0800) |
| 516 | -26.586 | -204.154 | 2.4436E-02 (2001,055,0700) | 2.4229E-02 (2001,341,0600) | 2.2553E-02 (2001,055,0600) | 2.2003E-02 (2001,055,0800) |
| 517 | -25.129 | -204.159 | 2.3850E-02 (2001,055,0700) | 2.3075E-02 (2001,341,0600) | 2.2091E-02 (2001,055,0600) | 2.1866E-02 (2001,055,0800) |
| 518 | -23.673 | -204.164 | 2.3295E-02 (2001,055,0700) | 2.1939E-02 (2001,341,0600) | 2.1674E-02 (2001,055,0800) | 2.1651E-02 (2001,055,0600) |
| 519 | -22.216 | -204.168 | 2.2749E-02 (2001,055,0700) | 2.1454E-02 (2001,055,0800) | 2.1222E-02 (2001,055,0600) | 2.0821E-02 (2001,341,0600) |
| 520 | -20.759 | -204.172 | 2.2229E-02 (2001,055,0700) | 2.1226E-02 (2001,055,0800) | 2.0782E-02 (2001,055,0600) | 1.9731E-02 (2001,341,0600) |
| 521 | -19.302 | -204.176 | 2.1747E-02 (2001,055,0700) | 2.0970E-02 (2001,055,0800) | 2.0355E-02 (2001,055,0600) | 1.8684E-02 (2001,341,0600) |
| 522 | -46.969 | -202.205 | 3.4881E-02 (2001,055,0400) | 3.4368E-02 (2001,341,0600) | 3.4182E-02 (2001,055,0300) | 3.3273E-02 (2001,055,0600) |
| 523 | -45.513 | -202.214 | 3.4382E-02 (2001,055,0400) | 3.4231E-02 (2001,341,0600) | 3.2531E-02 (2001,055,0300) | 3.2513E-02 (2001,055,0600) |
| 524 | -44.057 | -202.222 | 3.3935E-02 (2001,341,0600) | 3.3771E-02 (2001,055,0400) | 3.1799E-02 (2001,055,0600) | 3.1589E-02 (2001,055,0700) |
| 525 | -42.600 | -202.230 | 3.3553E-02 (2001,341,0600) | 3.3069E-02 (2001,055,0400) | 3.1500E-02 (2001,055,0700) | 3.1118E-02 (2001,055,0600) |
| 526 | -41.144 | -202.238 | 3.3013E-02 (2001,341,0600) | 3.2277E-02 (2001,055,0400) | 3.1214E-02 (2001,055,0700) | 3.0432E-02 (2001,055,0600) |
| 527 | -39.687 | -202.246 | 3.2382E-02 (2001,341,0600) | 3.1368E-02 (2001,055,0400) | 3.0874E-02 (2001,055,0700) | 2.9749E-02 (2001,055,0600) |
| 528 | -38.231 | -202.253 | 3.1654E-02 (2001,341,0600) | 3.0462E-02 (2001,055,0700) | 3.0395E-02 (2001,055,0400) | 2.9123E-02 (2001,055,0600) |
| 529 | -36.775 | -202.260 | 3.0839E-02 (2001,341,0600) | 3.0023E-02 (2001,055,0700) | 2.9365E-02 (2001,055,0400) | 2.8532E-02 (2001,055,0600) |
| 530 | -35.318 | -202.267 | 2.9948E-02 (2001,341,0600) | 2.9377E-02 (2001,055,0700) | 2.7492E-02 (2001,055,0600) | 2.3663E-02 (2001,055,0400) |
| 531 | -33.862 | -202.273 | 2.9035E-02 (2001,341,0600) | 2.8972E-02 (2001,055,0700) | 2.7428E-02 (2001,055,0600) | 2.7175E-02 (2001,055,0400) |
| 532 | -32.405 | -202.279 | 2.8479E-02 (2001,055,0700) | 2.8072E-02 (2001,341,0600) | 2.6964E-02 (2001,055,0600) | 2.6889E-02 (2001,055,0500) |
| 533 | -30.949 | -202.285 | 2.7933E-02 (2001,055,0700) | 2.7061E-02 (2001,341,0600) | 2.6477E-02 (2001,055,0600) | 2.6371E-02 (2001,055,0500) |
| 534 | -29.493 | -202.291 | 2.7350E-02 (2001,055,0700) | 2.6051E-02 (2001,341,0600) | 2.6034E-02 (2001,055,0600) | 2.5797E-02 (2001,055,0500) |
| 535 | -28.036 | -202.296 | 2.6766E-02 (2001,055,0700) | 2.5584E-02 (2001,055,0600) | 2.5199E-02 (2001,055,0500) | 2.5007E-02 (2001,341,0600) |
| 536 | -26.580 | -202.301 | 2.6220E-02 (2001,055,0700) | 2.5158E-02 (2001,055,0600) | 2.4557E-02 (2001,055,0500) | 2.3963E-02 (2001,341,0600) |
| 537 | -25.123 | -202.306 | 2.5681E-02 (2001,055,0700) | 2.4730E-02 (2001,055,0600) | 2.3867E-02 (2001,055,0500) | 2.3062E-02 (2001,055,0800) |
| 538 | -23.667 | -202.311 | 2.5142E-02 (2001,055,0700) | 2.4298E-02 (2001,055,0600) | 2.3161E-02 (2001,055,0500) | 2.2875E-02 (2001,055,0800) |
| 539 | -22.210 | -202.315 | 2.4641E-02 (2001,055,0700) | 2.3863E-02 (2001,055,0600) | 2.2691E-02 (2001,055,0800) | 2.2421E-02 (2001,055,0500) |
| 540 | -46.958 | -200.352 | 3.9602E-02 (2001,055,0400) | 3.7566E-02 (2001,055,0300) | 3.4658E-02 (2001,055,0600) | 3.4019E-02 (2001,055,0500) |
| 541 | -45.502 | -200.361 | 3.8937E-02 (2001,055,0400) | 3.5667E-02 (2001,055,0300) | 3.3900E-02 (2001,055,0600) | 3.3656E-02 (2001,055,0500) |
| 542 | -44.046 | -200.369 | 3.8172E-02 (2001,055,0400) | 3.3781E-02 (2001,055,0300) | 3.3381E-02 (2001,055,0500) | 3.3294E-02 (2001,055,0600) |
| 543 | -42.590 | -200.377 | 3.7282E-02 (2001,055,0400) | 3.3077E-02 (2001,055,0500) | 3.2683E-02 (2001,055,0600) | 3.2586E-02 (2001,055,0700) |
| 544 | -41.134 | -200.385 | 3.6312E-02 (2001,055,0400) | 3.2801E-02 (2001,055,0500) | 3.2365E-02 (2001,055,0700) | 3.2124E-02 (2001,055,0600) |
| 545 | -39.678 | -200.393 | 3.5228E-02 (2001,055,0400) | 3.2471E-02 (2001,055,0500) | 3.2031E-02 (2001,055,0700) | 3.1539E-02 (2001,055,0600) |
| 546 | -38.222 | -200.400 | 3.4070E-02 (2001,055,0400) | 3.2111E-02 (2001,055,0500) | 3.1632E-02 (2001,055,0700) | 3.1011E-02 (2001,055,0600) |
| 547 | -36.766 | -200.407 | 3.2862E-02 (2001,055,0400) | 3.1744E-02 (2001,055,0500) | 3.1278E-02 (2001,055,0700) | 3.0550E-02 (2001,055,0600) |
| 548 | -35.310 | -200.414 | 3.0685E-02 (2001,055,0700) | 2.9588E-02 (2001,055,0600) | 2.8749E-02 (2001,055,0500) | 2.8692E-02 (2001,341,0600) |
| 549 | -33.854 | -200.420 | 3.0831E-02 (2001,055,0500) | 3.0332E-02 (2001,055,0700) | 3.0293E-02 (2001,055,0400) | 2.9655E-02 (2001,055,0600) |
| 550 | -32.398 | -200.427 | 2.9788E-02 (2001,055,0700) | 2.9218E-02 (2001,055,0600) | 2.8939E-02 (2001,055,0500) | 2.8604E-02 (2001,055,0400) |
| 551 | -30.942 | -200.432 | 2.9734E-02 (2001,055,0500) | 2.9356E-02 (2001,055,0700) | 2.8883E-02 (2001,055,0600) | 2.7648E-02 (2001,055,0400) |
| 552 | -29.486 | -200.438 | 2.9082E-02 (2001,055,0500) | 2.8833E-02 (2001,055,0700) | 2.8494E-02 (2001,055,0600) | 2.6337E-02 (2001,055,0400) |
| 553 | -28.030 | -200.444 | 2.8266E-02 (2001,055,0700) | 2.8088E-02 (2001,055,0600) | 2.6725E-02 (2001,055,0500) | 2.5032E-02 (2001,055,0400) |
| 554 | -26.573 | -200.449 | 2.7806E-02 (2001,055,0700) | 2.7727E-02 (2001,055,0600) | 2.7652E-02 (2001,055,0500) | 2.4085E-02 (2001,055,0800) |
| 555 | -25.117 | -200.453 | 2.7330E-02 (2001,055,0600) | 2.7307E-02 (2001,055,0700) | 2.6850E-02 (2001,055,0500) | 2.3964E-02 (2001,055,0800) |
| 556 | -23.661 | -200.458 | 2.6936E-02 (2001,055,0600) | 2.6856E-02 (2001,055,0700) | 2.6034E-02 (2001,055,0500) | 2.3871E-02 (2001,055,0800) |
| 557 | -46.947 | -198.500 | 4.4035E-02 (2001,055,0400) | 4.0513E-02 (2001,055,0300) | 3.6972E-02 (2001,055,0500) | 3.5516E-02 (2001,055,0600) |
| 558 | -45.491 | -198.508 | 4.3231E-02 (2001,055,0400) | 3.8397E-02 (2001,055,0300) | 3.6726E-02 (2001,055,0500) | 3.4869E-02 (2001,055,0600) |
| 559 | -44.036 | -198.517 | 4.2299E-02 (2001,055,0400) | 3.6527E-02 (2001,055,0500) | 3.6325E-02 (2001,055,0300) | 3.4310E-02 (2001,055,0600) |
| 560 | -42.580 | -198.525 | 4.1227E-02 (2001,055,0400) | 3.6328E-02 (2001,055,0500) | 3.4291E-02 (2001,055,0300) | 3.3842E-02 (2001,055,0600) |
| 561 | -41.124 | -198.533 | 4.0084E-02 (2001,055,0400) | 3.6117E-02 (2001,055,0500) | 3.3406E-02 (2001,055,0600) | 3.3035E-02 (2001,055,0700) |
| 562 | -39.669 | -198.540 | 3.8852E-02 (2001,055,0400) | 3.5852E-02 (2001,055,0500) | 3.2994E-02 (2001,055,0600) | 3.2787E-02 (2001,055,0700) |
| 563 | -38.213 | -198.547 | 3.7498E-02 (2001,055,0400) | 3.5529E-02 (2001,055,0500) | 3.2610E-02 (2001,055,0600) | 3.2439E-02 (2001,055,0700) |
| 564 | -36.757 | -198.554 | 3.3105E-02 (2001,055,0400) | 3.2775E-02 (2001,055,0500) | 3.2071E-02 (2001,055,0600) | 3.2002E-02 (2001,055,0700) |
| 565 | -35.301 | -198.561 | 3.2157E-02 (2001,055,0500) | 3.2120E-02 (2001,055,0400) | 3.1748E-02 (2001,055,0600) | 3.1624E-02 (2001,055,0700) |
| 566 | -33.846 | -198.568 | 3.4224E-02 (2001,055,0500) | 3.3223E-02 (2001,055,0400) | 3.1648E-02 (2001,055,0600) | 3.1279E-02 (2001,055,0700) |
| 567 | -32.390 | -198.574 | 3.3674E-02 (2001,055,0500) | 3.1745E-02 (2001,055,0400) | 3.1372E-02 (2001,055,0600) | 3.0909E-02 (2001,055,0700) |
| 568 | -30.934 | -198.580 | 3.0286E-02 (2001,055,0700) | 3.0262E-02 (2001,055,0600) | 2.5727E-02 (2001,055,0500) | 2.5244E-02 (2001,341,0600) |
| 569 | -29.479 | -198.585 | 2.9892E-02 (2001,055,0600) | 2.9878E-02 (2001,055,0700) | 2.7812E-02 (2001,055,0500) | 2.4521E-02 (2001,055,0800) |
| 570 | -28.023 | -198.591 | 3.0160E-02 (2001,055,0600) | 2.9528E-02 (2001,055,0700) | 2.8117E-02 (2001,055,0500) | 2.4951E-02 (2001,055,0400) |
| 571 | -26.567 | -198.596 | 3.0689E-02 (2001,055,0500) | 3.0190E-02 (2001,055,0600) | 2.9153E-02 (2001,055,0700) | 2.5922E-02 (2001,055,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 572 | -46.936 | -196.647 | 4.7982E-02 (2001,055,0400) | 4.2906E-02 (2001,055,0300) | 3.9461E-02 (2001,055,0500) | 3.5639E-02 (2001,055,0600) |
| 573 | -45.481 | -196.656 | 4.7078E-02 (2001,055,0400) | 4.0640E-02 (2001,055,0300) | 3.9466E-02 (2001,055,0500) | 3.5312E-02 (2001,055,0600) |
| 574 | -44.025 | -196.664 | 4.5978E-02 (2001,055,0400) | 3.9368E-02 (2001,055,0500) | 3.8396E-02 (2001,055,0300) | 3.4840E-02 (2001,055,0600) |
| 575 | -42.570 | -196.672 | 4.4769E-02 (2001,055,0400) | 3.9264E-02 (2001,055,0500) | 3.6229E-02 (2001,055,0300) | 3.4524E-02 (2001,055,0600) |
| 576 | -41.115 | -196.680 | 4.3457E-02 (2001,055,0400) | 3.9168E-02 (2001,055,0500) | 3.4272E-02 (2001,055,0600) | 3.4141E-02 (2001,055,0300) |
| 577 | -39.659 | -196.687 | 4.2065E-02 (2001,055,0400) | 3.8964E-02 (2001,055,0500) | 3.4017E-02 (2001,055,0600) | 3.2955E-02 (2001,055,0700) |
| 578 | -38.204 | -196.695 | 4.0557E-02 (2001,055,0400) | 3.8707E-02 (2001,055,0500) | 3.3839E-02 (2001,055,0600) | 3.2770E-02 (2001,055,0700) |
| 579 | -36.748 | -196.702 | 3.9030E-02 (2001,055,0400) | 3.8375E-02 (2001,055,0500) | 3.3643E-02 (2001,055,0600) | 3.2469E-02 (2001,055,0700) |
| 580 | -35.293 | -196.708 | 3.3767E-02 (2001,055,0500) | 3.2896E-02 (2001,055,0600) | 3.2037E-02 (2001,055,0700) | 3.1819E-02 (2001,055,0400) |
| 581 | -33.838 | -196.715 | 3.3042E-02 (2001,055,0500) | 3.2669E-02 (2001,055,0600) | 3.1731E-02 (2001,055,0700) | 3.0244E-02 (2001,055,0400) |
| 582 | -32.382 | -196.721 | 3.6830E-02 (2001,055,0500) | 3.4210E-02 (2001,055,0400) | 3.3209E-02 (2001,055,0600) | 3.1514E-02 (2001,055,0700) |
| 583 | -30.927 | -196.727 | 3.6136E-02 (2001,055,0500) | 3.3051E-02 (2001,055,0600) | 3.2595E-02 (2001,055,0400) | 3.1159E-02 (2001,055,0700) |
| 584 | -29.472 | -196.733 | 3.5348E-02 (2001,055,0500) | 3.2877E-02 (2001,055,0600) | 3.0987E-02 (2001,055,0400) | 3.0846E-02 (2001,055,0700) |
| 585 | -28.016 | -196.738 | 3.1584E-02 (2001,055,0600) | 3.0383E-02 (2001,055,0700) | 2.9515E-02 (2001,055,0500) | 2.4926E-02 (2001,055,0800) |
| 586 | -26.561 | -196.743 | 3.1260E-02 (2001,055,0600) | 3.0091E-02 (2001,055,0700) | 2.9537E-02 (2001,055,0500) | 2.4988E-02 (2001,055,0800) |
| 587 | -46.925 | -194.794 | 5.1251E-02 (2001,055,0400) | 4.4632E-02 (2001,055,0300) | 4.1492E-02 (2001,055,0500) | 3.5268E-02 (2001,055,0600) |
| 588 | -45.470 | -194.803 | 5.0235E-02 (2001,055,0400) | 4.2231E-02 (2001,055,0300) | 4.1665E-02 (2001,055,0500) | 3.5075E-02 (2001,055,0600) |
| 589 | -44.015 | -194.811 | 4.9037E-02 (2001,055,0400) | 4.1791E-02 (2001,055,0500) | 3.9908E-02 (2001,055,0300) | 3.4904E-02 (2001,055,0600) |
| 590 | -42.560 | -194.819 | 4.7714E-02 (2001,055,0400) | 4.1705E-02 (2001,055,0500) | 3.6382E-02 (2001,055,0300) | 3.4760E-02 (2001,055,0600) |
| 591 | -41.105 | -194.827 | 4.6277E-02 (2001,055,0400) | 4.1831E-02 (2001,055,0500) | 3.5475E-02 (2001,055,0300) | 3.4705E-02 (2001,055,0600) |
| 592 | -39.650 | -194.835 | 4.4751E-02 (2001,055,0400) | 4.1745E-02 (2001,055,0500) | 3.4702E-02 (2001,055,0600) | 3.3410E-02 (2001,055,0300) |
| 593 | -38.195 | -194.842 | 4.3130E-02 (2001,055,0400) | 4.0315E-02 (2001,055,0500) | 3.4627E-02 (2001,055,0600) | 3.2541E-02 (2001,055,0700) |
| 594 | -36.740 | -194.849 | 3.8202E-02 (2001,055,0500) | 3.5667E-02 (2001,055,0400) | 3.4098E-02 (2001,055,0600) | 3.2268E-02 (2001,055,0700) |
| 595 | -35.285 | -194.856 | 3.7832E-02 (2001,055,0500) | 3.6980E-02 (2001,055,0400) | 3.4467E-02 (2001,055,0600) | 3.2139E-02 (2001,055,0700) |
| 596 | -33.830 | -194.862 | 3.8856E-02 (2001,055,0500) | 3.8018E-02 (2001,055,0400) | 3.4702E-02 (2001,055,0600) | 3.1969E-02 (2001,055,0700) |
| 597 | -32.375 | -194.868 | 3.9690E-02 (2001,055,0500) | 3.6282E-02 (2001,055,0400) | 3.4733E-02 (2001,055,0600) | 3.1770E-02 (2001,055,0700) |
| 598 | -30.920 | -194.874 | 3.8944E-02 (2001,055,0500) | 3.4730E-02 (2001,055,0600) | 3.4568E-02 (2001,055,0400) | 3.1567E-02 (2001,055,0700) |
| 599 | -29.465 | -194.880 | 3.3605E-02 (2001,055,0600) | 3.1222E-02 (2001,055,0700) | 2.9837E-02 (2001,055,0500) | 2.7219E-02 (2001,055,0400) |
| 600 | -28.009 | -194.885 | 3.3414E-02 (2001,055,0600) | 3.1016E-02 (2001,055,0700) | 2.9964E-02 (2001,055,0500) | 2.5746E-02 (2001,055,0400) |
| 601 | -26.554 | -194.890 | 3.6195E-02 (2001,055,0500) | 3.4477E-02 (2001,055,0600) | 3.0982E-02 (2001,055,0700) | 2.9558E-02 (2001,055,0400) |
| 602 | -45.459 | -192.950 | 5.2607E-02 (2001,055,0400) | 4.3341E-02 (2001,055,0500) | 4.3138E-02 (2001,055,0300) | 3.4397E-02 (2001,055,0600) |
| 603 | -44.004 | -192.959 | 5.1323E-02 (2001,055,0400) | 4.3370E-02 (2001,055,0500) | 3.8767E-02 (2001,055,0300) | 3.4410E-02 (2001,055,0600) |
| 604 | -42.550 | -192.967 | 4.9928E-02 (2001,055,0400) | 4.2971E-02 (2001,055,0500) | 3.4485E-02 (2001,055,0600) | 3.4132E-02 (2001,055,0300) |
| 605 | -41.095 | -192.975 | 4.8104E-02 (2001,055,0400) | 4.2662E-02 (2001,055,0500) | 3.4623E-02 (2001,055,0600) | 3.1947E-02 (2001,055,0700) |
| 606 | -39.640 | -192.982 | 4.6781E-02 (2001,055,0400) | 4.3969E-02 (2001,055,0500) | 3.4847E-02 (2001,055,0600) | 3.4158E-02 (2001,055,0300) |
| 607 | -38.186 | -192.989 | 4.0932E-02 (2001,055,0500) | 3.9236E-02 (2001,055,0400) | 3.4503E-02 (2001,055,0600) | 3.1814E-02 (2001,055,0700) |
| 608 | -36.731 | -192.996 | 3.9151E-02 (2001,055,0500) | 3.7366E-02 (2001,055,0400) | 3.4650E-02 (2001,055,0600) | 3.1756E-02 (2001,055,0700) |
| 609 | -35.276 | -193.003 | 3.8529E-02 (2001,055,0500) | 3.5566E-02 (2001,055,0400) | 3.4793E-02 (2001,055,0600) | 3.1681E-02 (2001,055,0700) |
| 610 | -33.822 | -193.010 | 4.2464E-02 (2001,055,0500) | 3.9723E-02 (2001,055,0400) | 3.5666E-02 (2001,055,0600) | 3.1678E-02 (2001,055,0700) |
| 611 | -32.367 | -193.016 | 4.2140E-02 (2001,055,0500) | 3.7915E-02 (2001,055,0400) | 3.5893E-02 (2001,055,0600) | 3.1658E-02 (2001,055,0700) |
| 612 | -30.912 | -193.022 | 4.1386E-02 (2001,055,0500) | 3.6118E-02 (2001,055,0400) | 3.6051E-02 (2001,055,0600) | 3.1592E-02 (2001,055,0700) |
| 613 | -29.457 | -193.027 | 4.0116E-02 (2001,055,0500) | 3.6135E-02 (2001,055,0600) | 3.4327E-02 (2001,055,0400) | 3.1456E-02 (2001,055,0700) |
| 614 | -28.003 | -193.033 | 3.9557E-02 (2001,055,0500) | 3.6191E-02 (2001,055,0600) | 3.2583E-02 (2001,055,0400) | 3.1421E-02 (2001,055,0700) |
| 615 | -26.548 | -193.038 | 3.4788E-02 (2001,055,0600) | 3.2826E-02 (2001,055,0500) | 3.1275E-02 (2001,055,0700) | 2.5619E-02 (2001,055,0400) |
| 616 | -25.093 | -193.043 | 3.6844E-02 (2001,055,0500) | 3.6088E-02 (2001,055,0600) | 3.1360E-02 (2001,055,0700) | 2.9238E-02 (2001,055,0400) |
| 617 | -41.085 | -191.122 | 4.9787E-02 (2001,055,0400) | 4.5508E-02 (2001,055,0500) | 3.6488E-02 (2001,055,0300) | 3.4180E-02 (2001,055,0600) |
| 618 | -39.631 | -191.129 | 4.5385E-02 (2001,055,0400) | 4.3074E-02 (2001,055,0500) | 3.4395E-02 (2001,055,0600) | 3.0721E-02 (2001,055,0700) |
| 619 | -38.176 | -191.137 | 4.6016E-02 (2001,055,0400) | 4.3921E-02 (2001,055,0500) | 3.4937E-02 (2001,055,0600) | 3.0826E-02 (2001,055,0700) |
| 620 | -36.722 | -191.144 | 4.4560E-02 (2001,055,0400) | 4.3983E-02 (2001,055,0500) | 3.5376E-02 (2001,055,0600) | 3.0895E-02 (2001,055,0700) |
| 621 | -35.268 | -191.150 | 4.5125E-02 (2001,055,0500) | 4.2749E-02 (2001,055,0400) | 3.5853E-02 (2001,055,0600) | 3.1008E-02 (2001,055,0700) |
| 622 | -33.813 | -191.157 | 4.4677E-02 (2001,055,0500) | 4.0901E-02 (2001,055,0400) | 3.6250E-02 (2001,055,0600) | 3.1069E-02 (2001,055,0700) |
| 623 | -32.359 | -191.163 | 4.4070E-02 (2001,055,0500) | 3.9028E-02 (2001,055,0400) | 3.6647E-02 (2001,055,0600) | 3.1159E-02 (2001,055,0700) |
| 624 | -30.905 | -191.169 | 4.3318E-02 (2001,055,0500) | 3.7201E-02 (2001,055,0400) | 3.6956E-02 (2001,055,0600) | 3.1218E-02 (2001,055,0700) |
| 625 | -29.450 | -191.175 | 4.2458E-02 (2001,055,0500) | 3.7195E-02 (2001,055,0600) | 3.5360E-02 (2001,055,0400) | 3.1247E-02 (2001,055,0700) |
| 626 | -27.996 | -191.180 | 4.1446E-02 (2001,055,0500) | 3.7400E-02 (2001,055,0600) | 3.3571E-02 (2001,055,0400) | 3.1364E-02 (2001,055,0700) |
| 627 | -26.542 | -191.185 | 3.7955E-02 (2001,055,0500) | 3.7471E-02 (2001,055,0600) | 3.1463E-02 (2001,055,0700) | 3.1329E-02 (2001,055,0400) |
| 628 | -25.087 | -191.190 | 3.9220E-02 (2001,055,0500) | 3.7525E-02 (2001,055,0600) | 3.1626E-02 (2001,055,0700) | 3.0158E-02 (2001,055,0400) |
| 629 | -39.621 | -189.277 | 4.3778E-02 (2001,055,0500) | 4.2877E-02 (2001,055,0400) | 3.3364E-02 (2001,055,0600) | 2.9378E-02 (2001,073,0800) |
| 630 | -38.167 | -189.284 | 4.6955E-02 (2001,055,0400) | 4.6705E-02 (2001,055,0500) | 3.4486E-02 (2001,055,0600) | 3.2199E-02 (2001,055,0300) |
| 631 | -36.713 | -189.291 | 4.6621E-02 (2001,055,0500) | 4.5110E-02 (2001,055,0400) | 3.5128E-02 (2001,055,0600) | 3.0384E-02 (2001,055,0300) |
| 632 | -35.259 | -189.298 | 4.4290E-02 (2001,055,0500) | 4.2866E-02 (2001,055,0400) | 3.5720E-02 (2001,055,0600) | 2.9741E-02 (2001,055,0700) |
| 633 | -33.805 | -189.304 | 4.6015E-02 (2001,055,0500) | 4.1457E-02 (2001,055,0400) | 3.6390E-02 (2001,055,0600) | 3.0074E-02 (2001,055,0700) |
| 634 | -32.351 | -189.310 | 4.5433E-02 (2001,055,0500) | 3.9592E-02 (2001,055,0400) | 3.6956E-02 (2001,055,0600) | 3.0305E-02 (2001,055,0700) |
| 635 | -30.897 | -189.316 | 4.4713E-02 (2001,055,0500) | 3.7752E-02 (2001,055,0400) | 3.7421E-02 (2001,055,0600) | 3.0445E-02 (2001,055,0700) |
| 636 | -29.443 | -189.322 | 4.3871E-02 (2001,055,0500) | 3.7840E-02 (2001,055,0600) | 3.5913E-02 (2001,055,0400) | 3.0691E-02 (2001,055,0700) |
| 637 | -27.989 | -189.327 | 3.8375E-02 (2001,055,0500) | 3.7716E-02 (2001,055,0600) | 3.1435E-02 (2001,055,0400) | 3.0920E-02 (2001,055,0700) |
| 638 | -26.535 | -189.332 | 3.9300E-02 (2001,055,0500) | 3.8392E-02 (2001,055,0600) | 3.1872E-02 (2001,055,0400) | 3.1216E-02 (2001,055,0700) |
| 639 | -25.081 | -189.337 | 3.6897E-02 (2001,055,0600) | 3.1714E-02 (2001,055,0500) | 3.1388E-02 (2001,055,0700) | 2.5455E-02 (2001,055,0400) |
| 640 | -23.628 | -189.342 | 3.8578E-02 (2001,055,0600) | 3.6663E-02 (2001,055,0500) | 3.1837E-02 (2001,055,0700) | 2.9073E-02 (2001,055,0400) |
| 641 | -22.173 | -189.346 | 3.8497E-02 (2001,055,0600) | 3.5290E-02 (2001,055,0500) | 3.2133E-02 (2001,055,0700) | 2.7522E-02 (2001,055,0400) |
| 642 | -41.066 | -187.417 | 5.0014E-02 (2001,055,0400) | 4.6460E-02 (2001,055,0500) | 3.5244E-02 (2001,055,0300) | 3.3422E-02 (2001,073,0800) |
| 643 | -39.612 | -187.424 | 4.4042E-02 (2001,055,0500) | 4.2777E-02 (2001,055,0400) | 3.2321E-02 (2001,073,0800) | 3.2256E-02 (2001,055,0600) |
| 644 | -38.158 | -187.431 | 4.7094E-02 (2001,055,0500) | 4.6774E-02 (2001,055,0400) | 3.3580E-02 (2001,055,0600) | 3.1511E-02 (2001,055,0300) |
| 645 | -36.705 | -187.438 | 4.7131E-02 (2001,055,0500) | 4.4983E-02 (2001,055,0400) | 3.4420E-02 (2001,055,0600) | 3.0638E-02 (2001,073,0900) |
| 646 | -35.251 | -187.445 | 4.6986E-02 (2001,055,0500) | 4.3219E-02 (2001,055,0400) | 3.5251E-02 (2001,055,0600) | 2.9899E-02 (2001,073,0900) |
| 647 | -33.797 | -187.452 | 4.6649E-02 (2001,055,0500) | 4.1403E-02 (2001,055,0400) | 3.6050E-02 (2001,055,0600) | 2.9074E-02 (2001,073,0900) |
| 648 | -32.344 | -187.458 | 4.6158E-02 (2001,055,0500) | 3.9580E-02 (2001,055,0400) | 3.6796E-02 (2001,055,0600) | 2.9030E-02 (2001,055,0700) |
| 649 | -30.890 | -187.464 | 4.5522E-02 (2001,055,0500) | 3.7804E-02 (2001,055,0400) | 3.7511E-02 (2001,055,0600) | 2.9511E-02 (2001,055,0700) |
| 650 | -29.436 | -187.469 | 4.4640E-02 (2001,055,0500) | 3.8047E-02 (2001,055,0600) | 3.5968E-02 (2001,055,0400) | 2.9812E-02 (2001,055,0700) |
| 651 | -27.983 | -187.475 | 4.3710E-02 (2001,055,0500) | 3.8522E-02 (2001,055,0600) | 3.4222E-02 (2001,055,0400) | 3.0233E-02 (2001,055,0700) |
| 652 | -26.529 | -187.480 | 4.2654E-02 (2001,055,0500) | 3.8917E-02 (2001,055,0600) | 3.2520E-02 (2001,055,0400) | 3.0691E-02 (2001,055,0700) |
| 653 | -25.076 | -187.485 | 4.1436E-02 (2001,055,0500) | 3.9165E-02 (2001,055,0600) | 3.1164E-02 (2001,055,0700) | 3.0855E-02 (2001,055,0400) |
| 654 | -23.622 | -187.489 | 3.9282E-02 (2001,055,0600) | 3.7516E-02 (2001,055,0500) | 3.1586E-02 (2001,055,0700) | 2.9247E-02 (2001,055,0400) |
| 655 | -22.168 | -187.494 | 3.9261E-02 (2001,055,0600) | 3.5624E-02 (2001,055,0500) | 3.2043E-02 (2001,055,0700) | 2.7227E-02 (2001,055,0400) |
| 656 | -41.056 | -185.564 | 4.3576E-02 (2001,055,0400) | 4.2007E-02 (2001,055,0500) | 3.6525E-02 (2001,073,0800) | 3.4231E-02 (2001,073,0900) |
| 657 | -39.602 | -185.572 | 4.4932E-02 (2001,055,0400) | 4.3783E-02 (2001,055,0500) | 3.5142E-02 (2001,073,0800) | 3.3852E-02 (2001,073,0900) |
| 658 | -38.149 | -185.579 | 4.6549E-02 (2001,055,0500) | 4.5826E-02 (2001,055,0400) | 3.3666E-02 (2001,073,0800) | 3.3294E-02 (2001,073,0900) |
| 659 | -36.696 | -185.586 | 4.6338E-02 (2001,055,0500) | 4.4180E-02 (2001,055,0400) | 3.3313E-02 (2001,055,0600) | 3.2595E-02 (2001,073,0900) |
| 660 | -35.243 | -185.593 | 4.6896E-02 (2001,055,0500) | 4.2510E-02 (2001,055,0400) | 3.4357E-02 (2001,055,0600) | 3.1756E-02 (2001,073,0900) |
| 661 | -33.789 | -185.599 | 4.6641E-02 (2001,055,0500) | 4.0736E-02 (2001,055,0400) | 3.5307E-02 (2001,055,0600) | 3.0827E-02 (2001,073,0900) |
| 662 | -32.336 | -185.605 | 4.6246E-02 (2001,055,0500) | 3.9021E-02 (2001,055,0400) | 3.6230E-02 (2001,055,0600) | 2.9809E-02 (2001,073,0900) |
| 663 | -30.883 | -185.611 | 4.5660E-02 (2001,055,0500) | 3.7308E-02 (2001,055,0400) | 3.7098E-02 (2001,055,0600) | 2.8736E-02 (2001,073,0900) |
| 664 | -29.429 | -185.617 | 4.4869E-02 (2001,055,0500) | 3.7789E-02 (2001,055,0600) | 3.5542E-02 (2001,055,0400) | 2.8613E-02 (2001,055,0700) |
| 665 | -27.976 | -185.622 | 4.3977E-02 (2001,055,0500) | 3.8411E-02 (2001,055,0600) | 3.3870E-02 (2001,055,0400) | 2.9197E-02 (2001,055,0700) |
| 666 | -26.523 | -185.627 | 4.2941E-02 (2001,055,0500) | 3.8938E-02 (2001,055,0600) | 3.2227E-02 (2001,055,0400) | 2.9819E-02 (2001,055,0700) |
| 667 | -25.070 | -185.632 | 3.9296E-02 (2001,055,0600) | 3.9198E-02 (2001,055,0500) | 3.0605E-02 (2001,055,0400) | 3.0408E-02 (2001,055,0700) |
| 668 | -23.616 | -185.637 | 3.7681E-02 (2001,055,0600) | 3.1782E-02 (2001,055,0500) | 3.0864E-02 (2001,055,0700) | 2.4209E-02 (2001,055,0400) |
| 669 | -22.163 | -185.641 | 3.8978E-02 (2001,055,0600) | 3.4387E-02 (2001,055,0500) | 3.1642E-02 (2001,055,0700) | 2.4942E-02 (2001,055,0400) |
| 670 | -42.499 | -183.704 | 4.7324E-02 (2001,055,0400) | 4.1697E-02 (2001,055,0500) | 4.1001E-02 (2001,073,0800) | 3.6059E-02 (2001,073,0900) |
| 671 | -41.046 | -183.711 | 4.2042E-02 (2001,055,0400) | 4.0822E-02 (2001,055,0500) | 3.9382E-02 (2001,073,0800) | 3.5869E-02 (2001,073,0900) |
| 672 | -39.593 | -183.719 | 4.2498E-02 (2001,055,0500) | 4.0578E-02 (2001,055,0400) | 3.7693E-02 (2001,073,0800) | 3.5460E-02 (2001,073,0900) |
| 673 | -38.140 | -183.726 | 4.1364E-02 (2001,055,0500) | 3.8935E-02 (2001,055,0400) | 3.5931E-02 (2001,073,0800) | 3.4850E-02 (2001,073,0900) |
| 674 | -36.687 | -183.733 | 4.2876E-02 (2001,055,0500) | 3.9950E-02 (2001,055,0400) | 3.4098E-02 (2001,073,0800) | 3.4088E-02 (2001,073,0900) |
| 675 | -35.234 | -183.740 | 4.6078E-02 (2001,055,0500) | 4.1192E-02 (2001,055,0400) | 3.3175E-02 (2001,073,0900) | 3.3064E-02 (2001,055,0600) |
| 676 | -33.781 | -183.746 | 4.5990E-02 (2001,055,0500) | 3.9557E-02 (2001,055,0400) | 3.4200E-02 (2001,055,0600) | 3.2163E-02 (2001,073,0900) |
| 677 | -32.328 | -183.753 | 4.5678E-02 (2001,055,0500) | 3.7954E-02 (2001,055,0400) | 3.5285E-02 (2001,055,0600) | 3.1058E-02 (2001,073,0900) |
| 678 | -30.875 | -183.759 | 4.5134E-02 (2001,055,0500) | 3.6320E-02 (2001,055,0400) | 3.6240E-02 (2001,055,0600) | 2.9893E-02 (2001,073,0900) |
| 679 | -29.422 | -183.764 | 4.4476E-02 (2001,055,0500) | 3.7085E-02 (2001,055,0600) | 3.4671E-02 (2001,055,0400) | 2.8669E-02 (2001,073,0900) |
| 680 | -27.969 | -183.770 | 4.3638E-02 (2001,055,0500) | 3.7872E-02 (2001,055,0600) | 3.3096E-02 (2001,055,0400) | 2.7919E-02 (2001,055,0700) |
| 681 | -26.517 | -183.775 | 4.0201E-02 (2001,055,0500) | 3.8509E-02 (2001,055,0600) | 3.1527E-02 (2001,055,0400) | 2.8647E-02 (2001,055,0700) |
| 682 | -25.064 | -183.779 | 3.8447E-02 (2001,055,0600) | 3.6896E-02 (2001,055,0500) | 2.9406E-02 (2001,055,0700) | 2.7696E-02 (2001,055,0400) |
| 683 | -23.611 | -183.784 | 3.7499E-02 (2001,055,0600) | 3.1775E-02 (2001,055,0500) | 3.0029E-02 (2001,055,0700) | 2.3841E-02 (2001,055,0400) |
| 684 | -22.158 | -183.788 | 3.9522E-02 (2001,055,0600) | 3.5953E-02 (2001,055,0500) | 3.0954E-02 (2001,055,0700) | 2.6647E-02 (2001,055,0400) |
| 685 | -20.705 | -183.792 | 3.9573E-02 (2001,055,0600) | 3.5102E-02 (2001,055,0500) | 3.1676E-02 (2001,055,0700) | 2.5283E-02 (2001,055,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 686 | -45.394 | -181.835 | 4.7408E-02 (2001,073,0800) | 4.3398E-02 (2001,055,0400) | 3.6572E-02 (2001,073,0900) | 3.6441E-02 (2001,055,0500) |
| 687 | -43.941 | -181.843 | 4.5645E-02 (2001,073,0800) | 4.4811E-02 (2001,055,0400) | 3.8729E-02 (2001,055,0500) | 3.6962E-02 (2001,073,0900) |
| 688 | -42.489 | -181.851 | 4.3789E-02 (2001,073,0800) | 4.1188E-02 (2001,055,0400) | 3.8349E-02 (2001,055,0500) | 3.7053E-02 (2001,073,0900) |
| 689 | -41.036 | -181.859 | 4.3648E-02 (2001,055,0400) | 4.1858E-02 (2001,073,0800) | 4.0454E-02 (2001,055,0500) | 3.6886E-02 (2001,073,0900) |
| 690 | -39.584 | -181.866 | 4.3485E-02 (2001,055,0400) | 4.3046E-02 (2001,055,0500) | 3.9837E-02 (2001,073,0800) | 3.6471E-02 (2001,073,0900) |
| 691 | -38.131 | -181.874 | 4.2903E-02 (2001,055,0500) | 4.2162E-02 (2001,055,0400) | 3.7820E-02 (2001,073,0800) | 3.5844E-02 (2001,073,0900) |
| 692 | -36.678 | -181.881 | 4.1465E-02 (2001,055,0500) | 3.9536E-02 (2001,055,0400) | 3.5732E-02 (2001,073,0800) | 3.5039E-02 (2001,073,0900) |
| 693 | -35.226 | -181.887 | 4.3261E-02 (2001,055,0500) | 3.9348E-02 (2001,055,0400) | 3.4086E-02 (2001,073,0900) | 3.3628E-02 (2001,073,0800) |
| 694 | -33.773 | -181.894 | 4.4658E-02 (2001,055,0500) | 3.7878E-02 (2001,055,0400) | 3.3014E-02 (2001,073,0900) | 3.2694E-02 (2001,055,0600) |
| 695 | -32.321 | -181.900 | 4.4473E-02 (2001,055,0500) | 3.6424E-02 (2001,055,0400) | 3.3945E-02 (2001,055,0600) | 3.1853E-02 (2001,073,0900) |
| 696 | -30.868 | -181.906 | 4.4077E-02 (2001,055,0500) | 3.5036E-02 (2001,055,0600) | 3.4902E-02 (2001,055,0400) | 3.0619E-02 (2001,073,0900) |
| 697 | -29.415 | -181.912 | 4.3475E-02 (2001,055,0500) | 3.6009E-02 (2001,055,0600) | 3.3396E-02 (2001,055,0400) | 2.9334E-02 (2001,073,0900) |
| 698 | -27.963 | -181.917 | 4.0804E-02 (2001,055,0500) | 3.6907E-02 (2001,055,0600) | 3.1929E-02 (2001,055,0400) | 2.8021E-02 (2001,073,0900) |
| 699 | -26.510 | -181.922 | 3.7596E-02 (2001,055,0600) | 3.7502E-02 (2001,055,0500) | 2.9544E-02 (2001,055,0400) | 2.7278E-02 (2001,055,0700) |
| 700 | -25.058 | -181.927 | 3.6582E-02 (2001,055,0600) | 3.4989E-02 (2001,055,0500) | 2.8037E-02 (2001,055,0700) | 2.5337E-02 (2001,073,0900) |
| 701 | -23.605 | -181.931 | 3.8111E-02 (2001,055,0600) | 3.5143E-02 (2001,055,0500) | 2.9070E-02 (2001,055,0700) | 2.5163E-02 (2001,055,0400) |
| 702 | -22.152 | -181.936 | 3.8367E-02 (2001,055,0600) | 3.3910E-02 (2001,055,0500) | 2.9968E-02 (2001,055,0700) | 2.3921E-02 (2001,055,0400) |
| 703 | -20.700 | -181.940 | 3.7121E-02 (2001,055,0600) | 3.1443E-02 (2001,055,0500) | 3.0622E-02 (2001,055,0700) | 2.1349E-02 (2001,073,0900) |
| 704 | -46.835 | -179.973 | 5.2262E-02 (2001,073,0800) | 4.2962E-02 (2001,055,0400) | 3.5983E-02 (2001,073,0900) | 3.5023E-02 (2001,073,0700) |
| 705 | -45.383 | -179.982 | 5.0303E-02 (2001,073,0800) | 4.0260E-02 (2001,055,0400) | 3.6748E-02 (2001,073,0900) | 3.4810E-02 (2001,055,0500) |
| 706 | -43.931 | -179.990 | 4.8215E-02 (2001,073,0800) | 4.1347E-02 (2001,055,0400) | 3.7212E-02 (2001,073,0900) | 3.6114E-02 (2001,055,0500) |
| 707 | -42.479 | -179.999 | 4.6046E-02 (2001,073,0800) | 4.0788E-02 (2001,055,0400) | 3.7360E-02 (2001,073,0900) | 3.7180E-02 (2001,055,0500) |
| 708 | -41.026 | -180.006 | 4.3810E-02 (2001,073,0800) | 3.9764E-02 (2001,055,0400) | 3.8073E-02 (2001,055,0500) | 3.7233E-02 (2001,073,0900) |
| 709 | -39.574 | -180.014 | 4.1536E-02 (2001,073,0800) | 4.0416E-02 (2001,055,0400) | 3.9689E-02 (2001,055,0500) | 3.6837E-02 (2001,073,0900) |
| 710 | -38.122 | -180.021 | 4.1659E-02 (2001,055,0500) | 3.9585E-02 (2001,055,0400) | 3.9222E-02 (2001,073,0800) | 3.6224E-02 (2001,073,0900) |
| 711 | -36.670 | -180.028 | 4.2382E-02 (2001,055,0500) | 3.8384E-02 (2001,055,0400) | 3.6922E-02 (2001,073,0800) | 3.5406E-02 (2001,073,0900) |
| 712 | -35.217 | -180.035 | 4.2673E-02 (2001,055,0500) | 3.7099E-02 (2001,055,0400) | 3.4623E-02 (2001,073,0800) | 3.4445E-02 (2001,073,0900) |
| 713 | -33.765 | -180.041 | 4.2822E-02 (2001,055,0500) | 3.5816E-02 (2001,055,0400) | 3.3340E-02 (2001,073,0900) | 3.2341E-02 (2001,073,0800) |
| 714 | -32.313 | -180.048 | 4.2729E-02 (2001,055,0500) | 3.4497E-02 (2001,055,0400) | 3.2295E-02 (2001,055,0600) | 3.2155E-02 (2001,073,0900) |
| 715 | -30.861 | -180.053 | 4.2416E-02 (2001,055,0500) | 3.3439E-02 (2001,055,0600) | 3.3113E-02 (2001,055,0400) | 3.0885E-02 (2001,073,0900) |
| 716 | -29.408 | -180.059 | 4.1972E-02 (2001,055,0500) | 3.4567E-02 (2001,055,0600) | 3.1764E-02 (2001,055,0400) | 2.9564E-02 (2001,073,0900) |
| 717 | -27.956 | -180.064 | 4.0882E-02 (2001,055,0500) | 3.5568E-02 (2001,055,0600) | 3.0418E-02 (2001,055,0400) | 2.8207E-02 (2001,073,0900) |
| 718 | -26.504 | -180.069 | 3.8268E-02 (2001,055,0500) | 3.6402E-02 (2001,055,0600) | 2.9086E-02 (2001,055,0400) | 2.6829E-02 (2001,073,0900) |
| 719 | -25.052 | -180.074 | 3.6615E-02 (2001,055,0600) | 3.5281E-02 (2001,055,0500) | 2.6716E-02 (2001,055,0700) | 2.5730E-02 (2001,055,0400) |
| 720 | -23.599 | -180.079 | 3.7146E-02 (2001,055,0600) | 3.4208E-02 (2001,055,0500) | 2.7749E-02 (2001,055,0700) | 2.4540E-02 (2001,055,0400) |
| 721 | -22.147 | -180.083 | 3.8056E-02 (2001,055,0600) | 3.5068E-02 (2001,055,0500) | 2.8749E-02 (2001,055,0700) | 2.4861E-02 (2001,055,0400) |
| 722 | -20.695 | -180.087 | 3.7703E-02 (2001,055,0600) | 3.1926E-02 (2001,055,0500) | 2.9706E-02 (2001,055,0700) | 2.2285E-02 (2001,055,0400) |
| 723 | -46.824 | -178.121 | 5.4704E-02 (2001,073,0800) | 3.7265E-02 (2001,055,0400) | 3.5730E-02 (2001,073,0700) | 3.5331E-02 (2001,073,0900) |
| 724 | -45.372 | -178.130 | 5.2449E-02 (2001,073,0800) | 3.6665E-02 (2001,055,0400) | 3.6186E-02 (2001,073,0900) | 3.3138E-02 (2001,073,0700) |
| 725 | -43.920 | -178.138 | 5.0074E-02 (2001,073,0800) | 3.8003E-02 (2001,055,0400) | 3.6735E-02 (2001,073,0900) | 3.3187E-02 (2001,055,0500) |
| 726 | -42.469 | -178.146 | 4.7642E-02 (2001,073,0800) | 3.7457E-02 (2001,055,0400) | 3.6951E-02 (2001,073,0900) | 3.4335E-02 (2001,055,0500) |
| 727 | -41.017 | -178.154 | 4.5148E-02 (2001,073,0800) | 3.6888E-02 (2001,073,0900) | 3.5169E-02 (2001,055,0500) | 3.4428E-02 (2001,055,0400) |
| 728 | -39.565 | -178.161 | 4.2631E-02 (2001,073,0800) | 3.7312E-02 (2001,055,0400) | 3.6993E-02 (2001,055,0500) | 3.6541E-02 (2001,073,0900) |
| 729 | -38.113 | -178.169 | 4.0091E-02 (2001,073,0800) | 3.7988E-02 (2001,055,0500) | 3.6648E-02 (2001,055,0400) | 3.5965E-02 (2001,073,0900) |
| 730 | -36.661 | -178.176 | 3.9567E-02 (2001,055,0500) | 3.7607E-02 (2001,073,0800) | 3.5604E-02 (2001,055,0400) | 3.5175E-02 (2001,073,0900) |
| 731 | -35.209 | -178.182 | 4.0256E-02 (2001,055,0500) | 3.5121E-02 (2001,073,0800) | 3.4526E-02 (2001,055,0400) | 3.4227E-02 (2001,073,0900) |
| 732 | -33.757 | -178.189 | 4.0469E-02 (2001,055,0500) | 3.3407E-02 (2001,055,0400) | 3.3136E-02 (2001,073,0900) | 3.2696E-02 (2001,073,0800) |
| 733 | -32.305 | -178.195 | 4.0494E-02 (2001,055,0500) | 3.2239E-02 (2001,055,0400) | 3.1947E-02 (2001,073,0900) | 3.0362E-02 (2001,055,0600) |
| 734 | -30.853 | -178.201 | 4.0351E-02 (2001,055,0500) | 3.1655E-02 (2001,055,0600) | 3.1041E-02 (2001,055,0400) | 3.0670E-02 (2001,073,0900) |
| 735 | -29.401 | -178.206 | 4.0006E-02 (2001,055,0500) | 3.2821E-02 (2001,055,0600) | 2.9841E-02 (2001,055,0400) | 2.9351E-02 (2001,073,0900) |
| 736 | -27.949 | -178.212 | 3.9514E-02 (2001,055,0500) | 3.3891E-02 (2001,055,0600) | 2.8660E-02 (2001,055,0400) | 2.7978E-02 (2001,073,0900) |
| 737 | -26.498 | -178.217 | 3.8873E-02 (2001,055,0500) | 3.4839E-02 (2001,055,0600) | 2.7458E-02 (2001,055,0400) | 2.6598E-02 (2001,073,0900) |
| 738 | -25.046 | -178.222 | 3.5118E-02 (2001,055,0600) | 3.3871E-02 (2001,055,0500) | 2.5197E-02 (2001,073,0900) | 2.5116E-02 (2001,055,0700) |
| 739 | -23.594 | -178.226 | 3.6630E-02 (2001,055,0500) | 3.6273E-02 (2001,055,0600) | 2.6242E-02 (2001,055,0700) | 2.5155E-02 (2001,055,0400) |
| 740 | -22.142 | -178.231 | 3.6203E-02 (2001,055,0600) | 3.1901E-02 (2001,055,0500) | 2.7303E-02 (2001,055,0700) | 2.2425E-02 (2001,073,0900) |
| 741 | -20.690 | -178.235 | 3.5201E-02 (2001,055,0600) | 3.0770E-02 (2001,055,0500) | 2.8196E-02 (2001,055,0700) | 2.1105E-02 (2001,282,0800) |
| 742 | -46.813 | -176.268 | 5.6205E-02 (2001,073,0800) | 3.5988E-02 (2001,073,0700) | 3.5638E-02 (2001,055,0400) | 3.3975E-02 (2001,073,0900) |
| 743 | -45.361 | -176.277 | 5.3709E-02 (2001,073,0800) | 3.4927E-02 (2001,073,0900) | 3.4752E-02 (2001,055,0400) | 3.3231E-02 (2001,073,0700) |
| 744 | -43.910 | -176.285 | 5.1113E-02 (2001,073,0800) | 3.5550E-02 (2001,073,0900) | 3.2477E-02 (2001,055,0400) | 3.0524E-02 (2001,073,0700) |
| 745 | -42.458 | -176.293 | 4.8457E-02 (2001,073,0800) | 3.5857E-02 (2001,073,0900) | 3.4665E-02 (2001,055,0400) | 3.1245E-02 (2001,055,0500) |
| 746 | -41.007 | -176.301 | 4.5755E-02 (2001,073,0800) | 3.5855E-02 (2001,073,0900) | 3.4879E-02 (2001,055,0400) | 3.3287E-02 (2001,055,0500) |
| 747 | -39.555 | -176.309 | 4.3076E-02 (2001,073,0800) | 3.5587E-02 (2001,073,0900) | 3.3973E-02 (2001,055,0400) | 3.3953E-02 (2001,055,0500) |
| 748 | -38.104 | -176.316 | 4.0375E-02 (2001,073,0800) | 3.6153E-02 (2001,055,0500) | 3.5065E-02 (2001,073,0900) | 3.3458E-02 (2001,055,0400) |
| 749 | -36.652 | -176.323 | 3.7727E-02 (2001,073,0800) | 3.6883E-02 (2001,055,0500) | 3.4339E-02 (2001,073,0900) | 3.2606E-02 (2001,055,0400) |
| 750 | -35.201 | -176.330 | 3.7385E-02 (2001,055,0500) | 3.5127E-02 (2001,073,0800) | 3.3430E-02 (2001,073,0900) | 3.1720E-02 (2001,055,0400) |
| 751 | -33.749 | -176.336 | 3.7747E-02 (2001,055,0500) | 3.2595E-02 (2001,073,0800) | 3.2389E-02 (2001,073,0900) | 3.1194E-02 (2001,282,0800) |
| 752 | -32.297 | -176.342 | 3.7891E-02 (2001,055,0500) | 3.1227E-02 (2001,073,0900) | 3.0719E-02 (2001,282,0800) | 3.0142E-02 (2001,073,0800) |
| 753 | -30.846 | -176.348 | 3.7863E-02 (2001,055,0500) | 3.0104E-02 (2001,282,0800) | 2.9988E-02 (2001,073,0900) | 2.9591E-02 (2001,055,0600) |
| 754 | -29.394 | -176.354 | 3.7657E-02 (2001,055,0500) | 3.0834E-02 (2001,055,0600) | 2.9344E-02 (2001,282,0800) | 2.8685E-02 (2001,073,0900) |
| 755 | -27.943 | -176.359 | 3.7282E-02 (2001,055,0500) | 3.1961E-02 (2001,055,0600) | 2.8429E-02 (2001,282,0800) | 2.7345E-02 (2001,073,0900) |
| 756 | -26.491 | -176.364 | 3.6769E-02 (2001,055,0500) | 3.2985E-02 (2001,055,0600) | 2.7442E-02 (2001,282,0800) | 2.5975E-02 (2001,073,0900) |
| 757 | -25.040 | -176.369 | 3.6128E-02 (2001,055,0500) | 3.3837E-02 (2001,055,0600) | 2.6356E-02 (2001,282,0800) | 2.4599E-02 (2001,055,0400) |
| 758 | -23.588 | -176.374 | 3.4562E-02 (2001,055,0600) | 3.3497E-02 (2001,055,0500) | 2.5207E-02 (2001,282,0800) | 2.4543E-02 (2001,055,0700) |
| 759 | -22.137 | -176.378 | 3.5153E-02 (2001,055,0600) | 3.3917E-02 (2001,055,0500) | 2.5719E-02 (2001,055,0700) | 2.4021E-02 (2001,282,0800) |
| 760 | -20.685 | -176.382 | 3.4990E-02 (2001,055,0600) | 2.9451E-02 (2001,055,0500) | 2.6855E-02 (2001,055,0700) | 2.2805E-02 (2001,282,0800) |
| 761 | -62.765 | -174.303 | 6.7511E-02 (2001,073,0800) | 5.9825E-02 (2001,073,0700) | 4.4377E-02 (2001,345,0800) | 4.0696E-02 (2001,073,0600) |
| 762 | -46.802 | -174.416 | 5.6654E-02 (2001,073,0800) | 3.5833E-02 (2001,073,0700) | 3.2015E-02 (2001,073,0900) | 3.1897E-02 (2001,055,0400) |
| 763 | -45.351 | -174.425 | 5.3997E-02 (2001,073,0800) | 3.3046E-02 (2001,073,0900) | 3.2933E-02 (2001,073,0700) | 3.0553E-02 (2001,055,0400) |
| 764 | -43.899 | -174.433 | 5.1245E-02 (2001,073,0800) | 3.3743E-02 (2001,073,0900) | 3.0105E-02 (2001,073,0700) | 2.9240E-02 (2001,282,0800) |
| 765 | -42.448 | -174.441 | 4.8447E-02 (2001,073,0800) | 3.4133E-02 (2001,073,0900) | 3.0915E-02 (2001,055,0400) | 3.0138E-02 (2001,282,0800) |
| 766 | -40.997 | -174.449 | 4.5617E-02 (2001,073,0800) | 3.4217E-02 (2001,073,0900) | 3.1016E-02 (2001,055,0400) | 3.0893E-02 (2001,282,0800) |
| 767 | -39.546 | -174.456 | 4.2794E-02 (2001,073,0800) | 3.4027E-02 (2001,073,0900) | 3.1931E-02 (2001,055,0500) | 3.1476E-02 (2001,282,0800) |
| 768 | -38.095 | -174.464 | 4.0005E-02 (2001,073,0800) | 3.3583E-02 (2001,073,0900) | 3.2903E-02 (2001,055,0500) | 3.1888E-02 (2001,282,0800) |
| 769 | -36.643 | -174.471 | 3.7256E-02 (2001,073,0800) | 3.3682E-02 (2001,055,0500) | 3.2941E-02 (2001,073,0900) | 3.2122E-02 (2001,282,0800) |
| 770 | -35.192 | -174.477 | 3.4593E-02 (2001,073,0800) | 3.4312E-02 (2001,055,0500) | 3.2161E-02 (2001,282,0800) | 3.2103E-02 (2001,073,0900) |
| 771 | -33.741 | -174.484 | 3.4756E-02 (2001,055,0500) | 3.2020E-02 (2001,073,0800) | 3.2013E-02 (2001,282,0800) | 3.1132E-02 (2001,073,0900) |
| 772 | -32.290 | -174.490 | 3.5013E-02 (2001,055,0500) | 3.1662E-02 (2001,282,0800) | 3.0032E-02 (2001,073,0900) | 2.9532E-02 (2001,073,0800) |
| 773 | -30.839 | -174.496 | 3.5093E-02 (2001,055,0500) | 3.1165E-02 (2001,282,0800) | 2.8859E-02 (2001,073,0900) | 2.7356E-02 (2001,055,0600) |
| 774 | -29.387 | -174.501 | 3.5007E-02 (2001,055,0500) | 3.0508E-02 (2001,282,0800) | 2.8645E-02 (2001,055,0600) | 2.7605E-02 (2001,073,0900) |
| 775 | -27.936 | -174.507 | 3.4762E-02 (2001,055,0500) | 2.9835E-02 (2001,055,0600) | 2.9690E-02 (2001,282,0800) | 2.6323E-02 (2001,073,0900) |
| 776 | -26.485 | -174.512 | 3.4364E-02 (2001,055,0500) | 3.0863E-02 (2001,055,0600) | 2.8782E-02 (2001,282,0800) | 2.4996E-02 (2001,073,0900) |
| 777 | -25.034 | -174.517 | 3.2952E-02 (2001,055,0500) | 3.1797E-02 (2001,055,0600) | 2.7766E-02 (2001,282,0800) | 2.3670E-02 (2001,073,0900) |
| 778 | -23.582 | -174.521 | 3.2601E-02 (2001,055,0600) | 3.1099E-02 (2001,055,0500) | 2.6674E-02 (2001,282,0800) | 2.2769E-02 (2001,055,0700) |
| 779 | -22.131 | -174.526 | 3.2677E-02 (2001,055,0600) | 2.8650E-02 (2001,055,0500) | 2.5536E-02 (2001,282,0800) | 2.3979E-02 (2001,055,0700) |
| 780 | -62.750 | -172.451 | 6.6897E-02 (2001,073,0800) | 6.3554E-02 (2001,073,0700) | 4.3497E-02 (2001,345,0800) | 4.0257E-02 (2001,034,1000) |
| 781 | -61.299 | -172.462 | 6.8130E-02 (2001,073,0800) | 6.2076E-02 (2001,073,0700) | 4.1478E-02 (2001,345,0800) | 3.9124E-02 (2001,034,1000) |
| 782 | -46.791 | -172.563 | 5.6001E-02 (2001,073,0800) | 3.5177E-02 (2001,073,0700) | 2.9562E-02 (2001,073,0900) | 2.9069E-02 (2001,282,0700) |
| 783 | -45.340 | -172.572 | 5.3256E-02 (2001,073,0800) | 3.2194E-02 (2001,073,0700) | 3.0631E-02 (2001,073,0900) | 2.7810E-02 (2001,282,0700) |
| 784 | -43.889 | -172.580 | 5.0434E-02 (2001,073,0800) | 3.1399E-02 (2001,073,0900) | 2.9318E-02 (2001,073,0700) | 2.8456E-02 (2001,282,0800) |
| 785 | -42.438 | -172.588 | 4.7566E-02 (2001,073,0800) | 3.1858E-02 (2001,073,0900) | 2.9462E-02 (2001,282,0800) | 2.7800E-02 (2001,055,0400) |
| 786 | -40.987 | -172.596 | 4.4683E-02 (2001,073,0800) | 3.2032E-02 (2001,073,0900) | 3.0345E-02 (2001,282,0800) | 2.7571E-02 (2001,055,0400) |
| 787 | -39.536 | -172.604 | 4.1814E-02 (2001,073,0800) | 3.1930E-02 (2001,073,0900) | 3.1071E-02 (2001,282,0800) | 2.7463E-02 (2001,055,0500) |
| 788 | -38.086 | -172.611 | 3.8993E-02 (2001,073,0800) | 3.1638E-02 (2001,282,0800) | 3.1590E-02 (2001,073,0900) | 2.9534E-02 (2001,055,0500) |
| 789 | -36.635 | -172.618 | 3.6223E-02 (2001,073,0800) | 3.2019E-02 (2001,282,0800) | 3.1032E-02 (2001,073,0900) | 3.0394E-02 (2001,055,0500) |
| 790 | -35.184 | -172.625 | 3.3563E-02 (2001,073,0800) | 3.2237E-02 (2001,282,0800) | 3.1075E-02 (2001,055,0500) | 3.0302E-02 (2001,073,0900) |
| 791 | -33.733 | -172.631 | 3.2251E-02 (2001,282,0800) | 3.1602E-02 (2001,055,0500) | 3.0976E-02 (2001,073,0800) | 2.9413E-02 (2001,073,0900) |
| 792 | -32.282 | -172.637 | 3.2065E-02 (2001,282,0800) | 3.1927E-02 (2001,055,0500) | 2.8498E-02 (2001,073,0800) | 2.8417E-02 (2001,073,0900) |
| 793 | -30.831 | -172.643 | 3.2134E-02 (2001,055,0500) | 3.1721E-02 (2001,282,0800) | 2.7318E-02 (2001,073,0900) | 2.6143E-02 (2001,073,0800) |
| 794 | -29.380 | -172.649 | 3.2148E-02 (2001,055,0500) | 3.1207E-02 (2001,282,0800) | 2.6310E-02 (2001,055,0600) | 2.6158E-02 (2001,073,0900) |
| 795 | -27.929 | -172.654 | 3.2009E-02 (2001,055,0500) | 3.0532E-02 (2001,282,0800) | 2.7524E-02 (2001,055,0600) | 2.4942E-02 (2001,073,0900) |
| 796 | -26.479 | -172.659 | 3.1739E-02 (2001,055,0500) | 2.9752E-02 (2001,282,0800) | 2.8625E-02 (2001,055,0600) | 2.3698E-02 (2001,073,0900) |
| 797 | -25.028 | -172.664 | 3.1343E-02 (2001,055,0500) | 2.9595E-02 (2001,055,0600) | 2.8836E-02 (2001,282,0800) | 2.2435E-02 (2001,073,0900) |
| 798 | -23.577 | -172.669 | 3.0398E-02 (2001,055,0600) | 2.9042E-02 (2001,055,0500) | 2.7861E-02 (2001,282,0800) | 2.1168E-02 (2001,073,0900) |
| 799 | -61.285 | -170.610 | 6.6042E-02 (2001,073,0800) | 6.4247E-02 (2001,073,0700) | 4.1862E-02 (2001,034,0800) | 4.1045E-02 (2001,034,1000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 800 | -46.780 | -170.711 | 5.4248E-02 (2001,073,0800) | 3.4115E-02 (2001,073,0700) | 3.1901E-02 (2001,282,0700) | 2.8739E-02 (2001,034,1100) |
| 801 | -45.329 | -170.720 | 5.1519E-02 (2001,073,0800) | 3.1078E-02 (2001,073,0700) | 3.0534E-02 (2001,282,0700) | 2.7823E-02 (2001,073,0900) |
| 802 | -43.879 | -170.728 | 4.8704E-02 (2001,073,0800) | 2.9049E-02 (2001,282,0700) | 2.8630E-02 (2001,073,0900) | 2.8146E-02 (2001,073,0700) |
| 803 | -42.428 | -170.736 | 4.5860E-02 (2001,073,0800) | 2.9160E-02 (2001,073,0900) | 2.8090E-02 (2001,282,0800) | 2.7470E-02 (2001,282,0700) |
| 804 | -40.977 | -170.744 | 4.2981E-02 (2001,073,0800) | 2.9413E-02 (2001,073,0900) | 2.9103E-02 (2001,282,0800) | 2.5785E-02 (2001,282,0700) |
| 805 | -39.527 | -170.751 | 4.0150E-02 (2001,073,0800) | 2.9981E-02 (2001,282,0800) | 2.9406E-02 (2001,073,0900) | 2.5141E-02 (2001,055,0500) |
| 806 | -38.076 | -170.759 | 3.7343E-02 (2001,073,0800) | 3.0722E-02 (2001,282,0800) | 2.9159E-02 (2001,073,0900) | 2.6181E-02 (2001,055,0500) |
| 807 | -36.626 | -170.766 | 3.4631E-02 (2001,073,0800) | 3.1281E-02 (2001,282,0800) | 2.8719E-02 (2001,073,0900) | 2.6142E-02 (2001,055,0500) |
| 808 | -35.175 | -170.772 | 3.2028E-02 (2001,073,0800) | 3.1684E-02 (2001,282,0800) | 2.8089E-02 (2001,073,0900) | 2.7793E-02 (2001,055,0500) |
| 809 | -33.725 | -170.779 | 3.1869E-02 (2001,282,0800) | 2.9489E-02 (2001,073,0800) | 2.7395E-02 (2001,055,0500) | 2.7324E-02 (2001,073,0900) |
| 810 | -32.274 | -170.785 | 3.1900E-02 (2001,282,0800) | 2.8802E-02 (2001,055,0500) | 2.7089E-02 (2001,073,0800) | 2.6428E-02 (2001,073,0900) |
| 811 | -30.824 | -170.791 | 3.1749E-02 (2001,282,0800) | 2.9048E-02 (2001,055,0500) | 2.5444E-02 (2001,073,0900) | 2.4777E-02 (2001,073,0800) |
| 812 | -29.373 | -170.796 | 3.1399E-02 (2001,282,0800) | 2.9171E-02 (2001,055,0500) | 2.4383E-02 (2001,073,0900) | 2.3955E-02 (2001,055,0600) |
| 813 | -27.923 | -170.802 | 3.0925E-02 (2001,282,0800) | 2.9159E-02 (2001,055,0500) | 2.5169E-02 (2001,055,0600) | 2.3271E-02 (2001,073,0900) |
| 814 | -26.472 | -170.807 | 3.0315E-02 (2001,282,0800) | 2.8986E-02 (2001,055,0500) | 2.6236E-02 (2001,055,0600) | 2.2122E-02 (2001,073,0900) |
| 815 | -25.022 | -170.812 | 2.9558E-02 (2001,282,0800) | 2.7304E-02 (2001,055,0500) | 2.7214E-02 (2001,055,0600) | 2.0950E-02 (2001,073,0900) |
| 816 | -59.820 | -168.769 | 6.3367E-02 (2001,073,0800) | 6.2452E-02 (2001,073,0700) | 4.4081E-02 (2001,034,0800) | 4.1863E-02 (2001,034,0700) |
| 817 | -43.868 | -168.875 | 4.6132E-02 (2001,073,0800) | 3.1366E-02 (2001,282,0700) | 2.7322E-02 (2001,034,1000) | 2.7032E-02 (2001,034,1100) |
| 818 | -42.418 | -168.884 | 4.3375E-02 (2001,073,0800) | 2.9701E-02 (2001,282,0700) | 2.6237E-02 (2001,034,1000) | 2.6160E-02 (2001,073,0900) |
| 819 | -40.968 | -168.891 | 4.0586E-02 (2001,073,0800) | 2.7957E-02 (2001,282,0700) | 2.7260E-02 (2001,282,0800) | 2.6479E-02 (2001,073,0900) |
| 820 | -39.518 | -168.899 | 3.7858E-02 (2001,073,0800) | 2.8287E-02 (2001,282,0800) | 2.6557E-02 (2001,073,0900) | 2.6164E-02 (2001,282,0700) |
| 821 | -38.067 | -168.906 | 3.5155E-02 (2001,073,0800) | 2.9187E-02 (2001,282,0800) | 2.6426E-02 (2001,073,0900) | 2.4365E-02 (2001,282,0700) |
| 822 | -36.617 | -168.913 | 3.2559E-02 (2001,073,0800) | 2.9949E-02 (2001,282,0800) | 2.6085E-02 (2001,073,0900) | 2.3101E-02 (2001,055,0500) |
| 823 | -35.167 | -168.920 | 3.0539E-02 (2001,282,0800) | 3.0041E-02 (2001,073,0800) | 2.5583E-02 (2001,073,0900) | 2.3767E-02 (2001,055,0500) |
| 824 | -33.717 | -168.926 | 3.0937E-02 (2001,282,0800) | 2.7624E-02 (2001,073,0800) | 2.5163E-02 (2001,055,0500) | 2.4930E-02 (2001,073,0900) |
| 825 | -32.267 | -168.932 | 3.1184E-02 (2001,282,0800) | 2.5643E-02 (2001,055,0500) | 2.5333E-02 (2001,073,0800) | 2.4165E-02 (2001,073,0900) |
| 826 | -30.816 | -168.938 | 3.1251E-02 (2001,282,0800) | 2.5981E-02 (2001,055,0500) | 2.3302E-02 (2001,073,0900) | 2.3134E-02 (2001,073,0800) |
| 827 | -29.366 | -168.944 | 3.1117E-02 (2001,282,0800) | 2.6178E-02 (2001,055,0500) | 2.2358E-02 (2001,073,0900) | 2.1567E-02 (2001,055,0600) |
| 828 | -27.916 | -168.949 | 3.0860E-02 (2001,282,0800) | 2.6246E-02 (2001,055,0500) | 2.2742E-02 (2001,055,0600) | 2.1363E-02 (2001,073,0900) |
| 829 | -26.466 | -168.954 | 3.0451E-02 (2001,282,0800) | 2.6192E-02 (2001,055,0500) | 2.3846E-02 (2001,055,0600) | 2.0327E-02 (2001,073,0900) |
| 830 | -25.016 | -168.959 | 2.9898E-02 (2001,282,0800) | 2.6019E-02 (2001,055,0500) | 2.4845E-02 (2001,055,0600) | 1.9268E-02 (2001,073,0900) |
| 831 | -45.307 | -167.015 | 4.5388E-02 (2001,073,0800) | 3.4813E-02 (2001,282,0700) | 2.9917E-02 (2001,034,1000) | 2.8970E-02 (2001,034,0800) |
| 832 | -43.858 | -167.023 | 4.2824E-02 (2001,073,0800) | 3.3267E-02 (2001,282,0700) | 2.8617E-02 (2001,034,1000) | 2.7735E-02 (2001,034,0800) |
| 833 | -42.408 | -167.031 | 4.0225E-02 (2001,073,0800) | 3.1576E-02 (2001,282,0700) | 2.7325E-02 (2001,034,1000) | 2.6321E-02 (2001,034,1100) |
| 834 | -25.010 | -167.107 | 2.9859E-02 (2001,282,0800) | 2.3327E-02 (2001,055,0500) | 2.2398E-02 (2001,055,0600) | 1.7445E-02 (2001,073,0900) |

**********
CALPOST Version 5.6394 Level 070622
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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 329 | -19.357 | -226.410 | 8.2994E-05 | 582 | -32.382 | -196.721 | 1.4387E-04 |
| 330 | -23.734 | -224.545 | 9.2304E-05 | 583 | -30.927 | -196.727 | 1.3783E-04 |
| 331 | -22.274 | -224.549 | 8.8797E-05 | 584 | -29.472 | -196.733 | 1.3252E-04 |
| 332 | -20.813 | -224.553 | 8.6000E-05 | 585 | -28.016 | -196.738 | 1.2001E-04 |
| 333 | -17.892 | -224.561 | 8.0113E-05 | 586 | -26.561 | -196.743 | 1.1691E-04 |
| 334 | -16.432 | -224.564 | 7.8021E-05 | 587 | -46.925 | -194.794 | 2.1741E-04 |
| 335 | -23.729 | -222.692 | 9.2615E-05 | 588 | -45.470 | -194.803 | 2.0982E-04 |
| 336 | -22.269 | -222.696 | 8.9837E-05 | 589 | -44.015 | -194.811 | 2.0222E-04 |
| 337 | -20.808 | -222.701 | 8.6372E-05 | 590 | -42.560 | -194.819 | 1.9164E-04 |
| 338 | -19.348 | -222.704 | 8.3435E-05 | 591 | -41.105 | -194.827 | 1.8597E-04 |
| 339 | -17.888 | -222.708 | 8.0625E-05 | 592 | -39.650 | -194.835 | 1.8086E-04 |
| 340 | -16.428 | -222.711 | 7.8232E-05 | 593 | -38.195 | -194.842 | 1.6799E-04 |
| 341 | -14.967 | -222.714 | 7.4818E-05 | 594 | -36.740 | -194.849 | 1.5472E-04 |
| 342 | -25.183 | -220.835 | 9.6882E-05 | 595 | -35.285 | -194.856 | 1.5331E-04 |
| 343 | -23.723 | -220.839 | 9.3812E-05 | 596 | -33.830 | -194.862 | 1.5049E-04 |
| 344 | -22.263 | -220.844 | 9.0084E-05 | 597 | -32.375 | -194.868 | 1.4651E-04 |
| 345 | -20.803 | -220.848 | 8.7279E-05 | 598 | -30.920 | -194.874 | 1.4096E-04 |
| 346 | -19.344 | -220.851 | 8.4435E-05 | 599 | -29.465 | -194.880 | 1.2573E-04 |
| 347 | -17.884 | -220.855 | 8.1594E-05 | 600 | -28.009 | -194.885 | 1.2167E-04 |
| 348 | -16.424 | -220.858 | 7.7693E-05 | 601 | -26.554 | -194.890 | 1.2538E-04 |
| 349 | -14.964 | -220.861 | 7.4950E-05 | 602 | -45.459 | -192.950 | 2.1176E-04 |
| 350 | -25.177 | -218.982 | 9.7878E-05 | 603 | -44.004 | -192.959 | 2.0180E-04 |
| 351 | -23.718 | -218.986 | 9.4659E-05 | 604 | -42.550 | -192.967 | 1.9149E-04 |
| 352 | -22.258 | -218.991 | 9.0528E-05 | 605 | -41.095 | -192.975 | 1.8373E-04 |
| 353 | -20.799 | -218.995 | 8.7943E-05 | 606 | -39.640 | -192.982 | 1.8092E-04 |
| 354 | -19.339 | -218.998 | 8.4958E-05 | 607 | -38.186 | -192.989 | 1.6361E-04 |
| 355 | -17.879 | -219.002 | 8.0904E-05 | 608 | -36.731 | -192.996 | 1.5620E-04 |
| 356 | -16.420 | -219.005 | 7.8983E-05 | 609 | -35.276 | -193.003 | 1.5004E-04 |
| 357 | -26.630 | -217.124 | 1.0263E-04 | 610 | -33.822 | -193.010 | 1.5385E-04 |
| 358 | -25.171 | -217.129 | 9.8520E-05 | 611 | -32.367 | -193.016 | 1.5014E-04 |
| 359 | -23.712 | -217.133 | 9.4628E-05 | 612 | -30.912 | -193.022 | 1.4443E-04 |
| 360 | -22.253 | -217.138 | 9.2070E-05 | 613 | -29.457 | -193.027 | 1.3714E-04 |
| 361 | -20.794 | -217.142 | 8.8938E-05 | 614 | -28.003 | -193.033 | 1.3228E-04 |
| 362 | -19.334 | -217.145 | 8.5274E-05 | 615 | -26.548 | -193.038 | 1.2024E-04 |
| 363 | -17.875 | -217.149 | 8.1823E-05 | 616 | -25.093 | -193.043 | 1.2243E-04 |
| 364 | -16.416 | -217.152 | 7.8640E-05 | 617 | -41.085 | -191.122 | 1.9204E-04 |
| 365 | -47.048 | -215.175 | 1.7924E-04 | 618 | -39.631 | -191.129 | 1.7537E-04 |
| 366 | -45.589 | -215.183 | 1.7597E-04 | 619 | -38.176 | -191.137 | 1.7243E-04 |
| 367 | -44.130 | -215.192 | 1.6956E-04 | 620 | -36.722 | -191.144 | 1.6657E-04 |
| 368 | -42.671 | -215.200 | 1.6278E-04 | 621 | -35.268 | -191.150 | 1.6453E-04 |
| 369 | -41.212 | -215.208 | 1.5624E-04 | 622 | -33.813 | -191.157 | 1.5853E-04 |
| 370 | -39.754 | -215.215 | 1.4953E-04 | 623 | -32.359 | -191.163 | 1.5364E-04 |
| 371 | -38.295 | -215.223 | 1.4304E-04 | 624 | -30.905 | -191.169 | 1.4748E-04 |
| 372 | -36.836 | -215.230 | 1.3762E-04 | 625 | -29.450 | -191.175 | 1.3969E-04 |
| 373 | -35.377 | -215.236 | 1.3196E-04 | 626 | -27.996 | -191.180 | 1.3448E-04 |
| 374 | -33.918 | -215.243 | 1.2676E-04 | 627 | -26.542 | -191.185 | 1.2751E-04 |
| 375 | -32.459 | -215.249 | 1.2140E-04 | 628 | -25.087 | -191.190 | 1.2483E-04 |
| 376 | -31.001 | -215.255 | 1.1664E-04 | 629 | -39.621 | -189.277 | 1.7420E-04 |
| 377 | -29.542 | -215.261 | 1.1224E-04 | 630 | -38.167 | -189.284 | 1.7861E-04 |
| 378 | -28.083 | -215.266 | 1.0872E-04 | 631 | -36.713 | -189.291 | 1.7182E-04 |
| 379 | -26.624 | -215.271 | 1.0379E-04 | 632 | -35.259 | -189.298 | 1.6175E-04 |
| 380 | -25.165 | -215.276 | 9.9495E-05 | 633 | -33.805 | -189.304 | 1.6223E-04 |
| 381 | -23.706 | -215.280 | 9.5715E-05 | 634 | -32.351 | -189.310 | 1.5706E-04 |
| 382 | -22.247 | -215.285 | 9.3134E-05 | 635 | -30.897 | -189.316 | 1.4795E-04 |
| 383 | -20.789 | -215.289 | 8.8661E-05 | 636 | -29.443 | -189.322 | 1.4190E-04 |
| 384 | -19.330 | -215.293 | 8.6190E-05 | 637 | -27.989 | -189.327 | 1.3155E-04 |
| 385 | -17.871 | -215.296 | 8.3024E-05 | 638 | -26.535 | -189.332 | 1.2923E-04 |
| 386 | -16.412 | -215.299 | 7.9174E-05 | 639 | -25.081 | -189.337 | 1.1836E-04 |
| 387 | -51.412 | -213.294 | 2.1418E-04 | 640 | -23.628 | -189.342 | 1.2042E-04 |
| 388 | -49.953 | -213.304 | 2.0431E-04 | 641 | -22.173 | -189.346 | 1.1600E-04 |
| 389 | -48.495 | -213.313 | 1.9415E-04 | 642 | -41.066 | -187.417 | 1.9376E-04 |
| 390 | -47.037 | -213.322 | 1.7143E-04 | 643 | -39.612 | -187.424 | 1.7596E-04 |
| 391 | -45.578 | -213.330 | 1.7860E-04 | 644 | -38.158 | -187.431 | 1.7979E-04 |

| | | | |
|---|---|---|---|
| 392 | -44.120 | -213.339 | 1.7182E-04 |
| 393 | -42.661 | -213.347 | 1.6336E-04 |
| 394 | -41.203 | -213.355 | 1.5805E-04 |
| 395 | -39.744 | -213.362 | 1.5176E-04 |
| 396 | -38.286 | -213.370 | 1.4532E-04 |
| 397 | -36.827 | -213.377 | 1.3956E-04 |
| 398 | -35.369 | -213.383 | 1.3367E-04 |
| 399 | -33.910 | -213.390 | 1.2832E-04 |
| 400 | -32.452 | -213.396 | 1.2306E-04 |
| 401 | -30.993 | -213.402 | 1.1911E-04 |
| 402 | -29.535 | -213.408 | 1.1354E-04 |
| 403 | -28.076 | -213.413 | 1.0965E-04 |
| 404 | -26.618 | -213.418 | 1.0532E-04 |
| 405 | -25.159 | -213.423 | 1.0075E-04 |
| 406 | -23.701 | -213.428 | 9.6770E-05 |
| 407 | -22.242 | -213.432 | 9.3132E-05 |
| 408 | -20.784 | -213.436 | 8.9652E-05 |
| 409 | -19.325 | -213.440 | 8.6328E-05 |
| 410 | -17.867 | -213.443 | 8.3865E-05 |
| 411 | -16.408 | -213.446 | 8.0375E-05 |
| 412 | -51.400 | -211.441 | 2.1785E-04 |
| 413 | -49.942 | -211.451 | 2.0801E-04 |
| 414 | -48.483 | -211.460 | 2.0001E-04 |
| 415 | -47.025 | -211.469 | 1.9084E-04 |
| 416 | -45.567 | -211.478 | 1.7159E-04 |
| 417 | -44.109 | -211.486 | 1.7275E-04 |
| 418 | -42.651 | -211.494 | 1.5608E-04 |
| 419 | -41.193 | -211.502 | 1.6005E-04 |
| 420 | -39.735 | -211.510 | 1.5299E-04 |
| 421 | -38.277 | -211.517 | 1.4715E-04 |
| 422 | -36.818 | -211.524 | 1.4169E-04 |
| 423 | -35.360 | -211.531 | 1.3601E-04 |
| 424 | -33.902 | -211.537 | 1.3038E-04 |
| 425 | -32.444 | -211.543 | 1.2532E-04 |
| 426 | -30.986 | -211.549 | 1.1982E-04 |
| 427 | -29.528 | -211.555 | 1.1582E-04 |
| 428 | -28.070 | -211.560 | 1.1085E-04 |
| 429 | -26.611 | -211.565 | 1.0652E-04 |
| 430 | -25.153 | -211.570 | 1.0239E-04 |
| 431 | -23.695 | -211.575 | 9.8025E-05 |
| 432 | -22.237 | -211.579 | 9.4731E-05 |
| 433 | -20.779 | -211.583 | 9.0881E-05 |
| 434 | -19.321 | -211.587 | 8.7900E-05 |
| 435 | -17.862 | -211.590 | 8.4938E-05 |
| 436 | -16.404 | -211.594 | 8.1262E-05 |
| 437 | -48.472 | -209.607 | 2.0126E-04 |
| 438 | -47.014 | -209.616 | 1.9213E-04 |
| 439 | -45.556 | -209.625 | 1.8463E-04 |
| 440 | -44.099 | -209.633 | 1.7320E-04 |
| 441 | -42.641 | -209.641 | 1.6858E-04 |
| 442 | -41.183 | -209.649 | 1.4989E-04 |
| 443 | -39.725 | -209.657 | 1.5078E-04 |
| 444 | -38.267 | -209.664 | 1.4902E-04 |
| 445 | -36.810 | -209.671 | 1.4210E-04 |
| 446 | -35.352 | -209.678 | 1.3821E-04 |
| 447 | -33.894 | -209.684 | 1.3234E-04 |
| 448 | -32.436 | -209.690 | 1.2721E-04 |
| 449 | -30.978 | -209.696 | 1.2250E-04 |
| 450 | -29.521 | -209.702 | 1.1718E-04 |
| 451 | -28.063 | -209.707 | 1.1250E-04 |
| 452 | -26.605 | -209.713 | 1.0800E-04 |
| 453 | -25.147 | -209.717 | 1.0353E-04 |
| 454 | -23.689 | -209.722 | 9.9549E-05 |
| 455 | -22.232 | -209.726 | 9.5778E-05 |
| 456 | -20.774 | -209.730 | 9.2183E-05 |
| 457 | -19.316 | -209.734 | 8.8733E-05 |
| 458 | -17.858 | -209.737 | 8.5536E-05 |
| 459 | -16.400 | -209.741 | 8.2612E-05 |
| 460 | -48.460 | -207.754 | 2.0613E-04 |
| 461 | -47.003 | -207.763 | 1.9734E-04 |
| 462 | -45.546 | -207.772 | 1.8795E-04 |
| 463 | -44.088 | -207.780 | 1.8031E-04 |
| 464 | -42.631 | -207.789 | 1.7385E-04 |
| 465 | -41.173 | -207.796 | 1.6524E-04 |
| 466 | -39.716 | -207.804 | 1.5149E-04 |
| 467 | -38.258 | -207.811 | 1.4956E-04 |
| 468 | -36.801 | -207.818 | 1.4507E-04 |
| 469 | -35.343 | -207.825 | 1.3882E-04 |
| 470 | -33.886 | -207.831 | 1.3468E-04 |
| 471 | -32.429 | -207.838 | 1.2962E-04 |
| 472 | -30.971 | -207.844 | 1.2467E-04 |
| 473 | -29.514 | -207.849 | 1.1901E-04 |
| 474 | -28.056 | -207.855 | 1.1430E-04 |
| 475 | -26.599 | -207.860 | 1.0980E-04 |
| 476 | -25.141 | -207.865 | 1.0551E-04 |
| 477 | -23.684 | -207.869 | 1.0103E-04 |
| 478 | -22.226 | -207.873 | 9.7124E-05 |
| 479 | -20.769 | -207.877 | 9.3874E-05 |
| 480 | -19.311 | -207.881 | 9.0514E-05 |
| 481 | -48.449 | -205.902 | 2.1040E-04 |
| 482 | -46.992 | -205.911 | 2.0080E-04 |
| 483 | -45.535 | -205.919 | 1.9228E-04 |
| 484 | -44.078 | -205.928 | 1.8409E-04 |
| 485 | -42.621 | -205.936 | 1.7713E-04 |
| 486 | -41.163 | -205.944 | 1.6929E-04 |
| 487 | -39.706 | -205.951 | 1.6142E-04 |
| 488 | -38.249 | -205.958 | 1.5388E-04 |
| 489 | -36.792 | -205.965 | 1.4823E-04 |
| 490 | -35.335 | -205.972 | 1.4143E-04 |
| 491 | -33.878 | -205.979 | 1.3576E-04 |
| 492 | -32.421 | -205.985 | 1.3168E-04 |
| 493 | -30.964 | -205.991 | 1.2644E-04 |
| 494 | -29.507 | -205.996 | 1.2141E-04 |
| 495 | -28.049 | -206.002 | 1.1663E-04 |
| 496 | -26.592 | -206.007 | 1.1200E-04 |
| 497 | -25.135 | -206.012 | 1.0720E-04 |
| 498 | -23.678 | -206.016 | 1.0304E-04 |
| 499 | -22.221 | -206.021 | 9.9106E-05 |
| 500 | -20.764 | -206.025 | 9.5833E-05 |
| 501 | -19.307 | -206.028 | 9.2255E-05 |
| 502 | -46.981 | -204.058 | 2.0592E-04 |
| 503 | -45.524 | -204.066 | 1.9651E-04 |
| 504 | -44.067 | -204.075 | 1.8804E-04 |
| 505 | -42.610 | -204.083 | 1.7991E-04 |
| 645 | -36.705 | -187.438 | 1.7432E-04 |
| 646 | -35.251 | -187.445 | 1.6710E-04 |
| 647 | -33.797 | -187.452 | 1.6167E-04 |
| 648 | -32.344 | -187.458 | 1.5744E-04 |
| 649 | -30.890 | -187.464 | 1.5431E-04 |
| 650 | -29.436 | -187.469 | 1.4421E-04 |
| 651 | -27.983 | -187.475 | 1.3864E-04 |
| 652 | -26.529 | -187.480 | 1.3368E-04 |
| 653 | -25.076 | -187.485 | 1.2865E-04 |
| 654 | -23.622 | -187.489 | 1.2173E-04 |
| 655 | -22.168 | -187.494 | 1.1704E-04 |
| 656 | -41.056 | -185.564 | 1.8275E-04 |
| 657 | -39.602 | -185.572 | 1.8005E-04 |
| 658 | -38.149 | -185.579 | 1.8038E-04 |
| 659 | -36.696 | -185.586 | 1.7332E-04 |
| 660 | -35.243 | -185.593 | 1.7103E-04 |
| 661 | -33.789 | -185.599 | 1.6355E-04 |
| 662 | -32.336 | -185.605 | 1.5967E-04 |
| 663 | -30.883 | -185.611 | 1.5591E-04 |
| 664 | -29.429 | -185.617 | 1.4611E-04 |
| 665 | -27.976 | -185.622 | 1.3953E-04 |
| 666 | -26.523 | -185.627 | 1.3442E-04 |
| 667 | -25.070 | -185.632 | 1.2749E-04 |
| 668 | -23.616 | -185.637 | 1.1632E-04 |
| 669 | -22.163 | -185.641 | 1.1563E-04 |
| 670 | -42.499 | -183.704 | 1.9829E-04 |
| 671 | -41.046 | -183.711 | 1.8328E-04 |
| 672 | -39.593 | -183.719 | 1.7805E-04 |
| 673 | -38.140 | -183.726 | 1.7005E-04 |
| 674 | -36.687 | -183.733 | 1.6782E-04 |
| 675 | -35.234 | -183.740 | 1.6935E-04 |
| 676 | -33.781 | -183.746 | 1.6708E-04 |
| 677 | -32.328 | -183.753 | 1.6284E-04 |
| 678 | -30.875 | -183.759 | 1.5314E-04 |
| 679 | -29.422 | -183.764 | 1.4579E-04 |
| 680 | -27.969 | -183.770 | 1.4043E-04 |
| 681 | -26.517 | -183.775 | 1.3278E-04 |
| 682 | -25.064 | -183.779 | 1.2519E-04 |
| 683 | -23.611 | -183.784 | 1.1699E-04 |
| 684 | -22.158 | -183.788 | 1.1885E-04 |
| 685 | -20.705 | -183.792 | 1.1480E-04 |
| 686 | -45.394 | -181.835 | 2.0486E-04 |
| 687 | -43.941 | -181.843 | 2.0254E-04 |
| 688 | -42.489 | -181.851 | 1.9060E-04 |
| 689 | -41.036 | -181.859 | 1.9159E-04 |
| 690 | -39.584 | -181.866 | 1.8833E-04 |
| 691 | -38.131 | -181.874 | 1.8009E-04 |
| 692 | -36.678 | -181.881 | 1.7071E-04 |
| 693 | -35.226 | -181.887 | 1.6808E-04 |
| 694 | -33.773 | -181.894 | 1.6359E-04 |
| 695 | -32.321 | -181.900 | 1.6385E-04 |
| 696 | -30.868 | -181.906 | 1.5592E-04 |
| 697 | -29.415 | -181.912 | 1.4626E-04 |
| 698 | -27.963 | -181.917 | 1.3949E-04 |
| 699 | -26.510 | -181.922 | 1.3247E-04 |
| 700 | -25.058 | -181.927 | 1.2309E-04 |
| 701 | -23.605 | -181.931 | 1.2106E-04 |
| 702 | -22.152 | -181.936 | 1.1681E-04 |
| 703 | -20.700 | -181.940 | 1.1048E-04 |
| 704 | -46.835 | -179.973 | 2.1754E-04 |
| 705 | -45.383 | -179.982 | 2.0628E-04 |
| 706 | -43.931 | -179.990 | 2.0195E-04 |
| 707 | -42.479 | -179.999 | 1.9549E-04 |
| 708 | -41.026 | -180.006 | 1.8853E-04 |
| 709 | -39.574 | -180.014 | 1.8549E-04 |
| 710 | -38.122 | -180.021 | 1.8176E-04 |
| 711 | -36.670 | -180.028 | 1.7614E-04 |
| 712 | -35.217 | -180.035 | 1.6986E-04 |
| 713 | -33.765 | -180.041 | 1.6873E-04 |
| 714 | -32.313 | -180.048 | 1.6339E-04 |
| 715 | -30.861 | -180.053 | 1.5193E-04 |
| 716 | -29.408 | -180.059 | 1.4575E-04 |
| 717 | -27.956 | -180.064 | 1.4013E-04 |
| 718 | -26.504 | -180.069 | 1.3331E-04 |
| 719 | -25.052 | -180.074 | 1.2574E-04 |
| 720 | -23.599 | -180.079 | 1.2137E-04 |
| 721 | -22.147 | -180.083 | 1.1960E-04 |
| 722 | -20.695 | -180.087 | 1.1305E-04 |
| 723 | -46.824 | -178.121 | 2.1458E-04 |
| 724 | -45.372 | -178.130 | 2.0263E-04 |
| 725 | -43.920 | -178.138 | 2.0173E-04 |
| 726 | -42.469 | -178.146 | 1.9514E-04 |
| 727 | -41.017 | -178.154 | 1.8479E-04 |
| 728 | -39.565 | -178.161 | 1.8512E-04 |
| 729 | -38.113 | -178.169 | 1.7875E-04 |
| 730 | -36.661 | -178.176 | 1.7476E-04 |
| 731 | -35.209 | -178.182 | 1.7534E-04 |
| 732 | -33.757 | -178.189 | 1.6957E-04 |
| 733 | -32.305 | -178.195 | 1.6327E-04 |
| 734 | -30.853 | -178.201 | 1.5719E-04 |
| 735 | -29.401 | -178.206 | 1.4607E-04 |
| 736 | -27.949 | -178.212 | 1.4319E-04 |
| 737 | -26.498 | -178.217 | 1.3579E-04 |
| 738 | -25.046 | -178.222 | 1.2537E-04 |
| 739 | -23.594 | -178.226 | 1.2548E-04 |
| 740 | -22.142 | -178.231 | 1.1716E-04 |
| 741 | -20.690 | -178.235 | 1.1159E-04 |
| 742 | -46.813 | -176.268 | 2.2008E-04 |
| 743 | -45.361 | -176.277 | 2.0865E-04 |
| 744 | -43.910 | -176.285 | 1.9460E-04 |
| 745 | -42.458 | -176.293 | 1.9711E-04 |
| 746 | -41.007 | -176.301 | 1.9181E-04 |
| 747 | -39.555 | -176.309 | 1.8433E-04 |
| 748 | -38.104 | -176.316 | 1.8522E-04 |
| 749 | -36.652 | -176.323 | 1.7465E-04 |
| 750 | -35.201 | -176.330 | 1.7471E-04 |
| 751 | -33.749 | -176.336 | 1.6811E-04 |
| 752 | -32.297 | -176.342 | 1.5828E-04 |
| 753 | -30.846 | -176.348 | 1.5736E-04 |
| 754 | -29.394 | -176.354 | 1.5136E-04 |
| 755 | -27.943 | -176.359 | 1.4254E-04 |
| 756 | -26.491 | -176.364 | 1.3707E-04 |
| 757 | -25.040 | -176.369 | 1.3175E-04 |
| 758 | -23.588 | -176.374 | 1.2404E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 506 | -41.154 | -204.091 | 1.7292E-04 | 759 | -22.137 | -176.378 | 1.2073E-04 |
| 507 | -39.697 | -204.098 | 1.6512E-04 | 760 | -20.685 | -176.382 | 1.1259E-04 |
| 508 | -38.240 | -204.106 | 1.5073E-04 | 761 | -62.765 | -174.303 | 3.4477E-04 |
| 509 | -36.783 | -204.113 | 1.4173E-04 | 762 | -46.802 | -174.416 | 2.3124E-04 |
| 510 | -35.327 | -204.119 | 1.4458E-04 | 763 | -45.351 | -174.425 | 2.0710E-04 |
| 511 | -33.870 | -204.126 | 1.3859E-04 | 764 | -43.899 | -174.433 | 1.9638E-04 |
| 512 | -32.413 | -204.132 | 1.3407E-04 | 765 | -42.448 | -174.441 | 1.9533E-04 |
| 513 | -30.956 | -204.138 | 1.2845E-04 | 766 | -40.997 | -174.449 | 1.9020E-04 |
| 514 | -29.500 | -204.144 | 1.2333E-04 | 767 | -39.546 | -174.456 | 1.9073E-04 |
| 515 | -28.043 | -204.149 | 1.1846E-04 | 768 | -38.095 | -174.464 | 1.8663E-04 |
| 516 | -26.586 | -204.154 | 1.1388E-04 | 769 | -36.643 | -174.471 | 1.7958E-04 |
| 517 | -25.129 | -204.159 | 1.0947E-04 | 770 | -35.192 | -174.477 | 1.6819E-04 |
| 518 | -23.673 | -204.164 | 1.0525E-04 | 771 | -33.741 | -174.484 | 1.6173E-04 |
| 519 | -22.216 | -204.168 | 1.0099E-04 | 772 | -32.290 | -174.490 | 1.6108E-04 |
| 520 | -20.759 | -204.172 | 9.7471E-05 | 773 | -30.839 | -174.496 | 1.5526E-04 |
| 521 | -19.302 | -204.176 | 9.4198E-05 | 774 | -29.387 | -174.501 | 1.5038E-04 |
| 522 | -46.969 | -202.205 | 2.0769E-04 | 775 | -27.936 | -174.507 | 1.4488E-04 |
| 523 | -45.513 | -202.214 | 1.9827E-04 | 776 | -26.485 | -174.512 | 1.3671E-04 |
| 524 | -44.057 | -202.222 | 1.8989E-04 | 777 | -25.034 | -174.517 | 1.2865E-04 |
| 525 | -42.600 | -202.230 | 1.8359E-04 | 778 | -23.582 | -174.521 | 1.2283E-04 |
| 526 | -41.144 | -202.238 | 1.7601E-04 | 779 | -22.131 | -174.526 | 1.1577E-04 |
| 527 | -39.687 | -202.246 | 1.6825E-04 | 780 | -62.750 | -172.451 | 3.3984E-04 |
| 528 | -38.231 | -202.253 | 1.6088E-04 | 781 | -61.299 | -172.462 | 3.3362E-04 |
| 529 | -36.775 | -202.260 | 1.5402E-04 | 782 | -46.791 | -172.563 | 2.0769E-04 |
| 530 | -35.318 | -202.267 | 1.3627E-04 | 783 | -45.340 | -172.572 | 2.0211E-04 |
| 531 | -33.862 | -202.273 | 1.4043E-04 | 784 | -43.889 | -172.580 | 2.0804E-04 |
| 532 | -32.405 | -202.279 | 1.3641E-04 | 785 | -42.438 | -172.588 | 2.0266E-04 |
| 533 | -30.949 | -202.285 | 1.3105E-04 | 786 | -40.987 | -172.596 | 1.9367E-04 |
| 534 | -29.493 | -202.291 | 1.2594E-04 | 787 | -39.536 | -172.604 | 1.8200E-04 |
| 535 | -28.036 | -202.296 | 1.2032E-04 | 788 | -38.086 | -172.611 | 1.8435E-04 |
| 536 | -26.580 | -202.301 | 1.1601E-04 | 789 | -36.635 | -172.618 | 1.7750E-04 |
| 537 | -25.123 | -202.306 | 1.1190E-04 | 790 | -35.184 | -172.625 | 1.6607E-04 |
| 538 | -23.667 | -202.311 | 1.0725E-04 | 791 | -33.733 | -172.631 | 1.6443E-04 |
| 539 | -22.210 | -202.315 | 1.0320E-04 | 792 | -32.282 | -172.637 | 1.5473E-04 |
| 540 | -46.958 | -200.352 | 2.1248E-04 | 793 | -30.831 | -172.643 | 1.5450E-04 |
| 541 | -45.502 | -200.361 | 2.0002E-04 | 794 | -29.380 | -172.649 | 1.4780E-04 |
| 542 | -44.046 | -200.369 | 1.9324E-04 | 795 | -27.929 | -172.654 | 1.4355E-04 |
| 543 | -42.590 | -200.377 | 1.8554E-04 | 796 | -26.479 | -172.659 | 1.3738E-04 |
| 544 | -41.134 | -200.385 | 1.7859E-04 | 797 | -25.028 | -172.664 | 1.2931E-04 |
| 545 | -39.678 | -200.393 | 1.6997E-04 | 798 | -23.577 | -172.669 | 1.2212E-04 |
| 546 | -38.222 | -200.400 | 1.6257E-04 | 799 | -61.285 | -170.610 | 3.3161E-04 |
| 547 | -36.766 | -200.407 | 1.5656E-04 | 800 | -46.780 | -170.711 | 2.2439E-04 |
| 548 | -35.310 | -200.414 | 1.4162E-04 | 801 | -45.329 | -170.720 | 2.1841E-04 |
| 549 | -33.854 | -200.420 | 1.4401E-04 | 802 | -43.879 | -170.728 | 1.9225E-04 |
| 550 | -32.398 | -200.427 | 1.3585E-04 | 803 | -42.428 | -170.736 | 1.8801E-04 |
| 551 | -30.942 | -200.432 | 1.3380E-04 | 804 | -40.977 | -170.744 | 1.9546E-04 |
| 552 | -29.486 | -200.438 | 1.2862E-04 | 805 | -39.527 | -170.751 | 1.8764E-04 |
| 553 | -28.030 | -200.444 | 1.2111E-04 | 806 | -38.076 | -170.759 | 1.8182E-04 |
| 554 | -26.573 | -200.449 | 1.1831E-04 | 807 | -36.626 | -170.766 | 1.6754E-04 |
| 555 | -25.117 | -200.453 | 1.1348E-04 | 808 | -35.175 | -170.772 | 1.6644E-04 |
| 556 | -23.661 | -200.458 | 1.0953E-04 | 809 | -33.725 | -170.779 | 1.5671E-04 |
| 557 | -46.947 | -198.500 | 2.1763E-04 | 810 | -32.274 | -170.785 | 1.5665E-04 |
| 558 | -45.491 | -198.508 | 2.0569E-04 | 811 | -30.824 | -170.791 | 1.4782E-04 |
| 559 | -44.036 | -198.517 | 1.9541E-04 | 812 | -29.373 | -170.796 | 1.4647E-04 |
| 560 | -42.580 | -198.525 | 1.8768E-04 | 813 | -27.923 | -170.802 | 1.4221E-04 |
| 561 | -41.124 | -198.533 | 1.8075E-04 | 814 | -26.472 | -170.807 | 1.3422E-04 |
| 562 | -39.669 | -198.540 | 1.7353E-04 | 815 | -25.022 | -170.812 | 1.2566E-04 |
| 563 | -38.213 | -198.547 | 1.6559E-04 | 816 | -59.820 | -168.769 | 3.1979E-04 |
| 564 | -36.757 | -198.554 | 1.5194E-04 | 817 | -43.868 | -168.875 | 1.9012E-04 |
| 565 | -35.301 | -198.561 | 1.4708E-04 | 818 | -42.418 | -168.884 | 1.8740E-04 |
| 566 | -33.846 | -198.568 | 1.4638E-04 | 819 | -40.968 | -168.891 | 1.8154E-04 |
| 567 | -32.390 | -198.574 | 1.4172E-04 | 820 | -39.518 | -168.899 | 1.7505E-04 |
| 568 | -30.934 | -198.580 | 1.2531E-04 | 821 | -38.067 | -168.906 | 1.6859E-04 |
| 569 | -29.479 | -198.585 | 1.2233E-04 | 822 | -36.617 | -168.913 | 1.6829E-04 |
| 570 | -28.023 | -198.591 | 1.2196E-04 | 823 | -35.167 | -168.920 | 1.6074E-04 |
| 571 | -26.567 | -198.596 | 1.2070E-04 | 824 | -33.717 | -168.926 | 1.6081E-04 |
| 572 | -46.936 | -196.647 | 2.1747E-04 | 825 | -32.267 | -168.932 | 1.5253E-04 |
| 573 | -45.481 | -196.656 | 2.1065E-04 | 826 | -30.816 | -168.938 | 1.5006E-04 |
| 574 | -44.025 | -196.664 | 1.9824E-04 | 827 | -29.366 | -168.944 | 1.4522E-04 |
| 575 | -42.570 | -196.672 | 1.8912E-04 | 828 | -27.916 | -168.949 | 1.4120E-04 |
| 576 | -41.115 | -196.680 | 1.8275E-04 | 829 | -26.466 | -168.954 | 1.3643E-04 |
| 577 | -39.659 | -196.687 | 1.7475E-04 | 830 | -25.016 | -168.959 | 1.2844E-04 |
| 578 | -38.204 | -196.695 | 1.6853E-04 | 831 | -45.307 | -167.015 | 1.9637E-04 |
| 579 | -36.748 | -196.702 | 1.6147E-04 | 832 | -43.858 | -167.023 | 1.9072E-04 |
| 580 | -35.293 | -196.708 | 1.4522E-04 | 833 | -42.408 | -167.031 | 1.9957E-04 |
| 581 | -33.838 | -196.715 | 1.4009E-04 | 834 | -25.010 | -167.107 | 1.2552E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 781 | -61.299 | -172.462 | DISCRETE | 6.8130E-02 (2001,073,0800) | RANK 1 | 1 | HOUR |
| 799 | -61.285 | -170.610 | DISCRETE | 6.4247E-02 (2001,073,0700) | RANK 2 | 1 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 4.4377E-02 (2001,345,0800) | RANK 3 | 1 | HOUR |
| 816 | -59.820 | -168.769 | DISCRETE | 4.1863E-02 (2001,034,0700) | RANK 4 | 1 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 3.4477E-04 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Capitol Reef

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  834*0, 363*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 841 | -129.441 | -256.870 | 4.8952E-02 (2001,074,0200) | 4.7614E-02 (2001,072,0500) | 4.6994E-02 (2001,074,0300) | 4.6783E-02 (2001,288,0500) |
| 842 | -127.975 | -256.894 | 4.7830E-02 (2001,288,0500) | 4.5246E-02 (2001,072,0500) | 4.4525E-02 (2001,074,0200) | 4.4286E-02 (2001,074,0300) |
| 843 | -126.508 | -256.918 | 4.8502E-02 (2001,288,0500) | 4.2511E-02 (2001,072,0500) | 4.2400E-02 (2001,113,0200) | 4.0534E-02 (2001,286,0200) |
| 844 | -125.041 | -256.941 | 4.8768E-02 (2001,288,0500) | 4.1317E-02 (2001,250,0600) | 3.9495E-02 (2001,288,0400) | 3.8726E-02 (2001,072,0500) |
| 845 | -129.411 | -255.017 | 5.0519E-02 (2001,074,0200) | 4.9318E-02 (2001,072,0500) | 4.6189E-02 (2001,288,0500) | 4.5328E-02 (2001,288,0400) |
| 846 | -127.944 | -255.041 | 4.7396E-02 (2001,288,0500) | 4.6814E-02 (2001,072,0500) | 4.5177E-02 (2001,288,0400) | 4.4904E-02 (2001,074,0200) |
| 847 | -126.478 | -255.065 | 4.8235E-02 (2001,288,0500) | 4.6200E-02 (2001,113,0200) | 4.4703E-02 (2001,288,0400) | 4.3901E-02 (2001,072,0500) |
| 848 | -129.380 | -253.164 | 5.1296E-02 (2001,074,0200) | 5.0947E-02 (2001,072,0500) | 4.9721E-02 (2001,288,0400) | 4.4478E-02 (2001,288,0500) |
| 849 | -127.914 | -253.188 | 4.9567E-02 (2001,288,0400) | 4.8331E-02 (2001,072,0500) | 4.5869E-02 (2001,288,0500) | 4.5447E-02 (2001,074,0200) |
| 850 | -126.448 | -253.212 | 4.9019E-02 (2001,288,0400) | 4.6926E-02 (2001,288,0500) | 4.5259E-02 (2001,072,0500) | 4.1572E-02 (2001,250,0600) |
| 851 | -130.815 | -251.286 | 5.6085E-02 (2001,074,0200) | 5.4584E-02 (2001,072,0500) | 5.3246E-02 (2001,288,0400) | 4.4767E-02 (2001,112,0200) |
| 852 | -129.349 | -251.311 | 5.3529E-02 (2001,288,0400) | 5.2246E-02 (2001,072,0500) | 4.9869E-02 (2001,074,0200) | 4.3904E-02 (2001,113,0100) |
| 853 | -127.884 | -251.335 | 5.3400E-02 (2001,288,0400) | 4.9556E-02 (2001,072,0500) | 4.8244E-02 (2001,113,0100) | 4.7291E-02 (2001,113,0200) |
| 854 | -126.418 | -251.359 | 5.2843E-02 (2001,288,0400) | 4.6382E-02 (2001,072,0500) | 4.4593E-02 (2001,288,0500) | 4.3507E-02 (2001,250,0600) |
| 855 | -133.715 | -249.384 | 6.1560E-02 (2001,074,0200) | 5.8709E-02 (2001,072,0500) | 5.3678E-02 (2001,288,0400) | 4.8141E-02 (2001,095,0400) |
| 856 | -132.249 | -249.409 | 5.9438E-02 (2001,074,0200) | 5.7621E-02 (2001,072,0500) | 5.5190E-02 (2001,288,0400) | 4.6611E-02 (2001,072,0400) |
| 857 | -130.784 | -249.433 | 5.6092E-02 (2001,288,0400) | 5.5722E-02 (2001,072,0500) | 5.4844E-02 (2001,074,0200) | 4.5127E-02 (2001,072,0400) |
| 858 | -129.319 | -249.458 | 5.6530E-02 (2001,288,0400) | 5.3295E-02 (2001,072,0500) | 4.9784E-02 (2001,113,0100) | 4.9356E-02 (2001,074,0200) |
| 859 | -127.854 | -249.482 | 5.6417E-02 (2001,288,0400) | 5.0294E-02 (2001,072,0500) | 4.1773E-02 (2001,165,0600) | 4.1023E-02 (2001,361,0400) |
| 860 | -133.683 | -247.531 | 6.1085E-02 (2001,074,0200) | 5.9689E-02 (2001,072,0500) | 5.4984E-02 (2001,288,0400) | 5.1022E-02 (2001,095,0400) |
| 861 | -132.218 | -247.556 | 5.8203E-02 (2001,072,0500) | 5.7588E-02 (2001,074,0200) | 5.6673E-02 (2001,288,0400) | 4.8134E-02 (2001,072,0400) |
| 862 | -130.753 | -247.580 | 5.7783E-02 (2001,288,0400) | 5.6059E-02 (2001,072,0500) | 5.1897E-02 (2001,074,0200) | 4.9696E-02 (2001,113,0100) |
| 863 | -129.288 | -247.605 | 5.8344E-02 (2001,288,0400) | 5.4850E-02 (2001,113,0100) | 5.3520E-02 (2001,072,0500) | 4.6567E-02 (2001,074,0200) |
| 864 | -127.823 | -247.629 | 5.9053E-02 (2001,113,0100) | 5.8373E-02 (2001,288,0400) | 5.0687E-02 (2001,113,0200) | 5.0497E-02 (2001,072,0500) |
| 865 | -135.116 | -245.653 | 6.0915E-02 (2001,074,0200) | 6.0654E-02 (2001,072,0500) | 5.6774E-02 (2001,095,0300) | 5.5915E-02 (2001,095,0400) |
| 866 | -133.651 | -245.678 | 5.9665E-02 (2001,072,0500) | 5.9263E-02 (2001,074,0200) | 5.4780E-02 (2001,288,0400) | 5.1208E-02 (2001,165,0600) |
| 867 | -132.187 | -245.703 | 5.8038E-02 (2001,072,0500) | 5.6633E-02 (2001,288,0400) | 5.5355E-02 (2001,074,0200) | 5.0459E-02 (2001,072,0400) |
| 868 | -130.722 | -245.727 | 5.7985E-02 (2001,288,0400) | 5.5735E-02 (2001,072,0500) | 5.5138E-02 (2001,113,0100) | 4.9806E-02 (2001,074,0200) |
| 869 | -129.258 | -245.752 | 6.0092E-02 (2001,113,0100) | 5.8739E-02 (2001,288,0400) | 5.2984E-02 (2001,072,0500) | 4.6949E-02 (2001,072,0400) |
| 870 | -136.548 | -243.775 | 6.5007E-02 (2001,095,0300) | 6.0415E-02 (2001,095,0400) | 6.0375E-02 (2001,072,0500) | 6.0069E-02 (2001,074,0100) |
| 871 | -135.084 | -243.800 | 5.9922E-02 (2001,072,0500) | 5.9318E-02 (2001,095,0300) | 5.9179E-02 (2001,074,0200) | 5.8304E-02 (2001,095,0400) |
| 872 | -133.620 | -243.825 | 5.8614E-02 (2001,072,0500) | 5.6618E-02 (2001,074,0200) | 5.3967E-02 (2001,072,0400) | 5.2902E-02 (2001,288,0400) |
| 873 | -132.155 | -243.850 | 5.6848E-02 (2001,072,0500) | 5.5259E-02 (2001,113,0100) | 5.4982E-02 (2001,288,0400) | 5.3368E-02 (2001,072,0400) |
| 874 | -130.691 | -243.874 | 6.1336E-02 (2001,113,0100) | 5.6504E-02 (2001,288,0400) | 5.4497E-02 (2001,072,0500) | 5.2013E-02 (2001,072,0400) |
| 875 | -129.227 | -243.899 | 6.4510E-02 (2001,113,0100) | 5.7546E-02 (2001,288,0400) | 5.1329E-02 (2001,072,0500) | 5.0469E-02 (2001,112,0300) |
| 876 | -137.980 | -241.896 | 7.3345E-02 (2001,095,0300) | 6.5418E-02 (2001,074,0100) | 6.4203E-02 (2001,095,0400) | 6.0724E-02 (2001,007,0500) |
| 877 | -136.516 | -241.922 | 6.8026E-02 (2001,095,0300) | 6.3209E-02 (2001,074,0100) | 6.2907E-02 (2001,095,0400) | 5.8725E-02 (2001,072,0500) |
| 878 | -135.052 | -241.947 | 5.8252E-02 (2001,074,0100) | 5.7847E-02 (2001,072,0500) | 5.7182E-02 (2001,072,0400) | 5.6762E-02 (2001,095,0400) |
| 879 | -133.588 | -241.972 | 5.7434E-02 (2001,072,0400) | 5.6517E-02 (2001,072,0500) | 5.5914E-02 (2001,095,0400) | 5.4487E-02 (2001,113,0100) |
| 880 | -132.124 | -241.997 | 6.0391E-02 (2001,113,0100) | 5.6703E-02 (2001,072,0400) | 5.4389E-02 (2001,072,0500) | 5.1677E-02 (2001,288,0400) |
| 881 | -130.660 | -242.022 | 6.4933E-02 (2001,113,0100) | 5.5038E-02 (2001,072,0400) | 5.3429E-02 (2001,288,0400) | 5.2638E-02 (2001,112,0300) |
| 882 | -129.197 | -242.046 | 6.8007E-02 (2001,113,0100) | 5.4708E-02 (2001,288,0400) | 5.3390E-02 (2001,112,0300) | 5.2593E-02 (2001,072,0400) |
| 883 | -137.947 | -240.043 | 7.6230E-02 (2001,095,0300) | 6.8768E-02 (2001,074,0100) | 6.6409E-02 (2001,095,0400) | 6.4394E-02 (2001,007,0500) |
| 884 | -136.483 | -240.069 | 6.9146E-02 (2001,095,0300) | 6.5796E-02 (2001,074,0100) | 6.4265E-02 (2001,095,0400) | 6.1911E-02 (2001,007,0500) |
| 885 | -135.020 | -240.094 | 6.0856E-02 (2001,072,0400) | 5.9363E-02 (2001,007,0500) | 5.8918E-02 (2001,074,0100) | 5.4348E-02 (2001,072,0500) |
| 886 | -133.556 | -240.119 | 6.0932E-02 (2001,072,0400) | 5.7305E-02 (2001,113,0100) | 5.6762E-02 (2001,007,0500) | 5.2616E-02 (2001,072,0500) |
| 887 | -132.093 | -240.144 | 6.3841E-02 (2001,113,0100) | 6.0128E-02 (2001,072,0400) | 5.4652E-02 (2001,113,0000) | 5.4180E-02 (2001,007,0500) |
| 888 | -130.629 | -240.169 | 6.6543E-02 (2001,113,0100) | 5.8144E-02 (2001,072,0400) | 5.4210E-02 (2001,112,0300) | 5.3760E-02 (2001,113,0000) |
| 889 | -129.166 | -240.193 | 7.0367E-02 (2001,113,0100) | 5.5519E-02 (2001,072,0400) | 5.4966E-02 (2001,112,0300) | 5.3872E-02 (2001,113,0000) |
| 890 | -137.914 | -238.190 | 7.8685E-02 (2001,095,0300) | 7.1456E-02 (2001,074,0100) | 6.8118E-02 (2001,095,0400) | 6.7395E-02 (2001,007,0500) |
| 891 | -136.451 | -238.216 | 6.7084E-02 (2001,074,0100) | 6.5809E-02 (2001,095,0300) | 6.4681E-02 (2001,007,0500) | 6.3675E-02 (2001,072,0400) |
| 892 | -134.988 | -238.241 | 6.4635E-02 (2001,072,0400) | 6.1867E-02 (2001,007,0500) | 5.9667E-02 (2001,074,0100) | 5.6083E-02 (2001,288,0300) |
| 893 | -133.525 | -238.266 | 6.4608E-02 (2001,072,0400) | 6.0879E-02 (2001,113,0100) | 5.9044E-02 (2001,007,0500) | 5.9030E-02 (2001,113,0000) |
| 894 | -132.062 | -238.291 | 6.3667E-02 (2001,113,0100) | 6.3225E-02 (2001,072,0400) | 5.8221E-02 (2001,113,0000) | 5.7789E-02 (2001,288,0300) |
| 895 | -130.599 | -238.316 | 6.7752E-02 (2001,113,0100) | 6.1153E-02 (2001,072,0400) | 5.8490E-02 (2001,113,0000) | 5.7715E-02 (2001,288,0300) |
| 896 | -137.882 | -236.337 | 8.0611E-02 (2001,095,0300) | 7.3141E-02 (2001,074,0100) | 6.9573E-02 (2001,007,0500) | 6.9467E-02 (2001,095,0400) |
| 897 | -136.419 | -236.363 | 7.0569E-02 (2001,095,0300) | 6.8003E-02 (2001,074,0100) | 6.7409E-02 (2001,072,0400) | 6.6653E-02 (2001,007,0500) |
| 898 | -134.956 | -236.388 | 6.8188E-02 (2001,072,0400) | 6.3926E-02 (2001,113,0000) | 6.3677E-02 (2001,007,0500) | 6.0887E-02 (2001,288,0300) |
| 899 | -133.493 | -236.413 | 6.7499E-02 (2001,072,0400) | 6.2703E-02 (2001,113,0000) | 6.2090E-02 (2001,288,0300) | 6.0645E-02 (2001,007,0500) |
| 900 | -132.030 | -236.438 | 6.6199E-02 (2001,072,0400) | 6.5283E-02 (2001,113,0100) | 6.4307E-02 (2001,113,0000) | 6.2598E-02 (2001,288,0300) |
| 901 | -137.849 | -234.485 | 8.1157E-02 (2001,095,0300) | 7.3591E-02 (2001,074,0100) | 7.0782E-02 (2001,007,0500) | 6.9988E-02 (2001,095,0400) |
| 902 | -136.386 | -234.510 | 7.0533E-02 (2001,072,0400) | 6.9153E-02 (2001,113,0000) | 6.8468E-02 (2001,095,0300) | 6.7731E-02 (2001,007,0500) |
| 903 | -134.924 | -234.536 | 7.0833E-02 (2001,072,0400) | 6.9685E-02 (2001,113,0000) | 6.4567E-02 (2001,007,0500) | 6.4435E-02 (2001,288,0300) |
| 904 | -133.462 | -234.561 | 7.0005E-02 (2001,072,0400) | 6.9084E-02 (2001,113,0000) | 6.5669E-02 (2001,288,0300) | 6.1430E-02 (2001,007,0500) |
| 905 | -137.816 | -232.632 | 8.1861E-02 (2001,095,0300) | 7.3152E-02 (2001,113,0000) | 7.2562E-02 (2001,074,0100) | 7.1321E-02 (2001,072,0400) |
| 906 | -136.354 | -232.657 | 7.7275E-02 (2001,113,0000) | 7.2603E-02 (2001,072,0400) | 6.9198E-02 (2001,095,0300) | 6.7711E-02 (2001,007,0500) |
| 907 | -134.892 | -232.683 | 7.3046E-02 (2001,113,0000) | 7.2193E-02 (2001,072,0400) | 6.6440E-02 (2001,288,0300) | 6.4502E-02 (2001,007,0500) |
| 908 | -139.245 | -230.753 | 8.8198E-02 (2001,095,0300) | 7.5729E-02 (2001,074,0100) | 7.5333E-02 (2001,113,0000) | 7.2856E-02 (2001,007,0500) |
| 909 | -137.784 | -230.779 | 8.2549E-02 (2001,095,0300) | 8.1168E-02 (2001,113,0000) | 7.2380E-02 (2001,072,0400) | 7.0430E-02 (2001,095,0400) |
| 910 | -136.322 | -230.805 | 7.7633E-02 (2001,113,0000) | 7.2568E-02 (2001,072,0400) | 6.6617E-02 (2001,007,0500) | 6.4474E-02 (2001,288,0300) |
| 911 | -134.860 | -230.830 | 7.8063E-02 (2001,113,0000) | 7.2424E-02 (2001,072,0400) | 6.6612E-02 (2001,288,0300) | 6.3377E-02 (2001,007,0500) |
| 912 | -139.212 | -228.900 | 8.7430E-02 (2001,095,0300) | 8.2806E-02 (2001,113,0000) | 7.3000E-02 (2001,074,0100) | 7.0621E-02 (2001,007,0500) |
| 913 | -137.751 | -228.926 | 8.6852E-02 (2001,113,0000) | 8.1893E-02 (2001,095,0300) | 7.1609E-02 (2001,072,0400) | 6.9783E-02 (2001,095,0400) |
| 914 | -136.290 | -228.952 | 8.0268E-02 (2001,113,0000) | 7.1126E-02 (2001,072,0400) | 6.4396E-02 (2001,007,0500) | 6.3029E-02 (2001,361,0100) |
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| 916 | -140.640 | -227.021 | 9.0881E-02 (2001,095,0300) | 8.2780E-02 (2001,113,0000) | 7.8115E-02 (2001,275,0400) | 7.3824E-02 (2001,074,0100) |
| 917 | -139.179 | -227.048 | 8.7650E-02 (2001,113,0000) | 8.5879E-02 (2001,095,0300) | 7.2612E-02 (2001,275,0400) | 6.9164E-02 (2001,095,0400) |
| 918 | -137.718 | -227.073 | 8.5944E-02 (2001,113,0000) | 6.8099E-02 (2001,072,0400) | 6.4245E-02 (2001,007,0500) | 6.3160E-02 (2001,361,0100) |
| 919 | -136.257 | -227.099 | 8.2120E-02 (2001,113,0000) | 6.7847E-02 (2001,072,0400) | 6.3656E-02 (2001,361,0100) | 6.1149E-02 (2001,007,0500) |
| 920 | -140.607 | -225.169 | 8.8469E-02 (2001,095,0300) | 8.6750E-02 (2001,113,0000) | 8.2551E-02 (2001,275,0400) | 7.1303E-02 (2001,275,0500) |
| 921 | -139.146 | -225.195 | 8.9144E-02 (2001,113,0000) | 8.3618E-02 (2001,095,0300) | 7.4931E-02 (2001,275,0400) | 6.8437E-02 (2001,275,0500) |
| 922 | -137.686 | -225.221 | 8.3600E-02 (2001,113,0000) | 6.4764E-02 (2001,007,0400) | 6.3477E-02 (2001,086,0200) | 6.2853E-02 (2001,361,0000) |
| 923 | -136.225 | -225.246 | 8.0833E-02 (2001,113,0000) | 6.5064E-02 (2001,086,0200) | 6.3489E-02 (2001,361,0100) | 6.2815E-02 (2001,070,0700) |
| 924 | -140.574 | -223.316 | 8.7533E-02 (2001,113,0000) | 8.5733E-02 (2001,275,0400) | 8.5418E-02 (2001,095,0300) | 7.6199E-02 (2001,007,0400) |
| 925 | -139.113 | -223.342 | 8.2965E-02 (2001,113,0000) | 7.4249E-02 (2001,007,0400) | 6.7965E-02 (2001,361,0000) | 6.5379E-02 (2001,086,0200) |
| 926 | -137.653 | -223.368 | 7.6639E-02 (2001,113,0000) | 7.1818E-02 (2001,007,0400) | 6.9466E-02 (2001,070,0700) | 6.6301E-02 (2001,086,0200) |
| 927 | -136.193 | -223.394 | 7.4814E-02 (2001,070,0700) | 7.2981E-02 (2001,113,0000) | 6.8992E-02 (2001,007,0400) | 6.7395E-02 (2001,086,0200) |
| 928 | -143.460 | -221.410 | 9.9645E-02 (2001,275,0400) | 8.8720E-02 (2001,095,0300) | 8.5674E-02 (2001,007,0400) | 8.1063E-02 (2001,113,0000) |
| 929 | -142.000 | -221.437 | 9.4166E-02 (2001,275,0400) | 8.5758E-02 (2001,095,0300) | 8.4914E-02 (2001,007,0400) | 8.4790E-02 (2001,113,0000) |
| 930 | -140.540 | -221.463 | 8.4965E-02 (2001,113,0000) | 8.3274E-02 (2001,007,0400) | 8.0120E-02 (2001,095,0300) | 8.0100E-02 (2001,275,0400) |
| 931 | -139.080 | -221.489 | 8.0882E-02 (2001,007,0400) | 7.4268E-02 (2001,113,0000) | 7.3960E-02 (2001,070,0700) | 6.9419E-02 (2001,361,0000) |
| 932 | -137.620 | -221.515 | 8.0385E-02 (2001,070,0700) | 7.8072E-02 (2001,007,0400) | 6.8831E-02 (2001,072,0300) | 6.8386E-02 (2001,113,0000) |
| 933 | -146.346 | -219.503 | 1.0811E-01 (2001,275,0400) | 9.2380E-02 (2001,275,0300) | 9.0562E-02 (2001,007,0400) | 8.7495E-02 (2001,095,0300) |
| 934 | -144.886 | -219.531 | 1.0497E-01 (2001,275,0400) | 9.1984E-02 (2001,007,0400) | 8.6784E-02 (2001,095,0300) | 8.3065E-02 (2001,275,0300) |
| 935 | -143.426 | -219.558 | 1.0043E-01 (2001,275,0400) | 9.2085E-02 (2001,007,0400) | 8.4980E-02 (2001,095,0300) | 8.1155E-02 (2001,113,0000) |
| 936 | -141.967 | -219.584 | 9.4650E-02 (2001,275,0400) | 9.1115E-02 (2001,007,0400) | 8.2089E-02 (2001,095,0300) | 8.2081E-02 (2001,113,0000) |
| 937 | -140.507 | -219.611 | 8.9180E-02 (2001,007,0400) | 7.6149E-02 (2001,070,0700) | 7.4821E-02 (2001,113,0000) | 7.0900E-02 (2001,361,0000) |
| 938 | -139.047 | -219.637 | 8.6511E-02 (2001,007,0400) | 8.2977E-02 (2001,070,0700) | 6.9683E-02 (2001,361,0000) | 6.9119E-02 (2001,086,0200) |
| 939 | -137.588 | -219.663 | 8.9240E-02 (2001,070,0700) | 8.3282E-02 (2001,007,0400) | 7.3040E-02 (2001,072,0300) | 6.8338E-02 (2001,086,0200) |
| 940 | -146.311 | -217.651 | 1.0666E-01 (2001,275,0400) | 9.7103E-02 (2001,275,0300) | 9.5794E-02 (2001,007,0400) | 8.5332E-02 (2001,112,2300) |
| 941 | -144.851 | -217.678 | 1.0372E-01 (2001,275,0400) | 9.7033E-02 (2001,007,0400) | 8.7040E-02 (2001,275,0300) | 8.4315E-02 (2001,112,2300) |
| 942 | -143.392 | -217.705 | 9.9268E-02 (2001,275,0400) | 9.6925E-02 (2001,007,0400) | 8.1350E-02 (2001,095,0300) | 7.9525E-02 (2001,112,2300) |
| 943 | -141.933 | -217.732 | 9.5658E-02 (2001,007,0400) | 8.8475E-02 (2001,275,0400) | 7.7894E-02 (2001,095,0300) | 7.7110E-02 (2001,113,0000) |
| 944 | -140.474 | -217.758 | 9.3383E-02 (2001,007,0400) | 8.2654E-02 (2001,070,0700) | 7.0052E-02 (2001,361,0000) | 6.8769E-02 (2001,086,0200) |
| 945 | -139.014 | -217.784 | 9.0468E-02 (2001,007,0400) | 8.9161E-02 (2001,070,0700) | 7.2508E-02 (2001,035,0000) | 7.2432E-02 (2001,072,0300) |
| 946 | -137.555 | -217.810 | 9.5060E-02 (2001,070,0700) | 8.7043E-02 (2001,007,0400) | 7.6010E-02 (2001,072,0300) | 7.0152E-02 (2001,035,0000) |
| 947 | -146.276 | -215.798 | 1.0291E-01 (2001,275,0400) | 1.0012E-01 (2001,275,0300) | 9.9018E-02 (2001,007,0400) | 9.1169E-02 (2001,112,2300) |
| 948 | -144.817 | -215.825 | 1.0021E-01 (2001,275,0400) | 1.0001E-01 (2001,007,0400) | 8.9486E-02 (2001,275,0300) | 8.6109E-02 (2001,112,2300) |
| 949 | -143.358 | -215.852 | 9.9653E-02 (2001,007,0400) | 8.2189E-02 (2001,275,0400) | 7.5363E-02 (2001,112,2300) | 7.4304E-02 (2001,070,0700) |
| 950 | -141.899 | -215.879 | 9.8144E-02 (2001,007,0400) | 7.9854E-02 (2001,070,0700) | 6.7965E-02 (2001,361,0000) | 6.7484E-02 (2001,086,0200) |
| 951 | -146.241 | -213.946 | 1.0150E-01 (2001,275,0300) | 9.9987E-02 (2001,007,0400) | 9.7265E-02 (2001,275,0400) | 9.2100E-02 (2001,112,2300) |
| 952 | -144.783 | -213.973 | 1.0071E-01 (2001,007,0400) | 9.4751E-02 (2001,275,0400) | 9.0118E-02 (2001,275,0300) | 8.2858E-02 (2001,112,2300) |
| 953 | -143.324 | -214.000 | 1.0008E-01 (2001,007,0400) | 8.6590E-02 (2001,275,0400) | 7.5391E-02 (2001,070,0700) | 7.4864E-02 (2001,095,0300) |
| 954 | -146.207 | -212.093 | 9.8759E-02 (2001,007,0400) | 8.8755E-02 (2001,275,0300) | 8.7308E-02 (2001,112,2300) | 8.1792E-02 (2001,275,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 955 | -144.748 | -212.120 | 9.9023E-02 (2001,007,0400) | 8.8816E-02 (2001,275,0300) | 8.7447E-02 (2001,275,0400) | 7.5726E-02 (2001,095,0300) |
| 956 | -143.290 | -212.147 | 9.8079E-02 (2001,007,0400) | 7.9048E-02 (2001,275,0400) | 7.6450E-02 (2001,070,0600) | 7.2333E-02 (2001,070,0700) |
| 957 | -141.832 | -212.174 | 9.6103E-02 (2001,007,0400) | 7.7872E-02 (2001,070,0600) | 7.5580E-02 (2001,070,0700) | 6.8360E-02 (2001,035,0000) |
| 958 | -146.172 | -210.241 | 9.7279E-02 (2001,275,0300) | 9.5246E-02 (2001,007,0400) | 8.7181E-02 (2001,070,0600) | 8.1499E-02 (2001,034,2300) |
| 959 | -144.714 | -210.268 | 9.5093E-02 (2001,007,0400) | 9.1227E-02 (2001,070,0600) | 8.5507E-02 (2001,275,0300) | 7.8711E-02 (2001,275,0400) |
| 960 | -143.256 | -210.295 | 9.3779E-02 (2001,007,0400) | 9.1920E-02 (2001,070,0600) | 7.0657E-02 (2001,277,2300) | 6.9997E-02 (2001,275,0400) |
| 961 | -141.798 | -210.321 | 9.3034E-02 (2001,070,0600) | 9.1571E-02 (2001,007,0400) | 7.0242E-02 (2001,277,2300) | 6.7970E-02 (2001,070,0700) |
| 962 | -146.137 | -208.388 | 1.0194E-01 (2001,070,0600) | 9.1839E-02 (2001,275,0300) | 8.9883E-02 (2001,007,0400) | 8.1551E-02 (2001,034,2300) |
| 963 | -144.680 | -208.415 | 1.0596E-01 (2001,070,0600) | 8.9161E-02 (2001,007,0400) | 8.0371E-02 (2001,275,0300) | 7.9846E-02 (2001,007,0300) |
| 964 | -143.222 | -208.442 | 1.0688E-01 (2001,070,0600) | 8.7448E-02 (2001,007,0400) | 7.9143E-02 (2001,007,0300) | 7.1357E-02 (2001,277,2300) |
| 965 | -141.764 | -208.469 | 1.0567E-01 (2001,070,0600) | 8.5071E-02 (2001,007,0400) | 7.7538E-02 (2001,007,0300) | 6.8190E-02 (2001,277,2300) |
| 966 | -140.307 | -208.495 | 1.0440E-01 (2001,070,0600) | 8.2260E-02 (2001,007,0400) | 7.5215E-02 (2001,007,0300) | 6.3185E-02 (2001,361,0000) |
| 967 | -146.102 | -206.535 | 1.1368E-01 (2001,070,0600) | 9.1871E-02 (2001,007,0300) | 8.4548E-02 (2001,275,0300) | 8.3256E-02 (2001,007,0400) |
| 968 | -144.645 | -206.563 | 1.1628E-01 (2001,070,0600) | 9.2050E-02 (2001,007,0300) | 8.1830E-02 (2001,007,0400) | 7.3561E-02 (2001,275,0300) |
| 969 | -143.188 | -206.590 | 1.1684E-01 (2001,070,0600) | 9.1018E-02 (2001,007,0300) | 7.9687E-02 (2001,007,0400) | 7.0022E-02 (2001,277,2300) |
| 970 | -141.731 | -206.616 | 1.1467E-01 (2001,070,0600) | 8.8965E-02 (2001,007,0300) | 7.6994E-02 (2001,007,0400) | 6.6309E-02 (2001,113,0100) |
| 971 | -146.068 | -204.683 | 1.1936E-01 (2001,070,0600) | 1.0314E-01 (2001,007,0300) | 7.5790E-02 (2001,007,0400) | 7.3794E-02 (2001,086,0100) |
| 972 | -144.611 | -204.710 | 1.2151E-01 (2001,070,0600) | 1.0288E-01 (2001,007,0300) | 7.3614E-02 (2001,007,0400) | 7.0703E-02 (2001,277,2300) |
| 973 | -143.154 | -204.737 | 1.2105E-01 (2001,070,0600) | 1.0134E-01 (2001,007,0300) | 7.0962E-02 (2001,007,0400) | 7.0924E-02 (2001,113,0100) |
| 974 | -141.697 | -204.764 | 1.1974E-01 (2001,070,0600) | 9.8971E-02 (2001,007,0300) | 7.2561E-02 (2001,113,0100) | 6.8153E-02 (2001,317,2200) |
| 975 | -148.946 | -202.775 | 1.1790E-01 (2001,070,0600) | 1.0809E-01 (2001,007,0300) | 9.3213E-02 (2001,034,2300) | 9.0574E-02 (2001,086,0100) |
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| 977 | -146.033 | -202.831 | 1.2141E-01 (2001,070,0600) | 1.1185E-01 (2001,007,0300) | 7.1678E-02 (2001,277,2300) | 7.0817E-02 (2001,034,2300) |
| 978 | -144.576 | -202.858 | 1.2082E-01 (2001,070,0600) | 1.1121E-01 (2001,007,0300) | 7.2205E-02 (2001,317,2200) | 7.1736E-02 (2001,113,0100) |
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| 980 | -141.663 | -202.911 | 1.1936E-01 (2001,070,0600) | 1.0631E-01 (2001,007,0300) | 6.5359E-02 (2001,113,0100) | 6.4452E-02 (2001,317,2200) |
| 981 | -148.910 | -200.923 | 1.1422E-01 (2001,007,0300) | 1.1359E-01 (2001,070,0600) | 8.3253E-02 (2001,086,0100) | 8.1484E-02 (2001,034,2300) |
| 982 | -147.454 | -200.951 | 1.1639E-01 (2001,007,0300) | 1.1396E-01 (2001,070,0600) | 7.0686E-02 (2001,360,2300) | 6.9485E-02 (2001,277,2300) |
| 983 | -145.998 | -200.978 | 1.1682E-01 (2001,070,0600) | 1.1673E-01 (2001,007,0300) | 7.4464E-02 (2001,317,2200) | 7.1906E-02 (2001,113,0100) |
| 984 | -144.542 | -201.005 | 1.1560E-01 (2001,007,0300) | 1.1532E-01 (2001,070,0600) | 7.3226E-02 (2001,113,0100) | 7.1723E-02 (2001,317,2200) |
| 985 | -143.086 | -201.032 | 1.1527E-01 (2001,070,0600) | 1.1348E-01 (2001,007,0300) | 7.2119E-02 (2001,113,0100) | 7.1094E-02 (2001,317,2200) |
| 986 | -141.630 | -201.059 | 1.1475E-01 (2001,070,0600) | 1.1012E-01 (2001,007,0300) | 7.3027E-02 (2001,070,0500) | 6.6629E-02 (2001,072,0200) |
| 987 | -148.875 | -199.071 | 1.1610E-01 (2001,007,0300) | 1.0289E-01 (2001,070,0600) | 7.0603E-02 (2001,360,2300) | 7.0058E-02 (2001,070,0500) |
| 988 | -147.419 | -199.098 | 1.1753E-01 (2001,007,0300) | 1.0684E-01 (2001,070,0600) | 7.5448E-02 (2001,317,2200) | 7.2849E-02 (2001,277,2300) |
| 989 | -145.963 | -199.126 | 1.1700E-01 (2001,007,0300) | 1.0539E-01 (2001,070,0600) | 7.3431E-02 (2001,070,0500) | 7.0022E-02 (2001,113,0100) |
| 990 | -144.508 | -199.153 | 1.1563E-01 (2001,007,0300) | 1.0667E-01 (2001,070,0600) | 8.5062E-02 (2001,317,2200) | 8.3992E-02 (2001,113,0100) |
| 991 | -151.751 | -197.162 | 1.0848E-01 (2001,007,0300) | 9.1246E-02 (2001,086,0100) | 9.0379E-02 (2001,034,2300) | 9.0377E-02 (2001,070,0600) |
| 992 | -150.295 | -197.190 | 1.1204E-01 (2001,007,0300) | 8.9461E-02 (2001,070,0600) | 8.3300E-02 (2001,070,0500) | 7.7835E-02 (2001,317,2300) |
| 993 | -148.840 | -197.218 | 1.1318E-01 (2001,007,0300) | 8.9937E-02 (2001,070,0600) | 8.2497E-02 (2001,070,0500) | 7.0142E-02 (2001,360,2300) |
| 994 | -147.384 | -197.246 | 1.1315E-01 (2001,007,0300) | 9.1324E-02 (2001,070,0600) | 8.2952E-02 (2001,070,0500) | 6.8107E-02 (2001,360,2300) |
| 995 | -145.929 | -197.273 | 1.1249E-01 (2001,007,0300) | 9.2986E-02 (2001,070,0600) | 8.4344E-02 (2001,070,0500) | 7.7248E-02 (2001,113,0100) |
| 996 | -144.473 | -197.300 | 1.0965E-01 (2001,007,0300) | 9.3483E-02 (2001,070,0600) | 8.6035E-02 (2001,070,0500) | 6.7193E-02 (2001,070,0300) |
| 997 | -151.714 | -195.310 | 1.0539E-01 (2001,007,0300) | 9.7293E-02 (2001,070,0500) | 8.1630E-02 (2001,277,2200) | 8.1195E-02 (2001,317,2300) |
| 998 | -150.259 | -195.338 | 1.0657E-01 (2001,007,0300) | 9.4412E-02 (2001,070,0500) | 7.3215E-02 (2001,007,0200) | 7.3042E-02 (2001,070,0600) |
| 999 | -148.804 | -195.366 | 1.0646E-01 (2001,007,0300) | 9.4208E-02 (2001,070,0500) | 8.3825E-02 (2001,317,2200) | 8.1628E-02 (2001,113,0100) |
| 1000 | -147.349 | -195.393 | 1.0506E-01 (2001,007,0300) | 9.3612E-02 (2001,070,0500) | 8.9312E-02 (2001,113,0100) | 8.8437E-02 (2001,317,2200) |
| 1001 | -145.894 | -195.421 | 1.0322E-01 (2001,007,0300) | 9.3760E-02 (2001,070,0500) | 8.4540E-02 (2001,113,0100) | 8.1136E-02 (2001,317,2200) |
| 1002 | -144.439 | -195.448 | 1.0061E-01 (2001,007,0300) | 9.4838E-02 (2001,070,0500) | 8.0168E-02 (2001,070,0600) | 7.3663E-02 (2001,070,0400) |
| 1003 | -153.133 | -193.429 | 1.0898E-01 (2001,070,0500) | 9.8338E-02 (2001,007,0300) | 9.3976E-02 (2001,007,0200) | 8.4595E-02 (2001,277,2200) |
| 1004 | -151.678 | -193.457 | 1.0443E-01 (2001,070,0500) | 9.8035E-02 (2001,007,0300) | 9.0094E-02 (2001,007,0200) | 6.9791E-02 (2001,360,2300) |
| 1005 | -150.224 | -193.485 | 1.0274E-01 (2001,070,0500) | 9.7679E-02 (2001,007,0300) | 8.8847E-02 (2001,007,0200) | 8.0185E-02 (2001,317,2200) |
| 1006 | -148.769 | -193.513 | 1.0176E-01 (2001,070,0500) | 9.5476E-02 (2001,007,0300) | 9.0891E-02 (2001,113,0100) | 9.0127E-02 (2001,317,2200) |
| 1007 | -147.314 | -193.541 | 1.0054E-01 (2001,070,0500) | 9.2907E-02 (2001,007,0300) | 8.7180E-02 (2001,113,0100) | 8.2991E-02 (2001,007,0200) |
| 1008 | -145.859 | -193.568 | 1.0059E-01 (2001,070,0500) | 9.0048E-02 (2001,007,0300) | 8.2803E-02 (2001,070,0400) | 7.9944E-02 (2001,007,0200) |
| 1009 | -144.404 | -193.596 | 1.0112E-01 (2001,070,0500) | 8.6964E-02 (2001,007,0300) | 8.3656E-02 (2001,070,0400) | 7.6544E-02 (2001,007,0200) |
| 1010 | -156.005 | -191.519 | 1.6259E-01 (2001,207,2300) | 1.2092E-01 (2001,070,0500) | 1.1048E-01 (2001,007,0200) | 9.9570E-02 (2001,085,2300) |
| 1011 | -154.551 | -191.548 | 1.4242E-01 (2001,207,2300) | 1.1661E-01 (2001,070,0500) | 1.0996E-01 (2001,007,0200) | 9.3312E-02 (2001,007,0300) |
| 1012 | -153.097 | -191.576 | 1.1102E-01 (2001,070,0500) | 1.0708E-01 (2001,007,0200) | 9.2763E-02 (2001,007,0300) | 7.9365E-02 (2001,277,2300) |
| 1013 | -151.642 | -191.605 | 1.0820E-01 (2001,070,0500) | 1.0285E-01 (2001,007,0200) | 8.9663E-02 (2001,007,0300) | 8.2753E-02 (2001,070,0400) |
| 1014 | -150.188 | -191.633 | 1.0610E-01 (2001,070,0500) | 9.9261E-02 (2001,007,0200) | 8.8348E-02 (2001,070,0400) | 8.5489E-02 (2001,007,0300) |
| 1015 | -148.733 | -191.661 | 1.0497E-01 (2001,070,0500) | 9.8079E-02 (2001,007,0200) | 9.6089E-02 (2001,113,0100) | 9.2395E-02 (2001,070,0400) |
| 1016 | -147.279 | -191.689 | 1.0414E-01 (2001,070,0500) | 9.5167E-02 (2001,007,0200) | 9.4337E-02 (2001,070,0400) | 8.8857E-02 (2001,113,0100) |
| 1017 | -145.824 | -191.716 | 1.0400E-01 (2001,070,0500) | 9.4390E-02 (2001,070,0400) | 9.2527E-02 (2001,007,0200) | 9.0293E-02 (2001,338,2200) |
| 1018 | -144.370 | -191.743 | 1.0420E-01 (2001,070,0500) | 9.3108E-02 (2001,070,0400) | 8.8936E-02 (2001,007,0200) | 8.8080E-02 (2001,338,2200) |
| 1019 | -155.968 | -189.666 | 1.6912E-01 (2001,207,2300) | 1.2208E-01 (2001,007,0200) | 1.1619E-01 (2001,070,0500) | 9.2678E-02 (2001,085,2300) |
| 1020 | -154.514 | -189.695 | 1.1842E-01 (2001,007,0200) | 1.1133E-01 (2001,070,0500) | 8.9336E-02 (2001,007,0300) | 8.7812E-02 (2001,070,0400) |
| 1021 | -153.060 | -189.724 | 1.0989E-01 (2001,007,0200) | 1.0819E-01 (2001,070,0500) | 9.4869E-02 (2001,070,0400) | 8.7274E-02 (2001,070,0300) |
| 1022 | -151.606 | -189.753 | 1.1122E-01 (2001,007,0200) | 1.0671E-01 (2001,070,0500) | 1.0110E-01 (2001,070,0400) | 9.4152E-02 (2001,070,0300) |
| 1023 | -150.152 | -189.781 | 1.0507E-01 (2001,070,0400) | 1.0483E-01 (2001,070,0500) | 1.0446E-01 (2001,007,0200) | 9.4647E-02 (2001,070,0300) |
| 1024 | -148.698 | -189.809 | 1.0690E-01 (2001,070,0400) | 1.0443E-01 (2001,007,0200) | 1.0396E-01 (2001,070,0500) | 9.1309E-02 (2001,070,0300) |
| 1025 | -147.244 | -189.836 | 1.0657E-01 (2001,070,0400) | 1.0331E-01 (2001,070,0500) | 9.8121E-02 (2001,007,0200) | 8.6151E-02 (2001,338,2200) |
| 1026 | -145.790 | -189.864 | 1.0448E-01 (2001,070,0400) | 1.0328E-01 (2001,070,0500) | 9.8033E-02 (2001,007,0200) | 8.9324E-02 (2001,338,2200) |
| 1027 | -144.336 | -189.891 | 1.0341E-01 (2001,070,0500) | 1.0095E-01 (2001,070,0400) | 9.9104E-02 (2001,007,0200) | 9.0690E-02 (2001,338,2200) |
| 1028 | -157.385 | -187.785 | 1.3012E-01 (2001,007,0200) | 1.2196E-01 (2001,207,2300) | 1.0846E-01 (2001,070,0500) | 1.0037E-01 (2001,085,2300) |
| 1029 | -155.931 | -187.814 | 1.2547E-01 (2001,007,0200) | 1.0536E-01 (2001,070,0500) | 9.8223E-02 (2001,070,0400) | 9.4036E-02 (2001,250,0300) |
| 1030 | -154.477 | -187.843 | 1.1381E-01 (2001,007,0200) | 1.0595E-01 (2001,070,0400) | 1.0270E-01 (2001,070,0500) | 9.7108E-02 (2001,070,0300) |
| 1031 | -153.024 | -187.872 | 1.1745E-01 (2001,007,0200) | 1.1304E-01 (2001,070,0400) | 1.0536E-01 (2001,070,0300) | 1.0161E-01 (2001,070,0500) |
| 1032 | -151.570 | -187.900 | 1.1761E-01 (2001,070,0400) | 1.1277E-01 (2001,007,0200) | 1.0687E-01 (2001,070,0300) | 1.0015E-01 (2001,070,0500) |
| 1033 | -150.116 | -187.928 | 1.1955E-01 (2001,070,0400) | 1.1027E-01 (2001,007,0200) | 1.0338E-01 (2001,070,0300) | 9.9173E-02 (2001,070,0500) |
| 1034 | -148.663 | -187.956 | 1.1882E-01 (2001,070,0400) | 1.0753E-01 (2001,007,0200) | 9.8583E-02 (2001,070,0500) | 9.8394E-02 (2001,338,2200) |
| 1035 | -147.209 | -187.984 | 1.1606E-01 (2001,070,0400) | 1.0943E-01 (2001,007,0200) | 1.0413E-01 (2001,338,2200) | 9.8467E-02 (2001,070,0500) |
| 1036 | -145.755 | -188.011 | 1.1168E-01 (2001,070,0400) | 1.0693E-01 (2001,007,0200) | 9.8515E-02 (2001,070,0500) | 9.3300E-02 (2001,338,2200) |
| 1037 | -144.301 | -188.039 | 1.0602E-01 (2001,070,0400) | 1.0479E-01 (2001,007,0200) | 9.8690E-02 (2001,070,0500) | 8.6799E-02 (2001,291,2300) |
| 1038 | -142.848 | -188.065 | 1.0847E-01 (2001,007,0200) | 9.9711E-02 (2001,070,0400) | 9.8790E-02 (2001,070,0500) | 9.0369E-02 (2001,291,2300) |
| 1039 | -141.394 | -188.092 | 1.0793E-01 (2001,007,0200) | 9.8638E-02 (2001,070,0500) | 9.3043E-02 (2001,070,0400) | 8.6529E-02 (2001,291,2300) |
| 1040 | -161.707 | -185.843 | 1.4325E-01 (2001,085,2300) | 1.3200E-01 (2001,086,0000) | 1.3184E-01 (2001,007,0200) | 1.1975E-01 (2001,089,2300) |
| 1041 | -160.254 | -185.873 | 1.3418E-01 (2001,007,0200) | 1.2781E-01 (2001,085,2300) | 1.0788E-01 (2001,086,0000) | 1.0766E-01 (2001,277,2200) |
| 1042 | -158.801 | -185.903 | 1.3221E-01 (2001,007,0200) | 1.0705E-01 (2001,085,2300) | 9.9299E-02 (2001,317,2300) | 9.8216E-02 (2001,250,0300) |
| 1043 | -157.347 | -185.932 | 1.2654E-01 (2001,007,0200) | 1.0430E-01 (2001,070,0400) | 1.0162E-01 (2001,070,0300) | 1.0088E-01 (2001,250,0300) |
| 1044 | -155.894 | -185.962 | 1.2201E-01 (2001,007,0200) | 1.1514E-01 (2001,207,2300) | 1.1358E-01 (2001,070,0400) | 1.1089E-01 (2001,070,0300) |
| 1045 | -154.441 | -185.991 | 1.3235E-01 (2001,207,2300) | 1.2122E-01 (2001,070,0400) | 1.1761E-01 (2001,070,0300) | 1.1623E-01 (2001,007,0200) |
| 1046 | -152.987 | -186.019 | 1.2643E-01 (2001,070,0400) | 1.1935E-01 (2001,070,0300) | 1.1088E-01 (2001,007,0200) | 9.4336E-02 (2001,317,2200) |
| 1047 | -151.534 | -186.048 | 1.2895E-01 (2001,070,0400) | 1.1566E-01 (2001,070,0300) | 1.0245E-01 (2001,007,0200) | 8.9264E-02 (2001,070,0500) |
| 1048 | -150.080 | -186.076 | 1.2894E-01 (2001,070,0400) | 1.0977E-01 (2001,070,0300) | 1.0794E-01 (2001,007,0200) | 1.0278E-01 (2001,338,2200) |
| 1049 | -148.627 | -186.104 | 1.2597E-01 (2001,070,0400) | 1.0848E-01 (2001,007,0200) | 1.0249E-01 (2001,338,2200) | 9.9630E-02 (2001,070,0300) |
| 1050 | -147.174 | -186.132 | 1.2085E-01 (2001,070,0400) | 1.0864E-01 (2001,007,0200) | 1.0194E-01 (2001,291,2300) | 9.2880E-02 (2001,072,2200) |
| 1051 | -145.720 | -186.159 | 1.1440E-01 (2001,070,0400) | 1.0668E-01 (2001,007,0200) | 9.6716E-02 (2001,291,2300) | 8.9988E-02 (2001,070,0500) |
| 1052 | -144.267 | -186.186 | 1.0758E-01 (2001,007,0200) | 1.0729E-01 (2001,070,0400) | 9.2803E-02 (2001,291,2300) | 9.0401E-02 (2001,070,0500) |
| 1053 | -142.813 | -186.213 | 1.1078E-01 (2001,007,0200) | 9.9725E-02 (2001,070,0400) | 9.0594E-02 (2001,070,0500) | 8.9857E-02 (2001,291,2300) |
| 1054 | -141.360 | -186.240 | 1.1130E-01 (2001,007,0200) | 9.2049E-02 (2001,070,0400) | 9.1600E-02 (2001,288,0000) | 9.0428E-02 (2001,070,0500) |
| 1055 | -161.669 | -183.991 | 1.3654E-01 (2001,085,2300) | 1.3056E-01 (2001,007,0200) | 1.1374E-01 (2001,089,2300) | 1.1249E-01 (2001,277,2200) |
| 1056 | -160.216 | -184.021 | 1.2863E-01 (2001,007,0200) | 1.1289E-01 (2001,085,2300) | 1.0785E-01 (2001,070,0300) | 1.0649E-01 (2001,250,0300) |
| 1057 | -158.763 | -184.051 | 1.2335E-01 (2001,007,0200) | 1.1739E-01 (2001,070,0300) | 1.0653E-01 (2001,207,2300) | 1.0522E-01 (2001,070,0400) |
| 1058 | -157.310 | -184.080 | 1.2492E-01 (2001,070,0300) | 1.1671E-01 (2001,007,0200) | 1.1358E-01 (2001,070,0400) | 1.1297E-01 (2001,207,2300) |
| 1059 | -155.857 | -184.109 | 1.3022E-01 (2001,070,0300) | 1.2174E-01 (2001,070,0400) | 1.1608E-01 (2001,207,2300) | 1.0992E-01 (2001,007,0200) |
| 1060 | -154.404 | -184.138 | 1.3199E-01 (2001,070,0300) | 1.2827E-01 (2001,070,0400) | 1.0940E-01 (2001,317,2200) | 1.0437E-01 (2001,007,0200) |
| 1061 | -152.951 | -184.167 | 1.3282E-01 (2001,070,0400) | 1.3034E-01 (2001,070,0300) | 1.2442E-01 (2001,207,2300) | 1.0573E-01 (2001,317,2200) |
| 1062 | -151.498 | -184.196 | 1.3376E-01 (2001,070,0400) | 1.2358E-01 (2001,070,0300) | 1.1389E-01 (2001,207,2300) | 1.0542E-01 (2001,304,2100) |
| 1063 | -150.045 | -184.224 | 1.3128E-01 (2001,070,0400) | 1.1240E-01 (2001,070,0300) | 1.0877E-01 (2001,291,2300) | 1.0341E-01 (2001,072,2200) |
| 1064 | -148.592 | -184.252 | 1.2646E-01 (2001,070,0400) | 1.1021E-01 (2001,291,2300) | 1.0097E-01 (2001,007,0200) | 9.9671E-02 (2001,070,0300) |
| 1065 | -147.139 | -184.279 | 1.1988E-01 (2001,070,0400) | 1.0310E-01 (2001,291,2300) | 1.0029E-01 (2001,007,0200) | 8.6444E-02 (2001,070,0300) |
| 1066 | -145.686 | -184.307 | 1.1235E-01 (2001,070,0400) | 1.0181E-01 (2001,007,0200) | 9.5743E-02 (2001,291,2300) | 8.0978E-02 (2001,288,0000) |
| 1067 | -144.233 | -184.334 | 1.0660E-01 (2001,007,0200) | 1.0436E-01 (2001,070,0400) | 9.1697E-02 (2001,288,0000) | 9.0622E-02 (2001,291,2300) |
| 1068 | -161.630 | -182.138 | 1.2114E-01 (2001,070,0300) | 1.2048E-01 (2001,007,0200) | 1.1881E-01 (2001,085,2300) | 1.1357E-01 (2001,250,0300) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1069 | -160.178 | -182.169 | 1.3039E-01 (2001,070,0300) | 1.1476E-01 (2001,007,0200) | 1.0726E-01 (2001,250,0300) | 1.0317E-01 (2001,317,2300) |
| 1070 | -158.725 | -182.198 | 1.3748E-01 (2001,070,0300) | 1.0707E-01 (2001,007,0200) | 1.0667E-01 (2001,317,2200) | 1.0574E-01 (2001,070,0400) |
| 1071 | -157.272 | -182.228 | 1.4115E-01 (2001,070,0300) | 1.1334E-01 (2001,317,2200) | 1.1293E-01 (2001,070,0400) | 1.0017E-01 (2001,250,0200) |
| 1072 | -155.820 | -182.257 | 1.4228E-01 (2001,070,0300) | 1.2015E-01 (2001,070,0400) | 1.1470E-01 (2001,317,2200) | 1.0793E-01 (2001,304,2100) |
| 1073 | -154.367 | -182.286 | 1.4048E-01 (2001,070,0300) | 1.2609E-01 (2001,070,0400) | 1.1328E-01 (2001,304,2100) | 1.1070E-01 (2001,317,2200) |
| 1074 | -152.914 | -182.315 | 1.3432E-01 (2001,070,0300) | 1.2951E-01 (2001,070,0400) | 1.1565E-01 (2001,304,2100) | 1.1089E-01 (2001,072,2200) |
| 1075 | -151.462 | -182.343 | 1.2943E-01 (2001,070,0400) | 1.2417E-01 (2001,070,0300) | 1.1771E-01 (2001,291,2300) | 1.1443E-01 (2001,304,2100) |
| 1076 | -150.009 | -182.372 | 1.2586E-01 (2001,070,0400) | 1.1418E-01 (2001,291,2300) | 1.1011E-01 (2001,070,0300) | 9.9333E-02 (2001,072,2200) |
| 1077 | -148.556 | -182.399 | 1.2023E-01 (2001,070,0400) | 1.0971E-01 (2001,291,2300) | 9.6682E-02 (2001,070,0300) | 8.9400E-02 (2001,007,0200) |
| 1078 | -147.104 | -182.427 | 1.1321E-01 (2001,070,0400) | 9.9133E-02 (2001,291,2300) | 9.1701E-02 (2001,007,0200) | 8.9357E-02 (2001,288,0000) |
| 1079 | -145.651 | -182.454 | 1.0545E-01 (2001,070,0400) | 1.0008E-01 (2001,288,0000) | 9.7875E-02 (2001,007,0200) | 9.2516E-02 (2001,291,2300) |
| 1080 | -161.592 | -180.286 | 1.3685E-01 (2001,070,0300) | 1.0888E-01 (2001,317,2300) | 1.0734E-01 (2001,250,0300) | 1.0597E-01 (2001,007,0200) |
| 1081 | -160.139 | -180.316 | 1.4326E-01 (2001,070,0300) | 1.1170E-01 (2001,317,2200) | 1.0640E-01 (2001,250,0200) | 1.0350E-01 (2001,113,0000) |
| 1082 | -158.687 | -180.346 | 1.4663E-01 (2001,070,0300) | 1.1921E-01 (2001,317,2200) | 1.0892E-01 (2001,304,2100) | 1.0587E-01 (2001,250,0200) |
| 1083 | -157.235 | -180.376 | 1.4672E-01 (2001,070,0300) | 1.2065E-01 (2001,317,2200) | 1.1813E-01 (2001,304,2100) | 1.0619E-01 (2001,286,2300) |
| 1084 | -155.783 | -180.405 | 1.4400E-01 (2001,070,0300) | 1.2346E-01 (2001,304,2100) | 1.1613E-01 (2001,072,2200) | 1.1606E-01 (2001,317,2200) |
| 1085 | -154.330 | -180.434 | 1.3850E-01 (2001,070,0300) | 1.2515E-01 (2001,304,2100) | 1.2209E-01 (2001,072,2200) | 1.1979E-01 (2001,291,2300) |
| 1086 | -152.878 | -180.463 | 1.2919E-01 (2001,070,0300) | 1.2503E-01 (2001,291,2300) | 1.2028E-01 (2001,304,2100) | 1.1934E-01 (2001,072,2200) |
| 1087 | -151.426 | -180.491 | 1.1945E-01 (2001,291,2300) | 1.1658E-01 (2001,070,0300) | 1.1643E-01 (2001,070,0400) | 1.0273E-01 (2001,072,2200) |
| 1088 | -149.973 | -180.519 | 1.1459E-01 (2001,291,2300) | 1.1337E-01 (2001,070,0400) | 1.0344E-01 (2001,070,0300) | 8.7964E-02 (2001,304,2100) |
| 1089 | -148.521 | -180.547 | 1.0807E-01 (2001,070,0400) | 1.0196E-01 (2001,291,2300) | 9.6657E-02 (2001,288,0000) | 8.9521E-02 (2001,070,0300) |
| 1090 | -147.068 | -180.575 | 1.0646E-01 (2001,288,0000) | 1.0144E-01 (2001,070,0400) | 8.9614E-02 (2001,291,2300) | 8.1721E-02 (2001,007,0200) |
| 1091 | -145.616 | -180.602 | 1.1367E-01 (2001,288,0000) | 9.4222E-02 (2001,070,0400) | 8.8112E-02 (2001,007,0200) | 8.7274E-02 (2001,287,2300) |
| 1092 | -161.553 | -178.434 | 1.3843E-01 (2001,070,0300) | 1.1721E-01 (2001,317,2200) | 1.1627E-01 (2001,250,0200) | 1.1455E-01 (2001,071,0700) |
| 1093 | -160.101 | -178.464 | 1.4106E-01 (2001,070,0300) | 1.2554E-01 (2001,317,2200) | 1.1674E-01 (2001,304,2100) | 1.1087E-01 (2001,250,0200) |
| 1094 | -158.649 | -178.494 | 1.4113E-01 (2001,070,0300) | 1.2713E-01 (2001,317,2200) | 1.2644E-01 (2001,304,2100) | 1.1913E-01 (2001,072,2200) |
| 1095 | -157.197 | -178.523 | 1.3805E-01 (2001,070,0300) | 1.3190E-01 (2001,304,2100) | 1.3077E-01 (2001,072,2200) | 1.2212E-01 (2001,317,2200) |
| 1096 | -155.745 | -178.553 | 1.3306E-01 (2001,304,2100) | 1.3272E-01 (2001,070,0300) | 1.3214E-01 (2001,072,2200) | 1.2644E-01 (2001,291,2300) |
| 1097 | -154.293 | -178.582 | 1.3002E-01 (2001,291,2300) | 1.2954E-01 (2001,304,2100) | 1.2543E-01 (2001,070,0300) | 1.2391E-01 (2001,072,2200) |
| 1098 | -152.841 | -178.610 | 1.2837E-01 (2001,291,2300) | 1.1961E-01 (2001,317,2100) | 1.1865E-01 (2001,304,2100) | 1.1544E-01 (2001,070,0300) |
| 1099 | -151.389 | -178.639 | 1.1918E-01 (2001,291,2300) | 1.0349E-01 (2001,070,0300) | 1.0217E-01 (2001,317,2100) | 1.0063E-01 (2001,304,2100) |
| 1100 | -149.937 | -178.667 | 1.0074E-01 (2001,288,0000) | 1.0001E-01 (2001,291,2300) | 9.5472E-02 (2001,070,0400) | 9.1116E-02 (2001,287,2300) |
| 1101 | -148.485 | -178.695 | 1.0967E-01 (2001,288,0000) | 9.8702E-02 (2001,287,2300) | 9.1502E-02 (2001,070,0400) | 8.8427E-02 (2001,291,2300) |
| 1102 | -147.033 | -178.723 | 1.1648E-01 (2001,288,0000) | 1.0564E-01 (2001,287,2300) | 9.9191E-02 (2001,304,2300) | 8.9768E-02 (2001,304,2200) |
| 1103 | -145.581 | -178.750 | 1.1806E-01 (2001,288,0000) | 1.0648E-01 (2001,287,2300) | 9.2696E-02 (2001,304,2300) | 8.3364E-02 (2001,007,0100) |
| 1104 | -164.418 | -176.521 | 1.2288E-01 (2001,250,0200) | 1.2066E-01 (2001,070,0300) | 1.1997E-01 (2001,071,0700) | 1.1908E-01 (2001,317,2300) |
| 1105 | -162.966 | -176.552 | 1.2561E-01 (2001,250,0200) | 1.2306E-01 (2001,317,2200) | 1.2267E-01 (2001,070,0300) | 1.2202E-01 (2001,071,0700) |
| 1106 | -161.515 | -176.582 | 1.3262E-01 (2001,317,2200) | 1.2339E-01 (2001,070,0300) | 1.2250E-01 (2001,304,2100) | 1.2112E-01 (2001,070,0200) |
| 1107 | -160.063 | -176.612 | 1.3624E-01 (2001,072,2200) | 1.3460E-01 (2001,317,2200) | 1.3259E-01 (2001,304,2100) | 1.2256E-01 (2001,070,0300) |
| 1108 | -158.611 | -176.642 | 1.4394E-01 (2001,072,2200) | 1.3801E-01 (2001,304,2100) | 1.2891E-01 (2001,317,2200) | 1.2186E-01 (2001,291,2300) |
| 1109 | -157.160 | -176.671 | 1.3931E-01 (2001,072,2200) | 1.3430E-01 (2001,304,2100) | 1.2802E-01 (2001,291,2300) | 1.1696E-01 (2001,317,2200) |
| 1110 | -155.708 | -176.701 | 1.3442E-01 (2001,304,2100) | 1.3160E-01 (2001,291,2300) | 1.2496E-01 (2001,072,2200) | 1.2034E-01 (2001,317,2100) |
| 1111 | -154.257 | -176.730 | 1.2853E-01 (2001,291,2300) | 1.2800E-01 (2001,317,2100) | 1.2200E-01 (2001,304,2100) | 1.0838E-01 (2001,338,0900) |
| 1112 | -152.805 | -176.758 | 1.1812E-01 (2001,291,2300) | 1.1082E-01 (2001,317,2100) | 1.0320E-01 (2001,304,2100) | 1.0142E-01 (2001,338,0900) |
| 1113 | -151.353 | -176.787 | 1.0691E-01 (2001,287,2300) | 1.0103E-01 (2001,288,0000) | 1.0080E-01 (2001,291,2300) | 9.2714E-02 (2001,338,0900) |
| 1114 | -149.902 | -176.815 | 1.1249E-01 (2001,287,2300) | 1.0831E-01 (2001,288,0000) | 9.0615E-02 (2001,007,0100) | 8.7207E-02 (2001,304,2300) |
| 1115 | -148.450 | -176.843 | 1.1668E-01 (2001,287,2300) | 1.1360E-01 (2001,288,0000) | 9.9056E-02 (2001,007,0100) | 9.8354E-02 (2001,304,2300) |
| 1116 | -146.998 | -176.870 | 1.1572E-01 (2001,287,2300) | 1.1442E-01 (2001,288,0000) | 1.0168E-01 (2001,007,0100) | 9.7398E-02 (2001,304,2300) |
| 1117 | -164.379 | -174.669 | 1.3409E-01 (2001,338,2100) | 1.3353E-01 (2001,250,0200) | 1.3174E-01 (2001,070,0200) | 1.3055E-01 (2001,113,0000) |
| 1118 | -162.927 | -174.699 | 1.3993E-01 (2001,317,2200) | 1.3611E-01 (2001,072,2200) | 1.3110E-01 (2001,070,0200) | 1.2717E-01 (2001,304,2100) |
| 1119 | -161.476 | -174.730 | 1.5145E-01 (2001,072,2200) | 1.4218E-01 (2001,317,2200) | 1.3729E-01 (2001,304,2100) | 1.2530E-01 (2001,338,0900) |
| 1120 | -160.025 | -174.760 | 1.5293E-01 (2001,072,2200) | 1.4175E-01 (2001,304,2100) | 1.3605E-01 (2001,317,2200) | 1.2570E-01 (2001,338,0900) |
| 1121 | -158.574 | -174.790 | 1.4158E-01 (2001,072,2200) | 1.4118E-01 (2001,304,2100) | 1.2624E-01 (2001,291,2300) | 1.2586E-01 (2001,338,0900) |
| 1122 | -157.122 | -174.819 | 1.3617E-01 (2001,304,2100) | 1.2887E-01 (2001,291,2300) | 1.2718E-01 (2001,317,2100) | 1.2526E-01 (2001,338,0900) |
| 1123 | -155.671 | -174.848 | 1.3506E-01 (2001,317,2100) | 1.2771E-01 (2001,304,2100) | 1.2733E-01 (2001,291,2300) | 1.2376E-01 (2001,338,0900) |
| 1124 | -154.220 | -174.877 | 1.3510E-01 (2001,317,2100) | 1.1911E-01 (2001,291,2300) | 1.1649E-01 (2001,338,0900) | 1.1138E-01 (2001,304,2100) |
| 1125 | -152.768 | -174.906 | 1.1836E-01 (2001,287,2300) | 1.0246E-01 (2001,338,0900) | 1.0148E-01 (2001,007,0100) | 9.6947E-02 (2001,288,0000) |
| 1126 | -151.317 | -174.934 | 1.2265E-01 (2001,287,2300) | 1.0877E-01 (2001,007,0100) | 1.0296E-01 (2001,288,0000) | 9.9803E-02 (2001,304,2300) |
| 1127 | -149.866 | -174.963 | 1.2174E-01 (2001,287,2300) | 1.1387E-01 (2001,007,0100) | 1.0641E-01 (2001,288,0000) | 1.0068E-01 (2001,304,2300) |
| 1128 | -148.415 | -174.991 | 1.2205E-01 (2001,007,0100) | 1.1937E-01 (2001,287,2300) | 1.1006E-01 (2001,304,2300) | 1.0677E-01 (2001,288,0000) |
| 1129 | -167.241 | -172.755 | 1.5837E-01 (2001,338,2100) | 1.5511E-01 (2001,338,0800) | 1.5026E-01 (2001,250,0200) | 1.3739E-01 (2001,311,0800) |
| 1130 | -165.790 | -172.786 | 1.5896E-01 (2001,338,0800) | 1.4364E-01 (2001,338,2100) | 1.4132E-01 (2001,113,0000) | 1.3899E-01 (2001,070,0200) |
| 1131 | -164.339 | -172.817 | 1.5918E-01 (2001,338,0800) | 1.5451E-01 (2001,072,2200) | 1.4722E-01 (2001,317,2200) | 1.3754E-01 (2001,070,0200) |
| 1132 | -162.888 | -172.847 | 1.6374E-01 (2001,072,2200) | 1.5655E-01 (2001,338,0800) | 1.4964E-01 (2001,317,2200) | 1.4202E-01 (2001,304,2100) |
| 1133 | -161.438 | -172.878 | 1.5681E-01 (2001,072,2200) | 1.5145E-01 (2001,338,0800) | 1.4544E-01 (2001,304,2100) | 1.4292E-01 (2001,317,2200) |
| 1134 | -159.987 | -172.908 | 1.4446E-01 (2001,338,0800) | 1.4283E-01 (2001,304,2100) | 1.3746E-01 (2001,072,2200) | 1.3221E-01 (2001,293,2100) |
| 1135 | -158.536 | -172.937 | 1.3555E-01 (2001,304,2100) | 1.3422E-01 (2001,317,2100) | 1.3284E-01 (2001,338,0800) | 1.2832E-01 (2001,338,0900) |
| 1136 | -157.085 | -172.967 | 1.3749E-01 (2001,317,2100) | 1.2043E-01 (2001,338,0900) | 1.1979E-01 (2001,304,2100) | 1.1937E-01 (2001,291,2300) |
| 1137 | -155.634 | -172.996 | 1.2003E-01 (2001,287,2300) | 1.1966E-01 (2001,317,2100) | 1.1395E-01 (2001,304,2200) | 1.1311E-01 (2001,338,0900) |
| 1138 | -154.183 | -173.025 | 1.2532E-01 (2001,287,2300) | 1.1147E-01 (2001,007,0100) | 1.0771E-01 (2001,304,2200) | 1.0670E-01 (2001,338,0900) |
| 1139 | -152.732 | -173.054 | 1.2787E-01 (2001,287,2300) | 1.2450E-01 (2001,304,2300) | 1.2418E-01 (2001,007,0100) | 1.1677E-01 (2001,317,2100) |
| 1140 | -151.281 | -173.082 | 1.3145E-01 (2001,007,0100) | 1.2304E-01 (2001,287,2300) | 1.2241E-01 (2001,304,2300) | 1.0678E-01 (2001,338,0900) |
| 1141 | -149.830 | -173.110 | 1.3622E-01 (2001,007,0100) | 1.1770E-01 (2001,304,2300) | 1.1438E-01 (2001,287,2300) | 1.1120E-01 (2001,305,0000) |
| 1142 | -148.379 | -173.138 | 1.3586E-01 (2001,007,0100) | 1.0277E-01 (2001,287,2300) | 1.0004E-01 (2001,304,2300) | 9.9264E-02 (2001,305,0000) |
| 1143 | -146.928 | -173.166 | 1.3204E-01 (2001,007,0100) | 9.3569E-02 (2001,295,2000) | 9.1666E-02 (2001,305,0000) | 9.1103E-02 (2001,287,2300) |
| 1144 | -165.751 | -170.934 | 1.8935E-01 (2001,338,0800) | 1.6961E-01 (2001,072,2200) | 1.5518E-01 (2001,311,0800) | 1.5472E-01 (2001,317,2200) |
| 1145 | -164.300 | -170.965 | 1.8485E-01 (2001,338,0800) | 1.6991E-01 (2001,072,2200) | 1.5659E-01 (2001,317,2200) | 1.4839E-01 (2001,304,2100) |
| 1146 | -162.850 | -170.995 | 1.7769E-01 (2001,338,0800) | 1.5395E-01 (2001,072,2200) | 1.5046E-01 (2001,304,2100) | 1.4898E-01 (2001,317,2200) |
| 1147 | -161.399 | -171.025 | 1.6859E-01 (2001,338,0800) | 1.4547E-01 (2001,304,2100) | 1.3521E-01 (2001,293,2100) | 1.3343E-01 (2001,317,2200) |
| 1148 | -159.948 | -171.056 | 1.5174E-01 (2001,338,0800) | 1.4276E-01 (2001,317,2100) | 1.3482E-01 (2001,304,2100) | 1.2868E-01 (2001,293,2100) |
| 1149 | -158.498 | -171.085 | 1.3796E-01 (2001,317,2100) | 1.2884E-01 (2001,304,2200) | 1.2851E-01 (2001,338,0800) | 1.1679E-01 (2001,304,2100) |
| 1150 | -157.047 | -171.115 | 1.3567E-01 (2001,317,2100) | 1.3220E-01 (2001,304,2200) | 1.2669E-01 (2001,287,2300) | 1.2104E-01 (2001,338,0800) |
| 1151 | -155.597 | -171.144 | 1.5066E-01 (2001,145,0400) | 1.3284E-01 (2001,317,2100) | 1.3078E-01 (2001,304,2300) | 1.2963E-01 (2001,287,2300) |
| 1152 | -154.146 | -171.173 | 1.3339E-01 (2001,304,2300) | 1.2954E-01 (2001,007,0100) | 1.2714E-01 (2001,145,0400) | 1.2574E-01 (2001,287,2300) |
| 1153 | -152.696 | -171.202 | 1.3849E-01 (2001,007,0100) | 1.3021E-01 (2001,304,2300) | 1.2968E-01 (2001,145,0400) | 1.1644E-01 (2001,287,2300) |
| 1154 | -151.245 | -171.230 | 1.4393E-01 (2001,007,0100) | 1.1470E-01 (2001,304,2300) | 1.0364E-01 (2001,287,2300) | 1.0319E-01 (2001,305,0000) |
| 1155 | -149.794 | -171.258 | 1.5058E-01 (2001,145,0400) | 1.4687E-01 (2001,007,0100) | 1.2500E-01 (2001,305,0000) | 1.1007E-01 (2001,304,2300) |
| 1156 | -148.344 | -171.286 | 1.3534E-01 (2001,007,0100) | 9.2909E-02 (2001,287,2200) | 8.7266E-02 (2001,295,2000) | 8.1652E-02 (2001,088,0100) |
| 1157 | -146.893 | -171.314 | 1.2800E-01 (2001,007,0100) | 8.8388E-02 (2001,287,2200) | 8.1984E-02 (2001,295,2000) | 8.0766E-02 (2001,088,0100) |
| 1158 | -162.811 | -169.143 | 1.8280E-01 (2001,338,0800) | 1.5107E-01 (2001,304,2100) | 1.4076E-01 (2001,317,2100) | 1.3636E-01 (2001,317,2200) |
| 1159 | -161.360 | -169.173 | 1.6306E-01 (2001,338,0800) | 1.5326E-01 (2001,317,2100) | 1.4361E-01 (2001,304,2200) | 1.3677E-01 (2001,304,2100) |
| 1160 | -159.910 | -169.203 | 1.5598E-01 (2001,317,2100) | 1.5003E-01 (2001,338,0800) | 1.4945E-01 (2001,304,2200) | 1.2617E-01 (2001,291,2300) |
| 1161 | -158.460 | -169.233 | 1.4881E-01 (2001,317,2100) | 1.4777E-01 (2001,304,2200) | 1.4113E-01 (2001,338,0800) | 1.3795E-01 (2001,145,0400) |
| 1162 | -157.010 | -169.263 | 1.5612E-01 (2001,145,0400) | 1.4097E-01 (2001,304,2300) | 1.3924E-01 (2001,304,2200) | 1.3381E-01 (2001,317,2100) |
| 1163 | -155.560 | -169.292 | 1.4197E-01 (2001,304,2300) | 1.2975E-01 (2001,007,0100) | 1.2702E-01 (2001,145,0400) | 1.2614E-01 (2001,304,2200) |
| 1164 | -154.109 | -169.321 | 1.3942E-01 (2001,007,0100) | 1.3752E-01 (2001,145,0400) | 1.3596E-01 (2001,304,2300) | 1.1951E-01 (2001,287,2200) |
| 1165 | -152.659 | -169.350 | 1.4620E-01 (2001,007,0100) | 1.4147E-01 (2001,145,0400) | 1.2458E-01 (2001,304,2300) | 1.1867E-01 (2001,305,0000) |
| 1166 | -151.209 | -169.378 | 1.4819E-01 (2001,007,0100) | 1.0822E-01 (2001,287,2200) | 1.0802E-01 (2001,305,0000) | 1.0135E-01 (2001,304,2300) |
| 1167 | -149.759 | -169.406 | 1.4804E-01 (2001,007,0100) | 1.1939E-01 (2001,305,0000) | 1.0594E-01 (2001,145,0400) | 1.0308E-01 (2001,287,2200) |
| 1168 | -148.308 | -169.434 | 1.4309E-01 (2001,007,0100) | 1.1556E-01 (2001,305,0000) | 9.7800E-02 (2001,295,2000) | 9.6057E-02 (2001,287,2200) |
| 1169 | -164.222 | -167.260 | 1.8231E-01 (2001,338,0800) | 1.6001E-01 (2001,304,2100) | 1.5675E-01 (2001,304,2200) | 1.5444E-01 (2001,317,2100) |
| 1170 | -162.772 | -167.291 | 1.6926E-01 (2001,338,0800) | 1.6879E-01 (2001,304,2200) | 1.6568E-01 (2001,317,2100) | 1.4586E-01 (2001,287,2200) |
| 1171 | -161.322 | -167.321 | 1.7039E-01 (2001,304,2200) | 1.6499E-01 (2001,317,2100) | 1.5649E-01 (2001,338,0800) | 1.4799E-01 (2001,287,2200) |
| 1172 | -159.872 | -167.351 | 1.6316E-01 (2001,304,2200) | 1.5354E-01 (2001,317,2100) | 1.4819E-01 (2001,145,0400) | 1.4625E-01 (2001,287,2200) |
| 1173 | -158.422 | -167.381 | 1.5195E-01 (2001,145,0400) | 1.4991E-01 (2001,304,2300) | 1.4864E-01 (2001,304,2200) | 1.4096E-01 (2001,287,2200) |
| 1174 | -156.972 | -167.411 | 1.6579E-01 (2001,145,0400) | 1.4856E-01 (2001,304,2300) | 1.3365E-01 (2001,287,2200) | 1.2993E-01 (2001,304,2200) |
| 1175 | -155.522 | -167.440 | 1.7651E-01 (2001,145,0400) | 1.4005E-01 (2001,304,2300) | 1.3456E-01 (2001,007,0100) | 1.2493E-01 (2001,287,2200) |
| 1176 | -154.072 | -167.469 | 1.8003E-01 (2001,145,0400) | 1.4144E-01 (2001,007,0100) | 1.2603E-01 (2001,304,2300) | 1.2446E-01 (2001,305,0000) |
| 1177 | -152.623 | -167.497 | 2.0119E-01 (2001,145,0400) | 1.4451E-01 (2001,007,0100) | 1.3212E-01 (2001,305,0000) | 1.0869E-01 (2001,304,2300) |
| 1178 | -164.182 | -165.408 | 1.9631E-01 (2001,304,2200) | 1.7932E-01 (2001,317,2100) | 1.7713E-01 (2001,287,2200) | 1.5399E-01 (2001,291,2300) |
| 1179 | -162.733 | -165.439 | 1.9288E-01 (2001,304,2200) | 1.7454E-01 (2001,317,2100) | 1.6940E-01 (2001,287,2200) | 1.4136E-01 (2001,287,2300) |
| 1180 | -161.283 | -165.469 | 1.7840E-01 (2001,304,2200) | 1.5812E-01 (2001,317,2100) | 1.5783E-01 (2001,287,2200) | 1.5325E-01 (2001,304,2300) |
| 1181 | -159.834 | -165.499 | 1.5746E-01 (2001,304,2300) | 1.5644E-01 (2001,304,2200) | 1.4423E-01 (2001,287,2200) | 1.4018E-01 (2001,295,1900) |
| 1182 | -158.384 | -165.529 | 1.5316E-01 (2001,304,2300) | 1.4867E-01 (2001,145,0400) | 1.3209E-01 (2001,295,1900) | 1.3167E-01 (2001,304,2200) |

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|---|---|---|---|---|---|---|
| 1183 | -156.935 | -165.558 | 1.2390E-01 (2001,304,2300) | 1.2233E-01 (2001,007,0100) | 1.1514E-01 (2001,054,2100) | 1.1378E-01 (2001,295,1900) |
| 1184 | -155.485 | -165.588 | 1.2935E-01 (2001,007,0100) | 1.1354E-01 (2001,054,2100) | 1.1309E-01 (2001,304,2300) | 1.0807E-01 (2001,089,0600) |
| 1185 | -154.036 | -165.617 | 1.2750E-01 (2001,007,0100) | 1.0553E-01 (2001,089,0600) | 1.0118E-01 (2001,054,2100) | 1.0002E-01 (2001,088,0100) |
| 1186 | -152.586 | -165.645 | 1.2735E-01 (2001,007,0100) | 1.0674E-01 (2001,089,0600) | 9.8312E-02 (2001,088,0100) | 9.5574E-02 (2001,291,0800) |
| 1187 | -164.143 | -163.556 | 2.1223E-01 (2001,304,2200) | 1.8375E-01 (2001,317,2100) | 1.6959E-01 (2001,287,2200) | 1.6547E-01 (2001,145,0300) |
| 1188 | -162.694 | -163.587 | 1.9059E-01 (2001,304,2200) | 1.6659E-01 (2001,304,2300) | 1.6413E-01 (2001,145,0300) | 1.6133E-01 (2001,317,2100) |
| 1189 | -161.245 | -163.617 | 1.6549E-01 (2001,304,2300) | 1.6158E-01 (2001,304,2200) | 1.4962E-01 (2001,295,1900) | 1.4244E-01 (2001,287,2300) |
| 1190 | -159.796 | -163.647 | 1.5552E-01 (2001,304,2300) | 1.3472E-01 (2001,295,1900) | 1.3097E-01 (2001,054,2100) | 1.3048E-01 (2001,304,2200) |
| 1191 | -158.346 | -163.677 | 1.3955E-01 (2001,304,2300) | 1.2788E-01 (2001,054,2100) | 1.1758E-01 (2001,295,1900) | 1.1567E-01 (2001,113,0200) |
| 1192 | -156.897 | -163.706 | 1.1855E-01 (2001,089,0600) | 1.1766E-01 (2001,054,2100) | 1.1444E-01 (2001,088,0100) | 1.1151E-01 (2001,304,2300) |
| 1193 | -155.448 | -163.736 | 1.3010E-01 (2001,089,0600) | 1.2891E-01 (2001,305,0000) | 1.2153E-01 (2001,145,0400) | 1.1853E-01 (2001,088,0100) |
| 1194 | -153.999 | -163.765 | 1.2261E-01 (2001,089,0600) | 1.1320E-01 (2001,007,0100) | 1.0932E-01 (2001,291,0800) | 1.0637E-01 (2001,088,0100) |
| 1195 | -152.550 | -163.793 | 1.1330E-01 (2001,089,0600) | 1.0692E-01 (2001,007,0100) | 1.0586E-01 (2001,291,0800) | 9.3553E-02 (2001,054,2200) |
| 1196 | -159.757 | -161.795 | 1.3793E-01 (2001,304,2300) | 1.3331E-01 (2001,145,0300) | 1.3034E-01 (2001,291,0800) | 1.2889E-01 (2001,054,2100) |
| 1197 | -158.309 | -161.825 | 1.3303E-01 (2001,089,0600) | 1.2945E-01 (2001,088,0100) | 1.2854E-01 (2001,305,0000) | 1.2773E-01 (2001,291,0800) |

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CALPOST Version 5.6394 Level 070622

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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 835 | -122.223 | -264.400 | 5.1314E-04 | 1016 | -147.279 | -191.689 | 1.1771E-03 |
| 836 | -120.755 | -264.423 | 4.6959E-04 | 1017 | -145.824 | -191.716 | 1.1190E-03 |
| 837 | -123.662 | -262.524 | 5.5225E-04 | 1018 | -144.370 | -191.743 | 1.0123E-03 |
| 838 | -122.195 | -262.547 | 5.0069E-04 | 1019 | -155.968 | -189.666 | 1.3899E-03 |
| 839 | -123.633 | -260.671 | 5.0595E-04 | 1020 | -154.514 | -189.695 | 1.2551E-03 |
| 840 | -125.071 | -258.794 | 5.4941E-04 | 1021 | -153.060 | -189.724 | 1.0963E-03 |
| 841 | -129.441 | -256.870 | 6.5811E-04 | 1022 | -151.606 | -189.753 | 1.2205E-03 |
| 842 | -127.975 | -256.894 | 6.5249E-04 | 1023 | -150.152 | -189.781 | 1.0937E-03 |
| 843 | -126.508 | -256.918 | 6.1444E-04 | 1024 | -148.698 | -189.809 | 1.1535E-03 |
| 844 | -125.041 | -256.941 | 5.5037E-04 | 1025 | -147.244 | -189.836 | 9.9875E-04 |
| 845 | -129.411 | -255.017 | 6.6940E-04 | 1026 | -145.790 | -189.864 | 9.9713E-04 |
| 846 | -127.944 | -255.041 | 6.3427E-04 | 1027 | -144.336 | -189.891 | 1.0253E-03 |
| 847 | -126.478 | -255.065 | 6.0030E-04 | 1028 | -157.385 | -187.785 | 1.3942E-03 |
| 848 | -129.380 | -253.164 | 6.7325E-04 | 1029 | -155.931 | -187.814 | 1.3045E-03 |
| 849 | -127.914 | -253.188 | 6.4902E-04 | 1030 | -154.477 | -187.843 | 1.1213E-03 |
| 850 | -126.448 | -253.212 | 5.8374E-04 | 1031 | -153.024 | -187.872 | 1.3026E-03 |
| 851 | -130.815 | -251.286 | 6.9416E-04 | 1032 | -151.570 | -187.900 | 1.2477E-03 |
| 852 | -129.349 | -251.311 | 6.3988E-04 | 1033 | -150.116 | -187.928 | 1.2414E-03 |
| 853 | -127.884 | -251.335 | 6.3586E-04 | 1034 | -148.663 | -187.956 | 1.1751E-03 |
| 854 | -126.418 | -251.359 | 5.9618E-04 | 1035 | -147.209 | -187.984 | 1.2365E-03 |
| 855 | -133.715 | -249.384 | 7.1922E-04 | 1036 | -145.755 | -188.011 | 1.1070E-03 |
| 856 | -132.249 | -249.409 | 7.1558E-04 | 1037 | -144.301 | -188.039 | 9.9510E-04 |
| 857 | -130.784 | -249.433 | 6.7915E-04 | 1038 | -142.848 | -188.065 | 1.0438E-03 |
| 858 | -129.319 | -249.458 | 6.6391E-04 | 1039 | -141.394 | -188.092 | 9.9328E-04 |
| 859 | -127.854 | -249.482 | 6.0629E-04 | 1040 | -161.707 | -185.843 | 1.4954E-03 |
| 860 | -133.683 | -247.531 | 7.3328E-04 | 1041 | -160.254 | -185.873 | 1.4613E-03 |
| 861 | -132.218 | -247.556 | 6.9362E-04 | 1042 | -158.801 | -185.903 | 1.4072E-03 |
| 862 | -130.753 | -247.580 | 6.4227E-04 | 1043 | -157.347 | -185.932 | 1.3231E-03 |
| 863 | -129.288 | -247.605 | 6.3982E-04 | 1044 | -155.894 | -185.962 | 1.3852E-03 |
| 864 | -127.823 | -247.629 | 6.4376E-04 | 1045 | -154.441 | -185.991 | 1.3777E-03 |
| 865 | -135.116 | -245.653 | 7.5336E-04 | 1046 | -152.987 | -186.019 | 1.2787E-03 |
| 866 | -133.651 | -245.678 | 7.2535E-04 | 1047 | -151.534 | -186.048 | 1.1284E-03 |
| 867 | -132.187 | -245.703 | 6.9783E-04 | 1048 | -150.080 | -186.076 | 1.2992E-03 |
| 868 | -130.722 | -245.727 | 6.6364E-04 | 1049 | -148.627 | -186.104 | 1.3066E-03 |
| 869 | -129.258 | -245.752 | 6.5517E-04 | 1050 | -147.174 | -186.132 | 1.2084E-03 |
| 870 | -136.548 | -243.775 | 7.7279E-04 | 1051 | -145.720 | -186.159 | 1.0595E-03 |
| 871 | -135.084 | -243.800 | 7.6448E-04 | 1052 | -144.267 | -186.186 | 9.9683E-04 |
| 872 | -133.620 | -243.825 | 7.2814E-04 | 1053 | -142.813 | -186.213 | 1.0007E-03 |
| 873 | -132.155 | -243.850 | 7.2021E-04 | 1054 | -141.360 | -186.240 | 9.6125E-04 |
| 874 | -130.691 | -243.874 | 7.2424E-04 | 1055 | -161.669 | -183.991 | 1.5066E-03 |
| 875 | -129.227 | -243.899 | 6.7100E-04 | 1056 | -160.216 | -184.021 | 1.4712E-03 |
| 876 | -137.980 | -241.896 | 7.9252E-04 | 1057 | -158.763 | -184.051 | 1.4807E-03 |
| 877 | -136.516 | -241.922 | 7.8955E-04 | 1058 | -157.310 | -184.080 | 1.4558E-03 |
| 878 | -135.052 | -241.947 | 7.7145E-04 | 1059 | -155.857 | -184.109 | 1.4324E-03 |
| 879 | -133.588 | -241.972 | 7.7396E-04 | 1060 | -154.404 | -184.138 | 1.3694E-03 |
| 880 | -132.124 | -241.997 | 7.5053E-04 | 1061 | -152.951 | -184.167 | 1.4010E-03 |
| 881 | -130.660 | -242.022 | 7.2747E-04 | 1062 | -151.498 | -184.196 | 1.3787E-03 |
| 882 | -129.197 | -242.046 | 7.0119E-04 | 1063 | -150.045 | -184.224 | 1.3027E-03 |
| 883 | -137.947 | -240.043 | 8.1017E-04 | 1064 | -148.592 | -184.252 | 1.2339E-03 |
| 884 | -136.483 | -240.069 | 7.9967E-04 | 1065 | -147.139 | -184.279 | 1.0938E-03 |
| 885 | -135.020 | -240.094 | 7.7379E-04 | 1066 | -145.686 | -184.307 | 1.0103E-03 |
| 886 | -133.556 | -240.119 | 7.5796E-04 | 1067 | -144.233 | -184.334 | 1.0087E-03 |
| 887 | -132.093 | -240.144 | 7.6381E-04 | 1068 | -161.630 | -182.138 | 1.5463E-03 |
| 888 | -130.629 | -240.169 | 7.1455E-04 | 1069 | -160.178 | -182.169 | 1.5207E-03 |
| 889 | -129.166 | -240.193 | 7.3367E-04 | 1070 | -158.725 | -182.198 | 1.5000E-03 |
| 890 | -137.914 | -238.190 | 8.2630E-04 | 1071 | -157.272 | -182.228 | 1.4758E-03 |
| 891 | -136.451 | -238.216 | 8.1047E-04 | 1072 | -155.820 | -182.257 | 1.4584E-03 |
| 892 | -134.988 | -238.241 | 7.9362E-04 | 1073 | -154.367 | -182.286 | 1.4527E-03 |
| 893 | -133.525 | -238.266 | 7.8476E-04 | 1074 | -152.914 | -182.315 | 1.4331E-03 |
| 894 | -132.062 | -238.291 | 7.2596E-04 | 1075 | -151.462 | -182.343 | 1.3931E-03 |
| 895 | -130.599 | -238.316 | 7.3272E-04 | 1076 | -150.009 | -182.372 | 1.2255E-03 |
| 896 | -137.882 | -236.337 | 8.4773E-04 | 1077 | -148.556 | -182.399 | 1.1641E-03 |
| 897 | -136.419 | -236.363 | 8.3652E-04 | 1078 | -147.104 | -182.427 | 1.0673E-03 |
| 898 | -134.956 | -236.388 | 8.1471E-04 | 1079 | -145.651 | -182.454 | 1.0721E-03 |
| 899 | -133.493 | -236.413 | 7.4199E-04 | 1080 | -161.592 | -180.286 | 1.5684E-03 |
| 900 | -132.030 | -236.438 | 7.6441E-04 | 1081 | -160.139 | -180.316 | 1.5468E-03 |
| 901 | -137.849 | -234.485 | 8.6451E-04 | 1082 | -158.687 | -180.346 | 1.5298E-03 |
| 902 | -136.386 | -234.510 | 8.5311E-04 | 1083 | -157.235 | -180.376 | 1.5121E-03 |
| 903 | -134.924 | -234.536 | 8.0797E-04 | 1084 | -155.783 | -180.405 | 1.4969E-03 |
| 904 | -133.462 | -234.561 | 7.7891E-04 | 1085 | -154.330 | -180.434 | 1.4689E-03 |
| 905 | -137.816 | -232.632 | 8.8706E-04 | 1086 | -152.878 | -180.463 | 1.4159E-03 |
| 906 | -136.354 | -232.657 | 8.7548E-04 | 1087 | -151.426 | -180.491 | 1.2731E-03 |
| 907 | -134.892 | -232.683 | 7.9209E-04 | 1088 | -149.973 | -180.519 | 1.2351E-03 |
| 908 | -139.245 | -230.753 | 9.1510E-04 | 1089 | -148.521 | -180.547 | 1.1400E-03 |
| 909 | -137.784 | -230.779 | 9.1393E-04 | 1090 | -147.068 | -180.575 | 1.0861E-03 |
| 910 | -136.322 | -230.805 | 8.2910E-04 | 1091 | -145.616 | -180.602 | 1.0914E-03 |
| 911 | -134.860 | -230.830 | 8.3360E-04 | 1092 | -161.553 | -178.434 | 1.6034E-03 |
| 912 | -139.212 | -228.900 | 9.3850E-04 | 1093 | -160.101 | -178.464 | 1.5827E-03 |
| 913 | -137.751 | -228.926 | 9.3643E-04 | 1094 | -158.649 | -178.494 | 1.5616E-03 |
| 914 | -136.290 | -228.952 | 8.4887E-04 | 1095 | -157.197 | -178.523 | 1.5395E-03 |
| 915 | -134.828 | -228.977 | 8.7723E-04 | 1096 | -155.745 | -178.553 | 1.5057E-03 |
| 916 | -140.640 | -227.021 | 9.5537E-04 | 1097 | -154.293 | -178.582 | 1.4678E-03 |
| 917 | -139.179 | -227.048 | 9.6199E-04 | 1098 | -152.841 | -178.610 | 1.4166E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 918 | -137.718 | -227.073 | 9.1294E-04 | 1099 | -151.389 | -178.639 | 1.3278E-03 |
| 919 | -136.257 | -227.099 | 8.9250E-04 | 1100 | -149.937 | -178.667 | 1.1680E-03 |
| 920 | -140.607 | -225.169 | 9.7958E-04 | 1101 | -148.485 | -178.695 | 1.1427E-03 |
| 921 | -139.146 | -225.195 | 9.7527E-04 | 1102 | -147.033 | -178.723 | 1.3079E-03 |
| 922 | -137.686 | -225.221 | 9.2382E-04 | 1103 | -145.581 | -178.750 | 1.1979E-03 |
| 923 | -136.225 | -225.246 | 9.3460E-04 | 1104 | -164.418 | -176.521 | 1.6966E-03 |
| 924 | -140.574 | -223.316 | 1.0003E-03 | 1105 | -162.966 | -176.552 | 1.6697E-03 |
| 925 | -139.113 | -223.342 | 9.4474E-04 | 1106 | -161.515 | -176.582 | 1.6445E-03 |
| 926 | -137.653 | -223.368 | 9.2114E-04 | 1107 | -160.063 | -176.612 | 1.6162E-03 |
| 927 | -136.193 | -223.394 | 9.4076E-04 | 1108 | -158.611 | -176.642 | 1.5720E-03 |
| 928 | -143.460 | -221.410 | 1.0044E-03 | 1109 | -157.160 | -176.671 | 1.5027E-03 |
| 929 | -142.000 | -221.437 | 1.0159E-03 | 1110 | -155.708 | -176.701 | 1.5142E-03 |
| 930 | -140.540 | -221.463 | 9.9768E-04 | 1111 | -154.257 | -176.730 | 1.4570E-03 |
| 931 | -139.080 | -221.489 | 9.3140E-04 | 1112 | -152.805 | -176.758 | 1.3672E-03 |
| 932 | -137.620 | -221.515 | 9.2762E-04 | 1113 | -151.353 | -176.787 | 1.2505E-03 |
| 933 | -146.346 | -219.503 | 1.0104E-03 | 1114 | -149.902 | -176.815 | 1.1750E-03 |
| 934 | -144.886 | -219.531 | 1.0217E-03 | 1115 | -148.450 | -176.843 | 1.2465E-03 |
| 935 | -143.426 | -219.558 | 1.0307E-03 | 1116 | -146.998 | -176.870 | 1.2271E-03 |
| 936 | -141.967 | -219.584 | 1.0321E-03 | 1117 | -164.379 | -174.669 | 1.7435E-03 |
| 937 | -140.507 | -219.611 | 9.6893E-04 | 1118 | -162.927 | -174.699 | 1.7160E-03 |
| 938 | -139.047 | -219.637 | 9.4143E-04 | 1119 | -161.476 | -174.730 | 1.6868E-03 |
| 939 | -137.588 | -219.663 | 9.2314E-04 | 1120 | -160.025 | -174.760 | 1.6549E-03 |
| 940 | -146.311 | -217.651 | 1.0350E-03 | 1121 | -158.574 | -174.790 | 1.6190E-03 |
| 941 | -144.851 | -217.678 | 1.0430E-03 | 1122 | -157.122 | -174.819 | 1.5734E-03 |
| 942 | -143.392 | -217.705 | 1.0506E-03 | 1123 | -155.671 | -174.848 | 1.5402E-03 |
| 943 | -141.933 | -217.732 | 1.0348E-03 | 1124 | -154.220 | -174.877 | 1.4746E-03 |
| 944 | -140.474 | -217.758 | 9.5694E-04 | 1125 | -152.768 | -174.906 | 1.2916E-03 |
| 945 | -139.014 | -217.784 | 9.7306E-04 | 1126 | -151.317 | -174.934 | 1.2757E-03 |
| 946 | -137.555 | -217.810 | 9.2577E-04 | 1127 | -149.866 | -174.963 | 1.2487E-03 |
| 947 | -146.276 | -215.798 | 1.0520E-03 | 1128 | -148.415 | -174.991 | 1.3439E-03 |
| 948 | -144.817 | -215.825 | 1.0656E-03 | 1129 | -167.241 | -172.755 | 1.8560E-03 |
| 949 | -143.358 | -215.852 | 1.0237E-03 | 1130 | -165.790 | -172.786 | 1.8217E-03 |
| 950 | -141.899 | -215.879 | 9.7752E-04 | 1131 | -164.339 | -172.817 | 1.7865E-03 |
| 951 | -146.241 | -213.946 | 1.0847E-03 | 1132 | -162.888 | -172.847 | 1.7551E-03 |
| 952 | -144.783 | -213.973 | 1.0863E-03 | 1133 | -161.438 | -172.878 | 1.7230E-03 |
| 953 | -143.324 | -214.000 | 1.0655E-03 | 1134 | -159.987 | -172.908 | 1.6786E-03 |
| 954 | -146.207 | -212.093 | 1.0745E-03 | 1135 | -158.536 | -172.937 | 1.6218E-03 |
| 955 | -144.748 | -212.120 | 1.0934E-03 | 1136 | -157.085 | -172.967 | 1.5338E-03 |
| 956 | -143.290 | -212.147 | 1.0739E-03 | 1137 | -155.634 | -172.996 | 1.4395E-03 |
| 957 | -141.832 | -212.174 | 1.0395E-03 | 1138 | -154.183 | -173.025 | 1.3587E-03 |
| 958 | -146.172 | -210.241 | 1.1229E-03 | 1139 | -152.732 | -173.054 | 1.4610E-03 |
| 959 | -144.714 | -210.268 | 1.1135E-03 | 1140 | -151.281 | -173.082 | 1.4164E-03 |
| 960 | -143.256 | -210.295 | 1.0775E-03 | 1141 | -149.830 | -173.110 | 1.4024E-03 |
| 961 | -141.798 | -210.321 | 1.0652E-03 | 1142 | -148.379 | -173.138 | 1.3007E-03 |
| 962 | -146.137 | -208.388 | 1.1314E-03 | 1143 | -146.928 | -173.166 | 1.2447E-03 |
| 963 | -144.680 | -208.415 | 1.1238E-03 | 1144 | -165.751 | -170.934 | 1.8675E-03 |
| 964 | -143.222 | -208.442 | 1.1037E-03 | 1145 | -164.300 | -170.965 | 1.8297E-03 |
| 965 | -141.764 | -208.469 | 1.0590E-03 | 1146 | -162.850 | -170.995 | 1.7846E-03 |
| 966 | -140.307 | -208.495 | 9.9531E-04 | 1147 | -161.399 | -171.025 | 1.7321E-03 |
| 967 | -146.102 | -206.535 | 1.1394E-03 | 1148 | -159.948 | -171.056 | 1.6719E-03 |
| 968 | -144.645 | -206.563 | 1.1253E-03 | 1149 | -158.498 | -171.085 | 1.5605E-03 |
| 969 | -143.188 | -206.590 | 1.1068E-03 | 1150 | -157.047 | -171.115 | 1.5355E-03 |
| 970 | -141.731 | -206.616 | 1.0436E-03 | 1151 | -155.597 | -171.144 | 1.5678E-03 |
| 971 | -146.068 | -204.683 | 1.1304E-03 | 1152 | -154.146 | -171.173 | 1.5011E-03 |
| 972 | -144.611 | -204.710 | 1.1243E-03 | 1153 | -152.696 | -171.202 | 1.4709E-03 |
| 973 | -143.154 | -204.737 | 1.0988E-03 | 1154 | -151.245 | -171.230 | 1.3846E-03 |
| 974 | -141.697 | -204.764 | 1.0595E-03 | 1155 | -149.794 | -171.258 | 1.4488E-03 |
| 975 | -148.946 | -202.775 | 1.1995E-03 | 1156 | -148.344 | -171.286 | 1.1765E-03 |
| 976 | -147.489 | -202.803 | 1.1683E-03 | 1157 | -146.893 | -171.314 | 1.1290E-03 |
| 977 | -146.033 | -202.831 | 1.1504E-03 | 1158 | -162.811 | -169.143 | 1.8082E-03 |
| 978 | -144.576 | -202.858 | 1.1111E-03 | 1159 | -161.360 | -169.173 | 1.7315E-03 |
| 979 | -143.120 | -202.885 | 1.1059E-03 | 1160 | -159.910 | -169.203 | 1.6892E-03 |
| 980 | -141.663 | -202.911 | 1.0221E-03 | 1161 | -158.460 | -169.233 | 1.6592E-03 |
| 981 | -148.910 | -200.923 | 1.1937E-03 | 1162 | -157.010 | -169.263 | 1.6206E-03 |
| 982 | -147.454 | -200.951 | 1.1270E-03 | 1163 | -155.560 | -169.292 | 1.5364E-03 |
| 983 | -145.998 | -200.978 | 1.1580E-03 | 1164 | -154.109 | -169.321 | 1.5085E-03 |
| 984 | -144.542 | -201.005 | 1.0834E-03 | 1165 | -152.659 | -169.350 | 1.4811E-03 |
| 985 | -143.086 | -201.032 | 1.0556E-03 | 1166 | -151.209 | -169.378 | 1.3799E-03 |
| 986 | -141.630 | -201.059 | 9.7376E-04 | 1167 | -149.759 | -169.406 | 1.4014E-03 |
| 987 | -148.875 | -199.071 | 1.1140E-03 | 1168 | -148.308 | -169.434 | 1.3872E-03 |
| 988 | -147.419 | -199.098 | 1.1895E-03 | 1169 | -164.222 | -167.260 | 1.8925E-03 |
| 989 | -145.963 | -199.126 | 1.0856E-03 | 1170 | -162.772 | -167.291 | 1.8303E-03 |
| 990 | -144.508 | -199.153 | 1.1227E-03 | 1171 | -161.322 | -167.321 | 1.7822E-03 |
| 991 | -151.751 | -197.162 | 1.2831E-03 | 1172 | -159.872 | -167.351 | 1.7366E-03 |
| 992 | -150.295 | -197.190 | 1.2132E-03 | 1173 | -158.422 | -167.381 | 1.6746E-03 |
| 993 | -148.840 | -197.218 | 1.1053E-03 | 1174 | -156.972 | -167.411 | 1.6275E-03 |
| 994 | -147.384 | -197.246 | 1.0708E-03 | 1175 | -155.522 | -167.440 | 1.5850E-03 |
| 995 | -145.929 | -197.273 | 1.1009E-03 | 1176 | -154.072 | -167.469 | 1.5484E-03 |
| 996 | -144.473 | -197.300 | 9.5970E-04 | 1177 | -152.623 | -167.497 | 1.5320E-03 |
| 997 | -151.714 | -195.310 | 1.2664E-03 | 1178 | -164.182 | -165.408 | 1.9230E-03 |
| 998 | -150.259 | -195.338 | 1.1577E-03 | 1179 | -162.733 | -165.439 | 1.8472E-03 |
| 999 | -148.804 | -195.366 | 1.2347E-03 | 1180 | -161.283 | -165.469 | 1.7631E-03 |
| 1000 | -147.349 | -195.393 | 1.2089E-03 | 1181 | -159.834 | -165.499 | 1.7220E-03 |
| 1001 | -145.894 | -195.421 | 1.1278E-03 | 1182 | -158.384 | -165.529 | 1.6722E-03 |
| 1002 | -144.439 | -195.448 | 1.0233E-03 | 1183 | -156.935 | -165.558 | 1.4961E-03 |
| 1003 | -153.133 | -193.429 | 1.3045E-03 | 1184 | -155.485 | -165.588 | 1.4844E-03 |
| 1004 | -151.678 | -193.457 | 1.1384E-03 | 1185 | -154.036 | -165.617 | 1.3395E-03 |
| 1005 | -150.224 | -193.485 | 1.2027E-03 | 1186 | -152.586 | -165.645 | 1.3268E-03 |
| 1006 | -148.769 | -193.513 | 1.2444E-03 | 1187 | -164.143 | -163.556 | 1.9448E-03 |
| 1007 | -147.314 | -193.541 | 1.1558E-03 | 1188 | -162.694 | -163.587 | 1.8695E-03 |
| 1008 | -145.859 | -193.568 | 1.1023E-03 | 1189 | -161.245 | -163.617 | 1.7738E-03 |
| 1009 | -144.404 | -193.596 | 9.9272E-04 | 1190 | -159.796 | -163.647 | 1.6706E-03 |
| 1010 | -156.005 | -191.519 | 1.3976E-03 | 1191 | -158.346 | -163.677 | 1.6277E-03 |
| 1011 | -154.551 | -191.548 | 1.3594E-03 | 1192 | -156.897 | -163.706 | 1.5434E-03 |
| 1012 | -153.097 | -191.576 | 1.2339E-03 | 1193 | -155.448 | -163.736 | 1.5675E-03 |
| 1013 | -151.642 | -191.605 | 1.1657E-03 | 1194 | -153.999 | -163.765 | 1.4519E-03 |
| 1014 | -150.188 | -191.633 | 1.1346E-03 | 1195 | -152.550 | -163.793 | 1.3659E-03 |
| 1015 | -148.733 | -191.661 | 1.2146E-03 | 1196 | -159.757 | -161.795 | 1.7177E-03 |
| | | | | 1197 | -158.309 | -161.825 | 1.6790E-03 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1187 | -164.143 | -163.556 | DISCRETE | 2.1223E-01 (2001,304,2200) | RANK 1 | 1 | HOUR |
| 1187 | -164.143 | -163.556 | DISCRETE | 1.8375E-01 (2001,317,2100) | RANK 2 | 1 | HOUR |
| 1178 | -164.182 | -165.408 | DISCRETE | 1.7713E-01 (2001,287,2200) | RANK 3 | 1 | HOUR |
| 1187 | -164.143 | -163.556 | DISCRETE | 1.6547E-01 (2001,145,0300) | RANK 4 | 1 | HOUR |
| 1187 | -164.143 | -163.556 | DISCRETE | 1.9448E-03 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Grand Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                            ! NDRECP =  1197*0, 791*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                          (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
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*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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  CALPOST.LST         8        C:\SPC_FF\CALPOST\2001\2001_GRAND_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_GC.DAT

*********************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*********************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
   1198     -355.887  -464.319   5.4210E-03 (2001,016,0900)  4.6237E-03 (2001,016,1000)  4.2759E-03 (2001,016,0800)  3.9485E-03 (2001,018,1000)
   1199     -353.629  -464.418   5.1397E-03 (2001,016,0900)  4.3694E-03 (2001,016,1000)  4.0729E-03 (2001,016,0800)  4.0073E-03 (2001,018,1000)
   1200     -351.371  -464.517   4.8479E-03 (2001,016,0900)  4.1027E-03 (2001,016,1000)  4.0129E-03 (2001,018,1000)  3.8550E-03 (2001,016,0800)
   1201     -362.536  -461.234   6.6103E-03 (2001,016,0900)  5.6193E-03 (2001,016,1000)  5.2436E-03 (2001,016,0800)  4.1008E-03 (2001,018,0200)
   1202     -360.279  -461.336   6.3689E-03 (2001,016,0900)  5.3945E-03 (2001,016,1000)  5.0761E-03 (2001,016,0800)  3.9447E-03 (2001,018,1000)
   1203     -358.021  -461.436   6.1046E-03 (2001,016,0900)  5.1522E-03 (2001,016,1000)  4.8869E-03 (2001,016,0800)  4.0752E-03 (2001,018,1000)
   1204     -355.764  -461.536   5.8200E-03 (2001,016,0900)  4.8906E-03 (2001,016,1000)  4.6818E-03 (2001,016,0800)  4.2378E-03 (2001,018,1000)
   1205     -353.507  -461.636   5.5144E-03 (2001,016,0900)  4.6201E-03 (2001,016,1000)  4.4615E-03 (2001,016,0800)  4.3570E-03 (2001,018,1000)
   1206     -351.249  -461.735   5.1974E-03 (2001,016,0900)  4.3388E-03 (2001,016,1000)  4.2288E-03 (2001,016,0800)  4.2197E-03 (2001,018,1000)
   1207     -348.992  -461.833   4.8731E-03 (2001,016,0900)  4.1717E-03 (2001,018,1000)  4.0534E-03 (2001,016,1000)  3.9838E-03 (2001,016,0800)
   1208     -366.923  -458.247   7.4898E-03 (2001,016,0900)  6.3329E-03 (2001,016,1000)  6.0056E-03 (2001,016,0800)  4.5938E-03 (2001,016,1100)
   1209     -364.667  -458.350   7.2964E-03 (2001,016,0900)  6.1486E-03 (2001,016,1000)  5.8777E-03 (2001,016,0800)  5.4142E-03 (2001,018,0200)
   1210     -362.410  -458.452   7.0703E-03 (2001,016,0900)  5.9359E-03 (2001,016,1000)  5.7249E-03 (2001,016,0800)  4.3138E-03 (2001,018,0200)
   1211     -360.154  -458.553   6.8147E-03 (2001,016,0900)  5.7009E-03 (2001,016,1000)  5.5456E-03 (2001,016,0800)  5.0296E-03 (2001,018,0200)
   1212     -357.897  -458.654   6.5308E-03 (2001,016,0900)  5.4427E-03 (2001,016,1000)  5.3417E-03 (2001,016,0800)  4.7770E-03 (2001,018,0200)
   1213     -355.641  -458.754   6.2265E-03 (2001,016,0900)  5.1688E-03 (2001,016,1000)  5.1196E-03 (2001,016,0800)  4.5029E-03 (2001,018,0200)
   1214     -353.384  -458.853   5.9016E-03 (2001,016,0900)  4.8804E-03 (2001,016,1000)  4.8802E-03 (2001,016,0800)  4.4624E-03 (2001,018,1000)
   1215     -351.128  -458.952   5.5614E-03 (2001,016,0900)  4.6247E-03 (2001,016,0800)  4.5829E-03 (2001,016,1000)  4.5368E-03 (2001,018,1000)
   1216     -348.871  -459.050   5.2129E-03 (2001,016,0900)  4.5082E-03 (2001,018,1000)  4.4142E-03 (2001,018,0900)  4.3588E-03 (2001,016,0800)
   1217     -346.614  -459.148   4.8548E-03 (2001,016,0900)  4.1900E-03 (2001,018,1000)  4.1851E-03 (2001,018,0900)  4.0824E-03 (2001,016,0800)
   1218     -373.563  -455.154   8.3514E-03 (2001,016,0900)  7.0538E-03 (2001,016,1000)  6.7327E-03 (2001,016,0800)  5.1396E-03 (2001,016,1100)
   1219     -366.796  -455.465   7.9826E-03 (2001,016,0900)  6.6782E-03 (2001,016,1000)  6.5278E-03 (2001,016,0800)  4.8235E-03 (2001,016,1100)
   1220     -364.541  -455.568   7.7804E-03 (2001,016,0900)  6.4859E-03 (2001,016,1000)  6.3962E-03 (2001,016,0800)  5.6364E-03 (2001,018,0200)
   1221     -362.285  -455.670   7.5425E-03 (2001,016,0900)  6.2644E-03 (2001,016,1000)  6.2327E-03 (2001,016,0800)  5.4734E-03 (2001,018,0200)
   1222     -360.029  -455.771   7.2720E-03 (2001,016,0900)  6.0413E-03 (2001,016,0800)  6.0170E-03 (2001,016,1000)  5.2667E-03 (2001,018,0200)
   1223     -357.774  -455.872   6.9725E-03 (2001,016,0900)  5.8244E-03 (2001,016,0800)  5.7470E-03 (2001,016,1000)  5.0209E-03 (2001,018,0200)
   1224     -355.518  -455.972   6.6480E-03 (2001,016,0900)  5.5847E-03 (2001,016,0800)  5.4573E-03 (2001,016,1000)  4.7638E-03 (2001,018,1000)
   1225     -353.262  -456.071   6.3020E-03 (2001,016,0900)  5.3235E-03 (2001,016,0800)  5.1515E-03 (2001,016,1000)  4.7045E-03 (2001,018,1000)
   1226     -351.006  -456.170   5.9391E-03 (2001,016,0900)  5.0457E-03 (2001,016,0800)  4.8339E-03 (2001,016,1000)  4.6323E-03 (2001,018,1000)
   1227     -348.750  -456.268   5.5636E-03 (2001,016,0900)  4.7560E-03 (2001,016,0800)  4.5087E-03 (2001,016,1000)  4.4696E-03 (2001,018,1000)
   1228     -346.494  -456.366   5.1819E-03 (2001,016,0900)  4.4569E-03 (2001,016,0800)  4.4062E-03 (2001,018,0900)  4.2744E-03 (2001,018,1000)
   1229     -375.689  -452.267   8.8914E-03 (2001,016,0900)  7.4659E-03 (2001,016,1000)  7.2694E-03 (2001,016,0800)  5.4309E-03 (2001,016,1100)
   1230     -373.434  -452.372   8.8603E-03 (2001,016,0900)  7.4151E-03 (2001,016,1000)  7.2784E-03 (2001,016,0800)  5.3832E-03 (2001,016,1100)
   1231     -371.179  -452.476   8.7814E-03 (2001,016,0900)  7.3241E-03 (2001,016,1000)  7.2474E-03 (2001,016,0800)  5.3029E-03 (2001,016,1100)
   1232     -368.924  -452.580   8.6599E-03 (2001,016,0900)  7.1978E-03 (2001,016,1000)  7.1797E-03 (2001,016,0800)  5.9621E-03 (2001,018,0200)
   1233     -366.670  -452.683   8.4924E-03 (2001,016,0900)  7.0794E-03 (2001,016,0800)  7.0340E-03 (2001,016,1000)  5.9110E-03 (2001,018,0200)
   1234     -364.415  -452.786   8.2829E-03 (2001,016,0900)  6.9427E-03 (2001,016,0800)  6.8350E-03 (2001,016,1000)  4.9024E-03 (2001,016,1100)
   1235     -362.160  -452.888   8.0335E-03 (2001,016,0900)  6.7708E-03 (2001,016,0800)  6.6046E-03 (2001,016,1000)  5.6541E-03 (2001,018,0200)
   1236     -359.905  -452.989   7.7476E-03 (2001,016,0900)  6.5675E-03 (2001,016,0800)  6.3440E-03 (2001,016,1000)  5.4478E-03 (2001,018,0200)
   1237     -357.650  -453.089   7.4288E-03 (2001,016,0900)  6.3354E-03 (2001,016,0800)  6.0577E-03 (2001,016,1000)  5.2236E-03 (2001,018,0200)
   1238     -353.140  -453.289   6.7159E-03 (2001,016,0900)  5.7963E-03 (2001,016,0800)  5.4299E-03 (2001,016,1000)  4.8349E-03 (2001,018,1000)
   1239     -350.885  -453.388   6.3274E-03 (2001,016,0900)  5.4963E-03 (2001,016,0800)  5.0940E-03 (2001,016,1000)  4.8410E-03 (2001,018,1000)
   1240     -348.630  -453.486   5.9230E-03 (2001,016,0900)  5.1824E-03 (2001,016,0800)  4.7665E-03 (2001,018,0900)  4.7490E-03 (2001,016,1000)
   1241     -346.375  -453.583   5.5134E-03 (2001,016,0900)  5.1346E-03 (2001,018,0900)  4.8548E-03 (2001,016,0800)  4.7640E-03 (2001,018,1000)
   1242     -377.813  -449.379   9.3704E-03 (2001,016,0900)  7.8259E-03 (2001,016,1000)  7.7690E-03 (2001,016,0800)  5.6931E-03 (2001,016,1100)
   1243     -375.559  -449.485   9.3948E-03 (2001,016,0900)  7.8285E-03 (2001,016,0800)  7.8204E-03 (2001,016,1000)  5.6758E-03 (2001,016,1100)
   1244     -373.305  -449.590   9.3719E-03 (2001,016,0900)  7.8452E-03 (2001,016,0800)  7.7806E-03 (2001,016,1000)  5.6251E-03 (2001,016,1100)
   1245     -371.051  -449.694   9.3000E-03 (2001,016,0900)  7.8238E-03 (2001,016,0800)  7.6930E-03 (2001,016,1000)  5.5448E-03 (2001,016,1100)
   1246     -368.797  -449.798   9.1781E-03 (2001,016,0900)  7.7634E-03 (2001,016,0800)  7.5641E-03 (2001,016,1000)  6.0417E-03 (2001,018,0200)
   1247     -366.543  -449.901   9.0064E-03 (2001,016,0900)  7.6605E-03 (2001,016,0800)  7.3941E-03 (2001,016,1000)  6.0044E-03 (2001,018,0200)
   1248     -364.289  -450.004   8.7905E-03 (2001,016,0900)  7.5178E-03 (2001,016,0800)  7.1907E-03 (2001,016,1000)  5.1400E-03 (2001,016,1100)
   1249     -362.034  -450.105   8.5303E-03 (2001,016,0900)  7.3378E-03 (2001,016,0800)  6.9487E-03 (2001,016,1000)  5.4748E-03 (2001,018,0200)
   1250     -359.780  -450.207   8.2307E-03 (2001,016,0900)  7.1227E-03 (2001,016,0800)  6.6785E-03 (2001,016,1000)  5.5790E-03 (2001,018,0200)
   1251     -357.526  -450.307   7.8943E-03 (2001,016,0900)  6.8753E-03 (2001,016,0800)  6.3793E-03 (2001,016,1000)  5.3523E-03 (2001,018,0200)
   1252     -353.018  -450.507   7.1357E-03 (2001,016,0900)  6.2969E-03 (2001,016,0800)  5.7191E-03 (2001,016,1000)  5.1695E-03 (2001,018,1000)
   1253     -350.763  -450.605   6.7202E-03 (2001,016,0900)  5.9736E-03 (2001,016,0800)  5.3629E-03 (2001,016,1000)  5.0501E-03 (2001,018,1000)
   1254     -348.509  -450.703   6.2920E-03 (2001,016,0900)  5.6331E-03 (2001,016,0800)  5.0209E-03 (2001,018,0900)  5.0002E-03 (2001,016,1000)
   1255     -346.255  -450.801   5.8555E-03 (2001,016,0900)  5.3386E-03 (2001,018,0900)  5.2799E-03 (2001,016,0800)  4.9747E-03 (2001,039,1000)
   1256     -344.000  -450.898   5.4163E-03 (2001,016,0900)  5.0398E-03 (2001,039,1000)  4.9888E-03 (2001,018,0900)  4.9119E-03 (2001,016,0800)
   1257     -379.935  -446.491   9.7733E-03 (2001,016,0900)  8.2173E-03 (2001,016,0800)  8.1309E-03 (2001,016,1000)  5.9074E-03 (2001,016,1100)
   1258     -377.682  -446.597   9.8657E-03 (2001,016,0900)  8.3298E-03 (2001,016,0800)  8.1806E-03 (2001,016,1000)  5.9302E-03 (2001,016,1100)
   1259     -375.429  -446.703   9.9031E-03 (2001,016,0900)  8.4005E-03 (2001,016,0800)  8.1895E-03 (2001,016,1000)  5.9189E-03 (2001,016,1100)
   1260     -373.175  -446.808   9.8889E-03 (2001,016,0900)  8.4363E-03 (2001,016,0800)  8.1492E-03 (2001,016,1000)  5.9334E-03 (2001,018,0200)
   1261     -370.922  -446.912   9.8213E-03 (2001,016,0900)  8.4241E-03 (2001,016,0800)  8.0627E-03 (2001,016,1000)  6.0160E-03 (2001,018,0200)
   1262     -368.669  -447.016   9.6990E-03 (2001,016,0900)  8.3661E-03 (2001,016,0800)  7.9336E-03 (2001,016,1000)  6.0489E-03 (2001,018,0200)
   1263     -366.416  -447.119   9.5265E-03 (2001,016,0900)  8.2630E-03 (2001,016,0800)  7.7649E-03 (2001,016,1000)  6.0267E-03 (2001,018,0200)
   1264     -364.162  -447.222   9.3028E-03 (2001,016,0900)  8.1189E-03 (2001,016,0800)  7.5519E-03 (2001,016,1000)  5.9441E-03 (2001,018,0200)
   1265     -361.909  -447.323   9.0334E-03 (2001,016,0900)  7.9325E-03 (2001,016,0800)  7.3022E-03 (2001,016,1000)  5.8154E-03 (2001,018,0200)
   1266     -359.656  -447.425   8.7200E-03 (2001,016,0900)  7.7098E-03 (2001,016,0800)  7.0194E-03 (2001,016,1000)  5.6445E-03 (2001,018,0200)
   1267     -350.642  -447.823   7.1278E-03 (2001,016,0900)  6.4792E-03 (2001,016,0800)  5.6419E-03 (2001,016,1000)  5.2535E-03 (2001,039,1000)
   1268     -348.388  -447.921   6.6732E-03 (2001,016,0900)  6.1055E-03 (2001,016,0800)  5.3659E-03 (2001,039,1000)  5.2611E-03 (2001,016,1000)
   1269     -346.135  -448.019   6.2087E-03 (2001,016,0900)  5.7227E-03 (2001,016,0800)  5.4530E-03 (2001,039,1000)  5.2947E-03 (2001,039,0900)
   1270     -379.803  -443.709   1.0246E-02 (2001,016,0900)  8.7686E-03 (2001,016,0800)  8.4689E-03 (2001,016,1000)  6.1371E-03 (2001,016,1100)
   1271     -377.551  -443.816   1.0356E-02 (2001,016,0900)  8.9025E-03 (2001,016,0800)  8.5364E-03 (2001,016,1000)  6.1665E-03 (2001,016,1100)
   1272     -375.299  -443.921   1.0411E-02 (2001,016,0900)  8.9972E-03 (2001,016,0800)  8.5495E-03 (2001,016,1000)  6.1595E-03 (2001,016,1100)
   1273     -373.046  -444.026   1.0408E-02 (2001,016,0900)  9.0434E-03 (2001,016,0800)  8.5162E-03 (2001,016,1000)  6.1181E-03 (2001,016,1100)
   1274     -370.794  -444.131   1.0348E-02 (2001,016,0900)  9.0392E-03 (2001,016,0800)  8.4394E-03 (2001,016,1000)  6.0912E-03 (2001,016,0700)
   1275     -368.541  -444.234   1.0230E-02 (2001,016,0900)  8.9943E-03 (2001,016,0800)  8.3117E-03 (2001,016,1000)  6.0854E-03 (2001,016,0700)
   1276     -366.289  -444.337   1.0056E-02 (2001,016,0900)  8.8948E-03 (2001,016,0800)  8.1386E-03 (2001,016,1000)  6.0441E-03 (2001,016,0700)
   1277     -364.036  -444.440   9.8279E-03 (2001,016,0900)  8.7477E-03 (2001,016,0800)  7.9225E-03 (2001,016,1000)  5.9740E-03 (2001,016,0700)
   1278     -355.026  -444.843   8.4475E-03 (2001,016,0900)  7.7257E-03 (2001,016,0800)  6.7012E-03 (2001,016,1000)  5.4423E-03 (2001,039,1000)
   1279     -350.520  -445.041   7.5459E-03 (2001,016,0900)  7.0050E-03 (2001,016,0800)  5.9354E-03 (2001,016,1000)  5.7484E-03 (2001,039,1000)
   1280     -348.268  -445.139   7.0652E-03 (2001,016,0900)  6.6084E-03 (2001,016,0800)  5.8586E-03 (2001,039,1000)  5.7585E-03 (2001,039,0900)
   1281     -346.015  -445.237   6.5688E-03 (2001,016,0900)  6.1939E-03 (2001,016,0800)  5.9379E-03 (2001,039,1000)  5.8963E-03 (2001,039,0900)
   1282     -381.923  -440.821   1.0523E-02 (2001,016,0900)  9.1226E-03 (2001,016,0800)  8.6811E-03 (2001,016,1000)  6.2868E-03 (2001,016,1100)
   1283     -379.672  -440.928   1.0708E-02 (2001,016,0900)  9.3234E-03 (2001,016,0800)  8.8095E-03 (2001,016,1000)  6.3615E-03 (2001,016,1100)
   1284     -377.420  -441.034   1.0837E-02 (2001,016,0900)  9.4876E-03 (2001,016,0800)  8.8859E-03 (2001,016,1000)  6.4343E-03 (2001,016,0700)
   1285     -375.169  -441.140   1.0912E-02 (2001,016,0900)  9.5997E-03 (2001,016,0800)  8.9113E-03 (2001,016,1000)  6.5341E-03 (2001,016,0700)
   1286     -372.917  -441.245   1.0926E-02 (2001,016,0900)  9.6599E-03 (2001,016,0800)  8.8919E-03 (2001,016,1000)  6.6051E-03 (2001,016,0700)
   1287     -370.665  -441.349   1.0875E-02 (2001,016,0900)  9.6770E-03 (2001,016,0800)  8.8143E-03 (2001,016,1000)  6.6379E-03 (2001,016,0700)
   1288     -368.414  -441.453   1.0764E-02 (2001,016,0900)  9.6344E-03 (2001,016,0800)  8.6867E-03 (2001,016,1000)  6.6380E-03 (2001,016,0700)
   1289     -366.162  -441.556   1.0592E-02 (2001,016,0900)  9.5399E-03 (2001,016,0800)  8.5148E-03 (2001,016,1000)  6.6040E-03 (2001,016,0700)
   1290     -354.903  -442.061   8.9246E-03 (2001,016,0900)  8.3271E-03 (2001,016,0800)  7.0348E-03 (2001,016,1000)  5.9444E-03 (2001,039,1000)
   1291     -352.651  -442.161   8.4646E-03 (2001,016,0900)  7.9578E-03 (2001,016,0800)  6.6466E-03 (2001,016,1000)  6.1104E-03 (2001,039,1000)
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| 1391 | -381.394 | -429.696 | 1.2131E-02 (2001,016,0900) | 1.1184E-02 (2001,016,0800) | 9.8777E-03 (2001,016,1000) | 8.1135E-03 (2001,016,0700) |
| 1392 | -379.146 | -429.803 | 1.2432E-02 (2001,016,0900) | 1.1520E-02 (2001,016,0800) | 1.0090E-02 (2001,016,1000) | 8.3863E-03 (2001,016,0700) |
| 1393 | -376.897 | -429.909 | 1.2667E-02 (2001,016,0900) | 1.1805E-02 (2001,016,0800) | 1.0244E-02 (2001,016,1000) | 8.6283E-03 (2001,016,0700) |
| 1394 | -374.649 | -430.014 | 1.2835E-02 (2001,016,0900) | 1.2025E-02 (2001,016,0800) | 1.0340E-02 (2001,016,1000) | 8.8259E-03 (2001,016,0700) |
| 1395 | -367.903 | -430.327 | 1.2877E-02 (2001,016,0900) | 1.2298E-02 (2001,016,0800) | 1.0260E-02 (2001,016,1000) | 9.1647E-03 (2001,016,0700) |
| 1396 | -365.654 | -430.430 | 1.2732E-02 (2001,016,0900) | 1.2244E-02 (2001,016,0800) | 1.0107E-02 (2001,016,1000) | 9.1815E-03 (2001,016,0700) |
| 1397 | -358.908 | -430.734 | 1.1845E-02 (2001,016,0900) | 1.1648E-02 (2001,016,0800) | 9.2999E-03 (2001,016,1000) | 8.9061E-03 (2001,016,0700) |
| 1398 | -352.162 | -431.034 | 1.0456E-02 (2001,016,0800) | 1.0376E-02 (2001,016,0900) | 8.6908E-03 (2001,039,0900) | 8.1798E-03 (2001,016,0700) |
| 1399 | -349.913 | -431.132 | 9.9511E-03 (2001,016,0800) | 9.7909E-03 (2001,016,0900) | 8.9161E-03 (2001,039,0900) | 8.0742E-03 (2001,039,1000) |
| 1400 | -347.664 | -431.230 | 9.4050E-03 (2001,016,0800) | 9.1728E-03 (2001,016,0900) | 9.0896E-03 (2001,039,0900) | 8.1251E-03 (2001,039,1000) |
| 1401 | -248.691 | -434.910 | 7.1350E-03 (2001,032,0700) | 6.6775E-03 (2001,285,0400) | 6.2032E-03 (2001,285,0700) | 5.5861E-03 (2001,350,0500) |
| 1402 | -246.441 | -434.980 | 7.1747E-03 (2001,032,0700) | 6.4302E-03 (2001,285,0700) | 6.1133E-03 (2001,285,0400) | 5.8410E-03 (2001,285,0800) |
| 1403 | -244.191 | -435.049 | 7.1507E-03 (2001,032,0700) | 6.5770E-03 (2001,285,0700) | 6.2831E-03 (2001,285,0800) | 5.9781E-03 (2001,032,0600) |
| 1404 | -241.942 | -435.117 | 7.0622E-03 (2001,032,0700) | 6.6442E-03 (2001,285,0800) | 6.6365E-03 (2001,285,0700) | 6.1772E-03 (2001,032,0600) |
| 1405 | -239.692 | -435.184 | 6.9008E-03 (2001,285,0800) | 6.8991E-03 (2001,032,0700) | 6.5968E-03 (2001,285,0700) | 6.3409E-03 (2001,032,0600) |
| 1406 | -237.442 | -435.251 | 7.0379E-03 (2001,285,0800) | 6.6738E-03 (2001,032,0700) | 6.4583E-03 (2001,285,0700) | 6.4538E-03 (2001,032,0600) |
| 1407 | -235.192 | -435.318 | 7.0523E-03 (2001,285,0800) | 6.5021E-03 (2001,032,0600) | 6.3895E-03 (2001,032,0700) | 6.2241E-03 (2001,285,0700) |
| 1408 | -232.942 | -435.383 | 6.9404E-03 (2001,285,0800) | 6.5004E-03 (2001,032,0600) | 6.0565E-03 (2001,032,0700) | 5.9008E-03 (2001,285,0700) |
| 1409 | -230.692 | -435.448 | 6.4481E-03 (2001,285,0800) | 5.1613E-03 (2001,285,0700) | 4.5689E-03 (2001,032,0600) | 4.3789E-03 (2001,350,0400) |
| 1410 | -228.442 | -435.513 | 5.8637E-03 (2001,285,0800) | 4.3540E-03 (2001,285,0700) | 4.1006E-03 (2001,350,0300) | 4.0054E-03 (2001,350,0400) |
| 1411 | -226.192 | -435.577 | 5.5164E-03 (2001,285,0800) | 4.1053E-03 (2001,019,0500) | 4.0365E-03 (2001,350,0300) | 3.9909E-03 (2001,285,0700) |

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|---|---|---|---|---|---|---|---|
| 1412 | -223.941 | -435.640 | 4.9390E-03 (2001,285,0800) | 3.9053E-03 (2001,350,0300) | 3.8553E-03 (2001,019,0500) | 3.8134E-03 (2001,019,0400) |
| 1413 | -221.691 | -435.702 | 4.5734E-03 (2001,285,0800) | 4.0471E-03 (2001,019,0500) | 3.8803E-03 (2001,019,0400) | 3.8605E-03 (2001,031,0800) |
| 1414 | -219.441 | -435.764 | 3.9627E-03 (2001,285,0800) | 3.8888E-03 (2001,031,0800) | 3.7276E-03 (2001,019,0500) | 3.6949E-03 (2001,019,0400) |
| 1415 | -217.191 | -435.825 | 4.0533E-03 (2001,031,0800) | 3.8177E-03 (2001,019,0500) | 3.7099E-03 (2001,350,0200) | 3.6906E-03 (2001,019,0400) |
| 1416 | -214.941 | -435.886 | 3.8999E-03 (2001,031,0800) | 3.4910E-03 (2001,031,0900) | 3.4567E-03 (2001,350,0200) | 3.4174E-03 (2001,019,0400) |
| 1417 | -212.691 | -435.946 | 4.0693E-03 (2001,031,0800) | 3.5362E-03 (2001,350,0200) | 3.4853E-03 (2001,350,0100) | 3.4819E-03 (2001,031,0900) |
| 1418 | -210.441 | -436.005 | 4.2662E-03 (2001,031,0800) | 3.9543E-03 (2001,350,0100) | 3.7512E-03 (2001,031,0700) | 3.7449E-03 (2001,359,0700) |
| 1419 | -208.190 | -436.064 | 4.3110E-03 (2001,031,0800) | 4.2715E-03 (2001,359,0700) | 4.2176E-03 (2001,359,0800) | 4.1911E-03 (2001,350,0100) |
| 1420 | -205.940 | -436.122 | 4.2819E-03 (2001,350,0100) | 4.2466E-03 (2001,031,0800) | 4.2082E-03 (2001,359,0700) | 4.1197E-03 (2001,359,0800) |
| 1421 | -203.690 | -436.179 | 4.3289E-03 (2001,350,0100) | 4.1956E-03 (2001,359,0700) | 4.1480E-03 (2001,031,0800) | 4.0855E-03 (2001,359,0800) |
| 1422 | -401.489 | -425.927 | 9.9139E-03 (2001,358,0700) | 9.0664E-03 (2001,358,0600) | 7.6533E-03 (2001,016,0900) | 7.1360E-03 (2001,358,0800) |
| 1423 | -399.242 | -426.039 | 9.4865E-03 (2001,358,0700) | 8.9400E-03 (2001,358,0600) | 8.2519E-03 (2001,016,0900) | 7.4942E-03 (2001,016,0800) |
| 1424 | -396.994 | -426.151 | 9.0247E-03 (2001,358,0700) | 8.8523E-03 (2001,016,0900) | 8.7598E-03 (2001,358,0600) | 8.0597E-03 (2001,016,0800) |
| 1425 | -394.747 | -426.262 | 9.4515E-03 (2001,016,0900) | 8.6230E-03 (2001,016,0800) | 8.5380E-03 (2001,358,0600) | 8.5367E-03 (2001,358,0700) |
| 1426 | -392.499 | -426.372 | 1.0033E-02 (2001,016,0900) | 9.1830E-03 (2001,016,0800) | 8.2940E-03 (2001,016,1000) | 8.2813E-03 (2001,358,0600) |
| 1427 | -390.252 | -426.482 | 1.0594E-02 (2001,016,0900) | 9.7304E-03 (2001,016,0800) | 8.7358E-03 (2001,016,1000) | 7.9857E-03 (2001,358,0600) |
| 1428 | -388.004 | -426.591 | 1.1128E-02 (2001,016,0900) | 1.0260E-02 (2001,016,0800) | 9.1487E-03 (2001,016,1000) | 7.6573E-03 (2001,358,0600) |
| 1429 | -385.757 | -426.700 | 1.1628E-02 (2001,016,0900) | 1.0760E-02 (2001,016,0800) | 9.5230E-03 (2001,016,1000) | 7.9105E-03 (2001,016,0700) |
| 1430 | -383.509 | -426.808 | 1.2078E-02 (2001,016,0900) | 1.1228E-02 (2001,016,0800) | 9.8616E-03 (2001,016,1000) | 8.2737E-03 (2001,016,0700) |
| 1431 | -381.262 | -426.915 | 1.2473E-02 (2001,016,0900) | 1.1652E-02 (2001,016,0800) | 1.0149E-02 (2001,016,1000) | 8.6166E-03 (2001,016,0700) |
| 1432 | -379.014 | -427.022 | 1.2813E-02 (2001,016,0900) | 1.2030E-02 (2001,016,0800) | 1.0388E-02 (2001,016,1000) | 8.9268E-03 (2001,016,0700) |
| 1433 | -376.766 | -427.128 | 1.3083E-02 (2001,016,0900) | 1.2349E-02 (2001,016,0800) | 1.0573E-02 (2001,016,1000) | 9.2063E-03 (2001,016,0700) |
| 1434 | -374.519 | -427.233 | 1.3281E-02 (2001,016,0900) | 1.2609E-02 (2001,016,0800) | 1.0691E-02 (2001,016,1000) | 9.4398E-03 (2001,016,0700) |
| 1435 | -365.527 | -427.648 | 1.3261E-02 (2001,016,0900) | 1.2923E-02 (2001,016,0800) | 1.0523E-02 (2001,016,1000) | 9.8893E-03 (2001,016,0700) |
| 1436 | -349.792 | -428.351 | 1.0586E-02 (2001,016,0800) | 1.0272E-02 (2001,016,0900) | 9.6113E-03 (2001,039,0900) | 8.5302E-03 (2001,016,0700) |
| 1437 | -347.544 | -428.448 | 1.0010E-02 (2001,016,0800) | 9.7805E-03 (2001,039,0900) | 9.6281E-03 (2001,016,0900) | 8.4601E-03 (2001,039,1000) |
| 1438 | -345.296 | -428.546 | 9.8937E-03 (2001,039,0900) | 9.3965E-03 (2001,016,0800) | 8.9560E-03 (2001,016,0900) | 8.4471E-03 (2001,039,1000) |
| 1439 | -250.854 | -432.057 | 7.2282E-03 (2001,032,0700) | 7.0411E-03 (2001,285,0400) | 5.9530E-03 (2001,350,0500) | 5.8794E-03 (2001,285,0700) |
| 1440 | -248.605 | -432.128 | 7.3572E-03 (2001,032,0700) | 6.4683E-03 (2001,285,0400) | 6.2547E-03 (2001,285,0700) | 6.0284E-03 (2001,032,0600) |
| 1441 | -246.356 | -432.197 | 7.3584E-03 (2001,032,0700) | 6.5652E-03 (2001,285,0700) | 6.2536E-03 (2001,032,0600) | 6.2163E-03 (2001,285,0800) |
| 1442 | -244.107 | -432.266 | 5.9257E-03 (2001,285,0800) | 5.6969E-03 (2001,285,0700) | 5.5377E-03 (2001,350,0400) | 4.7854E-03 (2001,285,0400) |
| 1443 | -241.858 | -432.334 | 6.2380E-03 (2001,285,0800) | 5.7682E-03 (2001,285,0700) | 5.5045E-03 (2001,350,0400) | 4.4473E-03 (2001,350,0500) |
| 1444 | -239.608 | -432.401 | 6.7045E-03 (2001,285,0800) | 6.1213E-03 (2001,285,0700) | 5.4747E-03 (2001,350,0400) | 4.4245E-03 (2001,350,0500) |
| 1445 | -237.359 | -432.468 | 7.2828E-03 (2001,285,0800) | 6.7076E-03 (2001,285,0700) | 6.2797E-03 (2001,032,0600) | 6.2486E-03 (2001,032,0700) |
| 1446 | -235.110 | -432.535 | 6.7383E-03 (2001,285,0800) | 5.7394E-03 (2001,285,0700) | 5.1378E-03 (2001,350,0400) | 4.2338E-03 (2001,350,0300) |
| 1447 | -232.861 | -432.600 | 6.9479E-03 (2001,285,0800) | 5.9655E-03 (2001,285,0700) | 5.1434E-03 (2001,032,0600) | 5.0114E-03 (2001,350,0400) |
| 1448 | -230.612 | -432.665 | 6.3929E-03 (2001,285,0800) | 5.1662E-03 (2001,285,0700) | 4.6492E-03 (2001,350,0400) | 4.3472E-03 (2001,350,0300) |
| 1449 | -228.362 | -432.730 | 5.8493E-03 (2001,285,0800) | 4.4869E-03 (2001,285,0700) | 4.3141E-03 (2001,350,0300) | 4.2942E-03 (2001,350,0400) |
| 1450 | -226.113 | -432.793 | 5.6026E-03 (2001,285,0800) | 4.3082E-03 (2001,285,0700) | 4.2735E-03 (2001,350,0300) | 4.0924E-03 (2001,019,0400) |
| 1451 | -223.864 | -432.857 | 5.2549E-03 (2001,285,0800) | 4.3224E-03 (2001,019,0500) | 4.2133E-03 (2001,019,0400) | 4.1913E-03 (2001,350,0300) |
| 1452 | -221.614 | -432.919 | 4.6801E-03 (2001,285,0800) | 4.2286E-03 (2001,019,0500) | 4.1446E-03 (2001,019,0400) | 4.0777E-03 (2001,031,0800) |
| 1453 | -219.365 | -432.981 | 5.7202E-03 (2001,032,0600) | 4.7672E-03 (2001,019,0500) | 4.4105E-03 (2001,031,0800) | 4.3828E-03 (2001,019,0400) |
| 1454 | -217.116 | -433.042 | 4.2945E-03 (2001,031,0800) | 4.0260E-03 (2001,019,0500) | 3.9625E-03 (2001,019,0400) | 3.8371E-03 (2001,350,0200) |
| 1455 | -214.866 | -433.103 | 4.0491E-03 (2001,031,0800) | 3.6031E-03 (2001,019,0400) | 3.5812E-03 (2001,031,0900) | 3.4162E-03 (2001,019,0500) |
| 1456 | -212.617 | -433.163 | 3.9165E-03 (2001,031,0800) | 3.4680E-03 (2001,031,0900) | 3.3062E-03 (2001,031,0700) | 3.2671E-03 (2001,350,0100) |
| 1457 | -210.368 | -433.222 | 4.0935E-03 (2001,031,0800) | 3.5583E-03 (2001,031,0700) | 3.5045E-03 (2001,350,0100) | 3.3955E-03 (2001,031,0900) |
| 1458 | -208.118 | -433.281 | 4.2321E-03 (2001,031,0800) | 3.9204E-03 (2001,350,0100) | 3.8381E-03 (2001,031,0700) | 3.7479E-03 (2001,359,0500) |
| 1459 | -205.869 | -433.339 | 4.4115E-03 (2001,031,0800) | 4.4101E-03 (2001,350,0100) | 4.3890E-03 (2001,359,0700) | 4.2967E-03 (2001,359,0800) |
| 1460 | -203.619 | -433.396 | 4.4526E-03 (2001,350,0100) | 4.3052E-03 (2001,031,0800) | 4.2541E-03 (2001,359,0700) | 4.2497E-03 (2001,031,0700) |
| 1461 | -401.350 | -423.146 | 1.0174E-02 (2001,358,0700) | 9.6887E-03 (2001,358,0600) | 7.6757E-03 (2001,016,0900) | 7.1364E-03 (2001,358,0800) |
| 1462 | -399.103 | -423.258 | 9.7408E-03 (2001,358,0700) | 9.5523E-03 (2001,358,0600) | 8.3000E-03 (2001,016,0900) | 7.6247E-03 (2001,016,0800) |
| 1463 | -396.857 | -423.370 | 9.3643E-03 (2001,358,0600) | 9.2731E-03 (2001,358,0700) | 8.9308E-03 (2001,016,0900) | 8.2197E-03 (2001,016,0800) |
| 1464 | -394.610 | -423.481 | 9.5545E-03 (2001,016,0900) | 9.1340E-03 (2001,358,0600) | 8.8208E-03 (2001,016,0800) | 8.7787E-03 (2001,358,0700) |
| 1465 | -392.363 | -423.592 | 1.0170E-02 (2001,016,0900) | 9.4175E-03 (2001,016,0800) | 8.8548E-03 (2001,358,0600) | 8.4060E-03 (2001,016,1000) |
| 1466 | -390.117 | -423.701 | 1.0771E-02 (2001,016,0900) | 1.0003E-02 (2001,016,0800) | 8.8730E-03 (2001,016,1000) | 8.5334E-03 (2001,358,0600) |
| 1467 | -387.870 | -423.810 | 1.1338E-02 (2001,016,0900) | 1.0572E-02 (2001,016,0800) | 9.3158E-03 (2001,016,1000) | 8.1809E-03 (2001,358,0600) |
| 1468 | -385.623 | -423.919 | 1.1871E-02 (2001,016,0900) | 1.1112E-02 (2001,016,0800) | 9.7214E-03 (2001,016,1000) | 8.3263E-03 (2001,016,0700) |
| 1469 | -383.376 | -424.027 | 1.2364E-02 (2001,016,0900) | 1.1626E-02 (2001,016,0800) | 1.0089E-02 (2001,016,1000) | 8.7356E-03 (2001,016,0700) |
| 1470 | -381.129 | -424.134 | 1.2799E-02 (2001,016,0900) | 1.2092E-02 (2001,016,0800) | 1.0412E-02 (2001,016,1000) | 9.1168E-03 (2001,016,0700) |
| 1471 | -378.882 | -424.241 | 1.3171E-02 (2001,016,0900) | 1.2510E-02 (2001,016,0800) | 1.0676E-02 (2001,016,1000) | 9.4691E-03 (2001,016,0700) |
| 1472 | -376.636 | -424.347 | 1.3477E-02 (2001,016,0900) | 1.2872E-02 (2001,016,0800) | 1.0886E-02 (2001,016,1000) | 9.7793E-03 (2001,016,0700) |
| 1473 | -347.423 | -425.667 | 1.0628E-02 (2001,016,0800) | 1.0449E-02 (2001,039,0900) | 1.0097E-02 (2001,016,0900) | 8.8253E-03 (2001,016,0700) |
| 1474 | -345.176 | -425.764 | 1.0548E-02 (2001,039,0900) | 9.9808E-03 (2001,016,0800) | 9.3982E-03 (2001,016,0900) | 8.6894E-03 (2001,039,1000) |
| 1475 | -342.929 | -425.860 | 1.0574E-02 (2001,039,0900) | 9.2997E-03 (2001,016,0800) | 8.7578E-03 (2001,039,0800) | 8.6807E-03 (2001,016,0900) |
| 1476 | -340.681 | -425.956 | 1.0554E-02 (2001,039,0900) | 8.8127E-03 (2001,039,0800) | 8.5987E-03 (2001,016,0800) | 8.4881E-03 (2001,039,1000) |
| 1477 | -336.186 | -426.146 | 1.0358E-02 (2001,039,0900) | 8.7638E-03 (2001,039,0800) | 8.1286E-03 (2001,039,1000) | 7.1765E-03 (2001,016,0800) |
| 1478 | -255.264 | -429.133 | 7.9010E-03 (2001,285,0400) | 6.8757E-03 (2001,032,0700) | 6.5191E-03 (2001,251,0700) | 6.1885E-03 (2001,350,0500) |
| 1479 | -253.015 | -429.204 | 7.4282E-03 (2001,285,0400) | 7.1209E-03 (2001,032,0700) | 6.3853E-03 (2001,251,0700) | 6.2204E-03 (2001,350,0500) |
| 1480 | -250.767 | -429.275 | 7.3228E-03 (2001,032,0700) | 6.8517E-03 (2001,285,0400) | 6.2299E-03 (2001,251,0700) | 6.2020E-03 (2001,350,0500) |
| 1481 | -248.519 | -429.345 | 5.6869E-03 (2001,285,0400) | 5.6383E-03 (2001,350,0400) | 5.3522E-03 (2001,285,0800) | 5.2887E-03 (2001,285,0700) |
| 1482 | -246.270 | -429.414 | 5.7269E-03 (2001,285,0800) | 5.6583E-03 (2001,350,0400) | 5.4493E-03 (2001,285,0700) | 5.0153E-03 (2001,285,0400) |
| 1483 | -244.022 | -429.483 | 6.0146E-03 (2001,285,0800) | 5.5314E-03 (2001,285,0700) | 4.3968E-03 (2001,350,0400) | 4.3551E-03 (2001,285,0400) |
| 1484 | -241.774 | -429.551 | 6.5503E-03 (2001,285,0800) | 5.9646E-03 (2001,285,0700) | 5.7797E-03 (2001,350,0400) | 4.6004E-03 (2001,350,0500) |
| 1485 | -239.525 | -429.619 | 6.4144E-03 (2001,285,0800) | 5.5957E-03 (2001,285,0700) | 3.7285E-03 (2001,285,0300) | 3.3154E-03 (2001,019,0400) |
| 1486 | -237.277 | -429.685 | 6.6744E-03 (2001,285,0800) | 5.7524E-03 (2001,285,0700) | 4.7721E-03 (2001,350,0400) | 3.8725E-03 (2001,019,0400) |
| 1487 | -235.028 | -429.752 | 6.7300E-03 (2001,285,0800) | 5.7292E-03 (2001,285,0700) | 5.3254E-03 (2001,350,0400) | 4.1652E-03 (2001,350,0300) |
| 1488 | -232.780 | -429.817 | 6.5568E-03 (2001,285,0800) | 5.4804E-03 (2001,285,0700) | 5.1094E-03 (2001,350,0400) | 4.2609E-03 (2001,350,0300) |
| 1489 | -230.532 | -429.882 | 6.5730E-03 (2001,285,0800) | 5.5694E-03 (2001,285,0700) | 5.0068E-03 (2001,350,0400) | 4.5781E-03 (2001,350,0300) |
| 1490 | -228.283 | -429.947 | 6.2136E-03 (2001,285,0800) | 5.2162E-03 (2001,285,0700) | 4.7207E-03 (2001,350,0400) | 4.5842E-03 (2001,350,0300) |
| 1491 | -226.035 | -430.010 | 5.7214E-03 (2001,285,0800) | 4.7420E-03 (2001,285,0700) | 4.5340E-03 (2001,350,0300) | 4.4006E-03 (2001,019,0400) |
| 1492 | -223.786 | -430.073 | 5.1693E-03 (2001,285,0800) | 4.4327E-03 (2001,350,0300) | 4.3733E-03 (2001,019,0400) | 4.3186E-03 (2001,019,0500) |
| 1493 | -221.538 | -430.136 | 5.0726E-03 (2001,032,0600) | 4.7915E-03 (2001,285,0800) | 4.4816E-03 (2001,019,0500) | 4.4535E-03 (2001,019,0400) |
| 1494 | -219.289 | -430.198 | 6.4183E-03 (2001,032,0600) | 5.3677E-03 (2001,019,0500) | 4.9120E-03 (2001,019,0400) | 4.6087E-03 (2001,031,0800) |
| 1495 | -217.040 | -430.259 | 4.3247E-03 (2001,031,0800) | 4.0871E-03 (2001,019,0400) | 3.9664E-03 (2001,019,0500) | 3.8703E-03 (2001,251,0800) |
| 1496 | -214.792 | -430.320 | 4.4923E-03 (2001,031,0800) | 4.0264E-03 (2001,019,0400) | 3.9312E-03 (2001,019,0500) | 3.8745E-03 (2001,350,0200) |
| 1497 | -212.543 | -430.379 | 4.4556E-03 (2001,031,0800) | 3.8215E-03 (2001,031,0700) | 3.8163E-03 (2001,019,0400) | 3.7562E-03 (2001,350,0200) |
| 1498 | -210.295 | -430.439 | 4.2955E-03 (2001,031,0800) | 3.7914E-03 (2001,031,0700) | 3.6600E-03 (2001,359,0400) | 3.6261E-03 (2001,350,0100) |
| 1499 | -208.046 | -430.497 | 4.1784E-03 (2001,031,0800) | 3.8260E-03 (2001,031,0700) | 3.6573E-03 (2001,350,0100) | 3.6155E-03 (2001,141,0500) |
| 1500 | -205.797 | -430.556 | 4.5811E-03 (2001,031,0800) | 4.5203E-03 (2001,350,0100) | 4.4128E-03 (2001,359,0700) | 4.4064E-03 (2001,031,0700) |
| 1501 | -203.549 | -430.613 | 4.5029E-03 (2001,350,0100) | 4.4208E-03 (2001,031,0800) | 4.4130E-03 (2001,031,0700) | 4.2139E-03 (2001,251,0600) |
| 1502 | -396.719 | -420.589 | 9.9642E-03 (2001,358,0600) | 9.4753E-03 (2001,358,0700) | 8.9729E-03 (2001,016,0900) | 8.3438E-03 (2001,016,0800) |
| 1503 | -394.473 | -420.700 | 9.7231E-03 (2001,358,0600) | 9.6305E-03 (2001,016,0900) | 8.9790E-03 (2001,016,0800) | 8.9787E-03 (2001,358,0700) |
| 1504 | -392.227 | -420.811 | 1.0276E-02 (2001,016,0900) | 9.6089E-03 (2001,016,0800) | 9.4235E-03 (2001,358,0600) | 8.4989E-03 (2001,016,1000) |
| 1505 | -389.981 | -420.921 | 1.0907E-02 (2001,016,0900) | 1.0234E-02 (2001,016,0800) | 9.0789E-03 (2001,358,0600) | 8.9917E-03 (2001,016,1000) |
| 1506 | -387.735 | -421.030 | 1.1519E-02 (2001,016,0900) | 1.0846E-02 (2001,016,0800) | 9.4644E-03 (2001,016,1000) | 8.6995E-03 (2001,358,0600) |
| 1507 | -385.489 | -421.138 | 1.2085E-02 (2001,016,0900) | 1.1432E-02 (2001,016,0800) | 9.9064E-03 (2001,016,1000) | 8.7286E-03 (2001,016,0700) |
| 1508 | -383.243 | -421.246 | 1.2613E-02 (2001,016,0900) | 1.1984E-02 (2001,016,0800) | 1.0301E-02 (2001,016,1000) | 9.1791E-03 (2001,016,0700) |
| 1509 | -380.997 | -421.353 | 1.3093E-02 (2001,016,0900) | 1.2496E-02 (2001,016,0800) | 1.0654E-02 (2001,016,1000) | 9.6025E-03 (2001,016,0700) |
| 1510 | -345.056 | -422.982 | 1.1161E-02 (2001,039,0900) | 1.0570E-02 (2001,016,0800) | 9.8705E-03 (2001,016,0900) | 9.6059E-03 (2001,039,0800) |
| 1511 | -333.823 | -423.459 | 1.0617E-02 (2001,039,0900) | 9.4471E-03 (2001,039,0800) | 7.9417E-03 (2001,039,1000) | 6.9687E-03 (2001,018,0900) |
| 1512 | -259.670 | -426.206 | 8.5980E-03 (2001,285,0400) | 7.5097E-03 (2001,251,0700) | 6.9779E-03 (2001,285,0600) | 6.6553E-03 (2001,032,0500) |
| 1513 | -257.422 | -426.278 | 8.3066E-03 (2001,285,0400) | 7.4053E-03 (2001,251,0700) | 6.7650E-03 (2001,285,0600) | 6.5160E-03 (2001,032,0700) |
| 1514 | -255.175 | -426.350 | 7.1934E-03 (2001,285,0400) | 5.4259E-03 (2001,285,0600) | 5.3047E-03 (2001,350,0500) | 5.1880E-03 (2001,285,0300) |
| 1515 | -252.927 | -426.421 | 6.9300E-03 (2001,285,0400) | 5.7016E-03 (2001,350,0500) | 5.6989E-03 (2001,251,0700) | 5.5508E-03 (2001,285,0600) |
| 1516 | -250.680 | -426.492 | 5.9791E-03 (2001,285,0400) | 5.6038E-03 (2001,350,0400) | 5.2344E-03 (2001,285,0300) | 5.1438E-03 (2001,350,0500) |
| 1517 | -248.432 | -426.562 | 5.6580E-03 (2001,350,0400) | 5.4761E-03 (2001,285,0800) | 5.3117E-03 (2001,285,0400) | 5.1084E-03 (2001,285,0300) |
| 1518 | -246.185 | -426.631 | 5.7504E-03 (2001,285,0800) | 5.1684E-03 (2001,285,0700) | 4.8614E-03 (2001,285,0300) | 4.5787E-03 (2001,285,0400) |
| 1519 | -243.937 | -426.700 | 7.0575E-03 (2001,285,0800) | 6.5748E-03 (2001,285,0700) | 6.1702E-03 (2001,350,0400) | 5.5288E-03 (2001,032,0700) |
| 1520 | -241.690 | -426.768 | 7.4726E-03 (2001,285,0800) | 6.9456E-03 (2001,285,0700) | 6.2318E-03 (2001,350,0400) | 5.7907E-03 (2001,032,0700) |
| 1521 | -239.442 | -426.836 | 7.0622E-03 (2001,285,0800) | 6.2816E-03 (2001,285,0700) | 6.0095E-03 (2001,350,0400) | 4.5401E-03 (2001,350,0500) |
| 1522 | -237.195 | -426.903 | 7.8268E-03 (2001,285,0800) | 7.2427E-03 (2001,285,0700) | 6.5961E-03 (2001,032,0600) | 6.1526E-03 (2001,350,0400) |
| 1523 | -234.947 | -426.969 | 7.1095E-03 (2001,285,0800) | 6.2801E-03 (2001,285,0700) | 5.7810E-03 (2001,350,0400) | 4.6152E-03 (2001,350,0300) |
| 1524 | -232.699 | -427.034 | 7.2435E-03 (2001,285,0800) | 6.5505E-03 (2001,285,0700) | 5.6984E-03 (2001,350,0400) | 5.2807E-03 (2001,032,0600) |
| 1525 | -230.452 | -427.099 | 6.9209E-03 (2001,285,0800) | 6.2671E-03 (2001,285,0700) | 5.4580E-03 (2001,350,0400) | 5.4183E-03 (2001,032,0600) |

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|---|---|---|---|---|---|---|
| 1526 | -228.204 | -427.164 | 8.6938E-03 (2001,032,0600) | 6.9626E-03 (2001,285,0800) | 6.5436E-03 (2001,285,0700) | 6.4421E-03 (2001,019,0500) |
| 1527 | -225.956 | -427.227 | 5.7364E-03 (2001,285,0800) | 5.1023E-03 (2001,285,0700) | 4.8023E-03 (2001,350,0300) | 4.7480E-03 (2001,350,0400) |
| 1528 | -223.708 | -427.290 | 5.2846E-03 (2001,285,0800) | 4.9260E-03 (2001,032,0600) | 4.7941E-03 (2001,285,0700) | 4.7327E-03 (2001,350,0300) |
| 1529 | -221.461 | -427.353 | 7.6191E-03 (2001,032,0600) | 6.0104E-03 (2001,019,0500) | 5.5047E-03 (2001,019,0400) | 5.2101E-03 (2001,032,0500) |
| 1530 | -219.213 | -427.415 | 7.1027E-03 (2001,032,0600) | 5.7749E-03 (2001,019,0500) | 5.3576E-03 (2001,019,0400) | 5.0247E-03 (2001,032,0500) |
| 1531 | -216.965 | -427.476 | 6.5326E-03 (2001,032,0600) | 5.0514E-03 (2001,019,0500) | 4.9041E-03 (2001,019,0400) | 4.8644E-03 (2001,251,0800) |
| 1532 | -214.717 | -427.536 | 5.9232E-03 (2001,032,0600) | 4.8923E-03 (2001,031,0800) | 4.7545E-03 (2001,251,0800) | 4.7246E-03 (2001,019,0500) |
| 1533 | -212.469 | -427.596 | 4.6454E-03 (2001,031,0800) | 4.1409E-03 (2001,251,0800) | 4.0679E-03 (2001,031,0700) | 4.0349E-03 (2001,019,0400) |
| 1534 | -210.222 | -427.656 | 4.4097E-03 (2001,031,0800) | 3.9609E-03 (2001,031,0700) | 3.8211E-03 (2001,251,0800) | 3.6078E-03 (2001,350,0100) |
| 1535 | -207.974 | -427.714 | 4.2938E-03 (2001,031,0800) | 4.0098E-03 (2001,031,0700) | 3.7079E-03 (2001,141,0500) | 3.6456E-03 (2001,350,0100) |
| 1536 | -205.726 | -427.772 | 4.7187E-03 (2001,031,0800) | 4.6647E-03 (2001,251,0600) | 4.6224E-03 (2001,031,0700) | 4.6048E-03 (2001,350,0100) |
| 1537 | -203.478 | -427.830 | 4.6109E-03 (2001,031,0700) | 4.5702E-03 (2001,350,0100) | 4.5558E-03 (2001,031,0800) | 4.4803E-03 (2001,251,0600) |
| 1538 | -385.355 | -418.357 | 1.2272E-02 (2001,016,0900) | 1.1706E-02 (2001,016,0800) | 1.0063E-02 (2001,016,1000) | 9.1037E-03 (2001,016,0700) |
| 1539 | -347.182 | -420.104 | 1.1889E-02 (2001,016,0800) | 1.1672E-02 (2001,039,0900) | 1.1106E-02 (2001,016,0900) | 1.0295E-02 (2001,039,0800) |
| 1540 | -266.320 | -423.202 | 8.7953E-03 (2001,285,0400) | 8.5415E-03 (2001,285,0500) | 8.3923E-03 (2001,251,0700) | 7.8888E-03 (2001,032,0500) |
| 1541 | -264.073 | -423.276 | 8.7694E-03 (2001,285,0400) | 7.8312E-03 (2001,251,0700) | 7.8070E-03 (2001,285,0500) | 6.7664E-03 (2001,285,0600) |
| 1542 | -261.826 | -423.350 | 8.9571E-03 (2001,285,0400) | 8.3656E-03 (2001,251,0700) | 8.0688E-03 (2001,032,0400) | 7.5567E-03 (2001,032,0500) |
| 1543 | -259.580 | -423.423 | 8.7411E-03 (2001,285,0400) | 8.2722E-03 (2001,251,0700) | 7.7802E-03 (2001,032,0400) | 7.1082E-03 (2001,331,0200) |
| 1544 | -257.333 | -423.496 | 8.3501E-03 (2001,285,0400) | 8.1257E-03 (2001,251,0700) | 7.3912E-03 (2001,032,0400) | 6.9357E-03 (2001,285,0600) |
| 1545 | -255.086 | -423.568 | 7.7700E-03 (2001,251,0700) | 7.7552E-03 (2001,285,0400) | 6.6593E-03 (2001,285,0600) | 6.4630E-03 (2001,350,0500) |
| 1546 | -252.840 | -423.639 | 6.3819E-03 (2001,285,0400) | 5.8348E-03 (2001,285,0300) | 5.4471E-03 (2001,350,0400) | 5.1268E-03 (2001,285,0600) |
| 1547 | -250.593 | -423.709 | 5.7773E-03 (2001,285,0300) | 5.7014E-03 (2001,285,0400) | 5.5901E-03 (2001,350,0400) | 5.1795E-03 (2001,285,0800) |
| 1548 | -248.346 | -423.779 | 5.6516E-03 (2001,285,0800) | 5.6079E-03 (2001,285,0300) | 5.2027E-03 (2001,350,0400) | 4.9979E-03 (2001,285,0400) |
| 1549 | -246.099 | -423.849 | 6.9058E-03 (2001,285,0800) | 6.2720E-03 (2001,350,0400) | 6.1710E-03 (2001,285,0700) | 5.6577E-03 (2001,350,0500) |
| 1550 | -243.853 | -423.917 | 6.9232E-03 (2001,285,0800) | 6.2557E-03 (2001,350,0400) | 6.1030E-03 (2001,285,0700) | 5.1849E-03 (2001,285,0300) |
| 1551 | -241.606 | -423.986 | 8.0721E-03 (2001,285,0800) | 7.4210E-03 (2001,285,0700) | 7.3449E-03 (2001,032,0600) | 6.6255E-03 (2001,350,0400) |
| 1552 | -239.359 | -424.053 | 8.8256E-03 (2001,032,0600) | 8.5069E-03 (2001,285,0800) | 7.9326E-03 (2001,285,0700) | 7.2195E-03 (2001,032,0700) |
| 1553 | -237.112 | -424.120 | 7.9042E-03 (2001,285,0800) | 7.2851E-03 (2001,285,0700) | 6.4207E-03 (2001,350,0400) | 6.0456E-03 (2001,032,0600) |
| 1554 | -234.865 | -424.186 | 7.6581E-03 (2001,285,0800) | 7.0863E-03 (2001,285,0700) | 6.2508E-03 (2001,350,0400) | 5.6363E-03 (2001,032,0600) |
| 1555 | -232.618 | -424.252 | 7.6740E-03 (2001,285,0800) | 7.2985E-03 (2001,285,0700) | 7.1824E-03 (2001,032,0600) | 6.1993E-03 (2001,350,0400) |
| 1556 | -230.371 | -424.317 | 6.9199E-03 (2001,285,0800) | 6.5250E-03 (2001,285,0700) | 5.8001E-03 (2001,350,0400) | 5.4097E-03 (2001,032,0600) |
| 1557 | -228.125 | -424.381 | 9.0109E-03 (2001,032,0600) | 7.0201E-03 (2001,285,0800) | 6.9632E-03 (2001,285,0700) | 6.0630E-03 (2001,032,0500) |
| 1558 | -225.878 | -424.445 | 9.1303E-03 (2001,032,0600) | 6.5116E-03 (2001,019,0500) | 6.4531E-03 (2001,285,0700) | 6.4116E-03 (2001,285,0800) |
| 1559 | -223.631 | -424.508 | 8.7593E-03 (2001,032,0600) | 6.5369E-03 (2001,019,0500) | 6.3037E-03 (2001,032,0500) | 6.0189E-03 (2001,019,0400) |
| 1560 | -221.384 | -424.570 | 8.2921E-03 (2001,032,0600) | 6.1712E-03 (2001,032,0500) | 5.9916E-03 (2001,019,0500) | 5.7058E-03 (2001,019,0400) |
| 1561 | -219.137 | -424.632 | 7.7403E-03 (2001,032,0600) | 6.0515E-03 (2001,019,0500) | 5.9691E-03 (2001,032,0500) | 5.7381E-03 (2001,019,0400) |
| 1562 | -216.890 | -424.693 | 6.3695E-03 (2001,032,0600) | 5.0322E-03 (2001,032,0500) | 4.9556E-03 (2001,031,0800) | 4.9464E-03 (2001,251,0800) |
| 1563 | -214.643 | -424.754 | 4.7651E-03 (2001,031,0800) | 4.7305E-03 (2001,251,0800) | 4.3882E-03 (2001,019,0400) | 4.1738E-03 (2001,350,0300) |
| 1564 | -212.396 | -424.813 | 4.6052E-03 (2001,031,0800) | 4.5048E-03 (2001,251,0800) | 4.0878E-03 (2001,031,0700) | 3.9543E-03 (2001,019,0400) |
| 1565 | -210.149 | -424.873 | 4.5361E-03 (2001,031,0800) | 4.2580E-03 (2001,251,0800) | 4.1695E-03 (2001,031,0700) | 3.6997E-03 (2001,350,0200) |
| 1566 | -207.902 | -424.931 | 4.2494E-03 (2001,031,0800) | 4.0577E-03 (2001,031,0700) | 3.7178E-03 (2001,141,0500) | 3.6877E-03 (2001,251,0800) |
| 1567 | -205.654 | -424.989 | 4.9457E-03 (2001,251,0600) | 4.8564E-03 (2001,031,0700) | 4.8433E-03 (2001,031,0800) | 4.6667E-03 (2001,350,0100) |
| 1568 | -203.407 | -425.047 | 4.8733E-03 (2001,031,0700) | 4.8445E-03 (2001,251,0600) | 4.6930E-03 (2001,031,0800) | 4.6783E-03 (2001,350,0100) |
| 1569 | -349.306 | -417.225 | 1.3208E-02 (2001,016,0800) | 1.2364E-02 (2001,016,0900) | 1.2099E-02 (2001,039,0900) | 1.1505E-02 (2001,016,0700) |
| 1570 | -329.101 | -418.081 | 1.0567E-02 (2001,039,0900) | 1.0526E-02 (2001,039,0800) | 7.7865E-03 (2001,018,0900) | 7.3918E-03 (2001,039,0700) |
| 1571 | -326.856 | -418.173 | 1.0128E-02 (2001,039,0900) | 1.0060E-02 (2001,039,0800) | 7.3354E-03 (2001,018,0900) | 7.1056E-03 (2001,039,0700) |
| 1572 | -302.157 | -419.144 | 1.0304E-02 (2001,018,0800) | 9.9156E-03 (2001,018,0700) | 6.9393E-03 (2001,350,0800) | 6.5658E-03 (2001,331,0300) |
| 1573 | -266.227 | -420.420 | 8.6333E-03 (2001,285,0400) | 8.1010E-03 (2001,285,0500) | 7.8343E-03 (2001,251,0700) | 6.0894E-03 (2001,018,0600) |
| 1574 | -263.981 | -420.494 | 8.6704E-03 (2001,285,0400) | 7.6276E-03 (2001,285,0500) | 7.5862E-03 (2001,251,0700) | 6.1096E-03 (2001,285,0600) |
| 1575 | -261.735 | -420.568 | 8.9359E-03 (2001,285,0400) | 8.3559E-03 (2001,251,0700) | 7.5859E-03 (2001,285,0500) | 6.6908E-03 (2001,285,0600) |
| 1576 | -259.489 | -420.641 | 8.9366E-03 (2001,251,0700) | 8.9268E-03 (2001,032,0400) | 8.8803E-03 (2001,285,0400) | 7.6068E-03 (2001,331,0200) |
| 1577 | -257.244 | -420.713 | 8.7516E-03 (2001,251,0700) | 8.5086E-03 (2001,032,0400) | 8.4035E-03 (2001,285,0400) | 7.1086E-03 (2001,331,0200) |
| 1578 | -254.998 | -420.785 | 6.9404E-03 (2001,285,0400) | 6.3907E-03 (2001,285,0300) | 5.6115E-03 (2001,285,0600) | 5.3121E-03 (2001,251,0700) |
| 1579 | -252.752 | -420.856 | 6.3064E-03 (2001,285,0300) | 6.0799E-03 (2001,285,0400) | 5.0399E-03 (2001,285,0600) | 4.6556E-03 (2001,285,0800) |
| 1580 | -250.506 | -420.927 | 6.4096E-03 (2001,285,0300) | 5.8066E-03 (2001,350,0400) | 5.6083E-03 (2001,285,0400) | 5.5867E-03 (2001,285,0800) |
| 1581 | -248.260 | -420.997 | 6.6282E-03 (2001,285,0800) | 6.3968E-03 (2001,285,0300) | 6.2193E-03 (2001,350,0400) | 5.9147E-03 (2001,251,0700) |
| 1582 | -246.014 | -421.066 | 7.5795E-03 (2001,285,0800) | 6.6160E-03 (2001,350,0400) | 6.5740E-03 (2001,032,0600) | 6.5736E-03 (2001,285,0700) |
| 1583 | -243.768 | -421.135 | 7.8226E-03 (2001,285,0800) | 6.8792E-03 (2001,285,0700) | 6.6922E-03 (2001,350,0400) | 6.1385E-03 (2001,032,0600) |
| 1584 | -241.522 | -421.203 | 7.7736E-03 (2001,285,0800) | 6.8957E-03 (2001,285,0700) | 6.6498E-03 (2001,350,0400) | 5.3174E-03 (2001,350,0500) |
| 1585 | -239.276 | -421.270 | 9.4462E-03 (2001,032,0600) | 8.9070E-03 (2001,285,0800) | 8.2645E-03 (2001,285,0700) | 7.1385E-03 (2001,350,0400) |
| 1586 | -237.030 | -421.337 | 9.7960E-03 (2001,032,0600) | 8.8860E-03 (2001,285,0800) | 8.4353E-03 (2001,285,0700) | 7.1193E-03 (2001,350,0400) |
| 1587 | -234.784 | -421.403 | 1.0020E-02 (2001,032,0600) | 8.6855E-03 (2001,285,0800) | 8.4405E-03 (2001,285,0700) | 7.0286E-03 (2001,350,0400) |
| 1588 | -232.538 | -421.469 | 1.0140E-02 (2001,032,0600) | 8.3140E-03 (2001,285,0800) | 8.2709E-03 (2001,285,0700) | 7.1207E-03 (2001,032,0500) |
| 1589 | -230.291 | -421.534 | 1.0130E-02 (2001,032,0600) | 7.9458E-03 (2001,285,0700) | 7.7908E-03 (2001,285,0800) | 7.2890E-03 (2001,032,0500) |
| 1590 | -228.045 | -421.598 | 6.5937E-03 (2001,285,0700) | 6.4598E-03 (2001,285,0800) | 6.2034E-03 (2001,032,0600) | 5.9373E-03 (2001,350,0400) |
| 1591 | -225.799 | -421.662 | 9.7318E-03 (2001,032,0600) | 7.4045E-03 (2001,032,0500) | 7.0302E-03 (2001,019,0500) | 6.8834E-03 (2001,285,0700) |
| 1592 | -223.553 | -421.725 | 9.3551E-03 (2001,032,0600) | 7.3640E-03 (2001,032,0500) | 6.8538E-03 (2001,019,0500) | 6.4227E-03 (2001,019,0400) |
| 1593 | -221.307 | -421.787 | 8.8685E-03 (2001,032,0600) | 7.2225E-03 (2001,032,0500) | 6.6110E-03 (2001,019,0500) | 6.2957E-03 (2001,019,0400) |
| 1594 | -219.061 | -421.849 | 8.3030E-03 (2001,032,0600) | 6.9858E-03 (2001,032,0500) | 6.3068E-03 (2001,019,0500) | 6.1170E-03 (2001,019,0400) |
| 1595 | -216.814 | -421.910 | 7.0752E-03 (2001,032,0600) | 6.1029E-03 (2001,032,0500) | 5.4450E-03 (2001,251,0800) | 5.2000E-03 (2001,251,0600) |
| 1596 | -214.568 | -421.971 | 5.2436E-03 (2001,251,0800) | 5.0205E-03 (2001,031,0800) | 4.9783E-03 (2001,032,0600) | 4.6258E-03 (2001,019,0400) |
| 1597 | -212.322 | -422.030 | 5.0647E-03 (2001,251,0800) | 4.9570E-03 (2001,031,0800) | 4.5211E-03 (2001,031,0700) | 4.3544E-03 (2001,019,0400) |
| 1598 | -210.076 | -422.090 | 4.9713E-03 (2001,031,0800) | 4.8673E-03 (2001,251,0800) | 4.7094E-03 (2001,031,0700) | 4.1817E-03 (2001,359,0400) |
| 1599 | -207.829 | -422.148 | 4.5036E-03 (2001,031,0800) | 4.3958E-03 (2001,031,0700) | 4.1709E-03 (2001,251,0800) | 3.6863E-03 (2001,141,0500) |
| 1600 | -205.583 | -422.206 | 4.4708E-03 (2001,031,0700) | 4.4197E-03 (2001,031,0800) | 3.9189E-03 (2001,251,0800) | 3.7550E-03 (2001,141,0500) |
| 1601 | -203.337 | -422.264 | 5.1254E-03 (2001,031,0700) | 5.0241E-03 (2001,251,0600) | 4.8108E-03 (2001,031,0800) | 4.7583E-03 (2001,350,0100) |
| 1602 | -326.742 | -415.392 | 1.0755E-02 (2001,039,0800) | 1.0209E-02 (2001,039,0900) | 8.4835E-03 (2001,018,0900) | 8.0484E-03 (2001,039,0700) |
| 1603 | -324.498 | -415.483 | 1.0301E-02 (2001,039,0800) | 9.7052E-03 (2001,039,0900) | 7.8446E-03 (2001,039,0700) | 7.8315E-03 (2001,018,0900) |
| 1604 | -322.253 | -415.574 | 9.7045E-03 (2001,039,0800) | 9.1753E-03 (2001,039,0900) | 7.5582E-03 (2001,018,0800) | 7.4769E-03 (2001,039,0700) |
| 1605 | -302.052 | -416.362 | 9.1671E-03 (2001,018,0700) | 8.8305E-03 (2001,018,0800) | 5.2203E-03 (2001,018,0600) | 4.9640E-03 (2001,039,0800) |
| 1606 | -268.380 | -417.562 | 9.9904E-03 (2001,032,0400) | 9.7385E-03 (2001,251,0700) | 9.5155E-03 (2001,331,0200) | 9.2112E-03 (2001,285,0400) |
| 1607 | -266.134 | -417.637 | 8.6709E-03 (2001,285,0400) | 7.8839E-03 (2001,251,0700) | 7.8794E-03 (2001,285,0500) | 6.4277E-03 (2001,018,0600) |
| 1608 | -263.889 | -417.712 | 8.0779E-03 (2001,285,0400) | 6.6818E-03 (2001,285,0500) | 5.1839E-03 (2001,285,0300) | 5.0992E-03 (2001,141,0600) |
| 1609 | -261.644 | -417.785 | 8.8443E-03 (2001,285,0400) | 8.0648E-03 (2001,251,0700) | 7.5481E-03 (2001,285,0500) | 6.2245E-03 (2001,285,0300) |
| 1610 | -259.399 | -417.858 | 8.9007E-03 (2001,251,0700) | 8.8624E-03 (2001,285,0400) | 7.4992E-03 (2001,285,0500) | 6.9346E-03 (2001,285,0300) |
| 1611 | -257.154 | -417.931 | 8.0656E-03 (2001,285,0400) | 7.8224E-03 (2001,251,0700) | 7.1316E-03 (2001,285,0300) | 6.5658E-03 (2001,285,0500) |
| 1612 | -254.909 | -418.003 | 6.7677E-03 (2001,285,0300) | 6.6173E-03 (2001,285,0400) | 5.2194E-03 (2001,285,0600) | 4.8438E-03 (2001,285,0500) |
| 1613 | -252.664 | -418.074 | 7.1181E-03 (2001,285,0300) | 6.3179E-03 (2001,285,0400) | 6.1798E-03 (2001,251,0700) | 5.8637E-03 (2001,285,0600) |
| 1614 | -250.419 | -418.144 | 7.0628E-03 (2001,285,0300) | 6.1147E-03 (2001,251,0700) | 6.1010E-03 (2001,285,0800) | 5.9669E-03 (2001,350,0400) |
| 1615 | -248.174 | -418.214 | 8.0210E-03 (2001,251,0700) | 7.7363E-03 (2001,285,0800) | 7.6947E-03 (2001,032,0600) | 7.3151E-03 (2001,251,0600) |
| 1616 | -245.928 | -418.284 | 7.8211E-03 (2001,285,0800) | 6.7780E-03 (2001,350,0400) | 6.6375E-03 (2001,251,0700) | 6.6043E-03 (2001,285,0300) |
| 1617 | -243.683 | -418.352 | 8.8289E-03 (2001,032,0600) | 8.8027E-03 (2001,285,0800) | 7.6480E-03 (2001,285,0700) | 7.3832E-03 (2001,251,0700) |
| 1618 | -241.438 | -418.420 | 8.9286E-03 (2001,285,0800) | 8.6689E-03 (2001,032,0600) | 8.0362E-03 (2001,285,0700) | 7.3312E-03 (2001,350,0400) |
| 1619 | -239.193 | -418.488 | 8.4919E-03 (2001,285,0800) | 7.8571E-03 (2001,285,0700) | 7.1427E-03 (2001,350,0400) | 7.1058E-03 (2001,032,0600) |
| 1620 | -236.947 | -418.555 | 1.0145E-02 (2001,032,0600) | 9.1659E-03 (2001,285,0800) | 8.8006E-03 (2001,285,0700) | 7.5534E-03 (2001,019,0500) |
| 1621 | -234.702 | -418.621 | 1.0410E-02 (2001,032,0600) | 8.9072E-03 (2001,285,0800) | 8.8434E-03 (2001,285,0700) | 7.8034E-03 (2001,032,0500) |
| 1622 | -232.457 | -418.686 | 1.0553E-02 (2001,032,0600) | 8.6974E-03 (2001,285,0700) | 8.4744E-03 (2001,285,0800) | 8.0874E-03 (2001,032,0500) |
| 1623 | -230.211 | -418.751 | 1.0567E-02 (2001,032,0600) | 8.3763E-03 (2001,285,0700) | 8.3147E-03 (2001,032,0500) | 7.8898E-03 (2001,285,0800) |
| 1624 | -227.966 | -418.815 | 1.0447E-02 (2001,032,0600) | 8.4709E-03 (2001,032,0500) | 7.8956E-03 (2001,285,0700) | 7.3638E-03 (2001,019,0500) |
| 1625 | -225.721 | -418.879 | 1.0197E-02 (2001,032,0600) | 8.5130E-03 (2001,032,0500) | 7.3406E-03 (2001,019,0500) | 7.2853E-03 (2001,285,0700) |
| 1626 | -223.475 | -418.942 | 9.8254E-03 (2001,032,0600) | 8.4749E-03 (2001,032,0500) | 7.1422E-03 (2001,019,0500) | 6.8356E-03 (2001,019,0400) |
| 1627 | -221.230 | -419.004 | 9.3430E-03 (2001,032,0600) | 8.3400E-03 (2001,032,0500) | 6.8805E-03 (2001,019,0500) | 6.6948E-03 (2001,019,0400) |
| 1628 | -218.984 | -419.066 | 8.7686E-03 (2001,032,0600) | 8.0786E-03 (2001,032,0500) | 6.4493E-03 (2001,019,0500) | 6.4297E-03 (2001,019,0400) |
| 1629 | -216.739 | -419.127 | 7.7075E-03 (2001,032,0600) | 7.2869E-03 (2001,032,0500) | 5.9743E-03 (2001,251,0800) | 5.7359E-03 (2001,251,0600) |
| 1630 | -214.494 | -419.188 | 7.2323E-03 (2001,032,0600) | 7.0479E-03 (2001,032,0500) | 5.9803E-03 (2001,251,0800) | 5.7634E-03 (2001,251,0600) |
| 1631 | -212.248 | -419.248 | 5.9953E-03 (2001,032,0600) | 5.9405E-03 (2001,032,0500) | 5.6303E-03 (2001,251,0800) | 5.3213E-03 (2001,031,0800) |
| 1632 | -210.003 | -419.307 | 5.2668E-03 (2001,251,0800) | 5.1140E-03 (2001,031,0800) | 4.9376E-03 (2001,031,0700) | 4.3559E-03 (2001,350,0200) |
| 1633 | -207.757 | -419.365 | 4.4691E-03 (2001,031,0800) | 4.4526E-03 (2001,251,0800) | 4.4437E-03 (2001,031,0700) | 3.5705E-03 (2001,141,0500) |
| 1634 | -205.512 | -419.423 | 5.1523E-03 (2001,031,0700) | 4.9399E-03 (2001,031,0800) | 4.6019E-03 (2001,251,0800) | 4.4903E-03 (2001,350,0100) |
| 1635 | -203.266 | -419.481 | 5.3754E-03 (2001,031,0700) | 5.1241E-03 (2001,251,0600) | 4.9271E-03 (2001,031,0800) | 4.8370E-03 (2001,350,0100) |
| 1636 | -328.872 | -412.519 | 1.1740E-02 (2001,039,0800) | 1.0686E-02 (2001,039,0900) | 1.0281E-02 (2001,018,0900) | 9.0438E-03 (2001,039,0700) |
| 1637 | -326.629 | -412.611 | 1.1273E-02 (2001,039,0800) | 1.0178E-02 (2001,039,0900) | 9.7136E-03 (2001,018,0900) | 8.8498E-03 (2001,039,0700) |
| 1638 | -324.385 | -412.702 | 1.0769E-02 (2001,039,0800) | 9.6446E-03 (2001,039,0900) | 8.8033E-03 (2001,018,0900) | 8.6047E-03 (2001,039,0700) |
| 1639 | -322.141 | -412.793 | 1.0230E-02 (2001,039,0800) | 9.0899E-03 (2001,039,0900) | 8.5533E-03 (2001,018,0900) | 8.4298E-03 (2001,018,0800) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1640 | -319.898 | -412.883 | 9.6644E-03 (2001,039,0800) | 9.0223E-03 (2001,018,0800) | 8.5332E-03 (2001,018,0900) | 8.5228E-03 (2001,039,0900) |
| 1641 | -317.654 | -412.972 | 8.9622E-03 (2001,039,0800) | 7.9321E-03 (2001,039,0900) | 7.2971E-03 (2001,018,0800) | 7.1509E-03 (2001,039,0700) |
| 1642 | -301.947 | -413.580 | 8.9348E-03 (2001,018,0700) | 8.2451E-03 (2001,018,0800) | 5.2172E-03 (2001,018,0600) | 4.9582E-03 (2001,039,0800) |
| 1643 | -272.775 | -414.628 | 8.4154E-03 (2001,018,0600) | 8.3378E-03 (2001,251,0700) | 7.5986E-03 (2001,285,0400) | 7.5545E-03 (2001,285,0500) |
| 1644 | -270.530 | -414.705 | 8.7767E-03 (2001,251,0700) | 8.4443E-03 (2001,285,0400) | 8.2978E-03 (2001,018,0600) | 8.0935E-03 (2001,285,0500) |
| 1645 | -268.286 | -414.780 | 8.7866E-03 (2001,285,0400) | 8.5619E-03 (2001,251,0700) | 8.0674E-03 (2001,285,0500) | 7.6543E-03 (2001,018,0600) |
| 1646 | -266.042 | -414.855 | 8.3771E-03 (2001,285,0400) | 7.1583E-03 (2001,285,0500) | 6.5875E-03 (2001,251,0700) | 5.8857E-03 (2001,018,0600) |
| 1647 | -263.798 | -414.929 | 9.4965E-03 (2001,285,0400) | 9.2044E-03 (2001,251,0700) | 8.4194E-03 (2001,285,0500) | 6.9130E-03 (2001,331,0200) |
| 1648 | -261.553 | -415.003 | 8.4683E-03 (2001,285,0400) | 7.0569E-03 (2001,285,0500) | 6.5484E-03 (2001,251,0700) | 6.4650E-03 (2001,285,0300) |
| 1649 | -259.309 | -415.076 | 8.7070E-03 (2001,285,0400) | 8.2780E-03 (2001,251,0700) | 7.4846E-03 (2001,285,0500) | 7.3588E-03 (2001,285,0300) |
| 1650 | -257.065 | -415.149 | 7.7071E-03 (2001,285,0400) | 7.4219E-03 (2001,285,0300) | 6.9616E-03 (2001,251,0700) | 6.4281E-03 (2001,285,0500) |
| 1651 | -254.820 | -415.220 | 7.1506E-03 (2001,285,0300) | 6.4480E-03 (2001,285,0400) | 5.0112E-03 (2001,285,0500) | 4.9811E-03 (2001,285,0600) |
| 1652 | -252.576 | -415.292 | 7.6124E-03 (2001,285,0300) | 6.3043E-03 (2001,251,0700) | 6.2453E-03 (2001,285,0400) | 5.9340E-03 (2001,285,0600) |
| 1653 | -250.332 | -415.362 | 8.5672E-03 (2001,251,0700) | 8.5560E-03 (2001,251,0600) | 8.5488E-03 (2001,032,0400) | 8.0253E-03 (2001,285,0300) |
| 1654 | -248.087 | -415.432 | 8.5055E-03 (2001,251,0600) | 8.1766E-03 (2001,251,0700) | 8.0443E-03 (2001,285,0800) | 7.6224E-03 (2001,285,0300) |
| 1655 | -245.843 | -415.501 | 8.6824E-03 (2001,285,0800) | 8.5575E-03 (2001,251,0600) | 8.3092E-03 (2001,032,0600) | 7.8820E-03 (2001,251,0700) |
| 1656 | -243.598 | -415.570 | 9.1293E-03 (2001,285,0800) | 8.9018E-03 (2001,032,0600) | 8.4845E-03 (2001,251,0600) | 7.8431E-03 (2001,285,0700) |
| 1657 | -241.354 | -415.638 | 9.4565E-03 (2001,032,0600) | 9.4001E-03 (2001,285,0800) | 8.4440E-03 (2001,285,0700) | 8.3784E-03 (2001,251,0600) |
| 1658 | -239.109 | -415.705 | 9.0705E-03 (2001,285,0800) | 8.7950E-03 (2001,032,0600) | 8.5958E-03 (2001,285,0700) | 7.7070E-03 (2001,350,0400) |
| 1659 | -236.865 | -415.772 | 1.0328E-02 (2001,032,0600) | 9.3643E-03 (2001,285,0800) | 9.1642E-03 (2001,285,0700) | 8.2886E-03 (2001,032,0500) |
| 1660 | -234.620 | -415.838 | 1.0616E-02 (2001,032,0600) | 9.2390E-03 (2001,285,0700) | 9.0445E-03 (2001,285,0800) | 8.6997E-03 (2001,032,0500) |
| 1661 | -232.376 | -415.904 | 1.0793E-02 (2001,032,0600) | 9.1097E-03 (2001,285,0700) | 9.0675E-03 (2001,032,0500) | 8.5433E-03 (2001,285,0800) |
| 1662 | -230.131 | -415.969 | 1.0829E-02 (2001,032,0600) | 9.3642E-03 (2001,032,0500) | 8.7886E-03 (2001,285,0700) | 7.9283E-03 (2001,019,0500) |
| 1663 | -227.887 | -416.033 | 1.0732E-02 (2001,032,0600) | 9.5680E-03 (2001,032,0500) | 8.2910E-03 (2001,285,0700) | 7.8259E-03 (2001,019,0500) |
| 1664 | -225.642 | -416.096 | 1.0502E-02 (2001,032,0600) | 9.6535E-03 (2001,032,0500) | 7.6529E-03 (2001,019,0500) | 7.6456E-03 (2001,285,0700) |
| 1665 | -223.398 | -416.159 | 1.0149E-02 (2001,032,0600) | 9.6301E-03 (2001,032,0500) | 7.4039E-03 (2001,019,0500) | 7.2447E-03 (2001,019,0400) |
| 1666 | -221.153 | -416.222 | 9.6710E-03 (2001,032,0600) | 9.4763E-03 (2001,032,0500) | 6.9110E-03 (2001,019,0400) | 6.8692E-03 (2001,019,0500) |
| 1667 | -218.908 | -416.284 | 7.9150E-03 (2001,032,0600) | 7.9148E-03 (2001,032,0500) | 6.1704E-03 (2001,251,0800) | 5.8466E-03 (2001,350,0300) |
| 1668 | -216.664 | -416.345 | 8.7572E-03 (2001,032,0500) | 8.4265E-03 (2001,032,0600) | 6.5488E-03 (2001,251,0800) | 6.2660E-03 (2001,251,0600) |
| 1669 | -214.419 | -416.405 | 6.0049E-03 (2001,251,0800) | 5.2641E-03 (2001,031,0800) | 5.1861E-03 (2001,350,0300) | 4.7734E-03 (2001,031,0700) |
| 1670 | -212.174 | -416.465 | 5.8566E-03 (2001,251,0800) | 5.2292E-03 (2001,031,0800) | 4.9165E-03 (2001,031,0700) | 4.8321E-03 (2001,350,0300) |
| 1671 | -209.930 | -416.524 | 5.6044E-03 (2001,251,0800) | 5.1415E-03 (2001,031,0800) | 5.0127E-03 (2001,031,0700) | 4.4331E-03 (2001,350,0300) |
| 1672 | -207.685 | -416.583 | 6.2414E-03 (2001,032,0500) | 5.6424E-03 (2001,032,0600) | 5.6022E-03 (2001,251,0800) | 5.5552E-03 (2001,031,0700) |
| 1673 | -328.758 | -409.737 | 1.2221E-02 (2001,039,0800) | 1.0802E-02 (2001,018,0900) | 1.0566E-02 (2001,039,0900) | 9.8880E-03 (2001,039,0700) |
| 1674 | -326.515 | -409.829 | 1.1707E-02 (2001,039,0800) | 1.0845E-02 (2001,018,0900) | 1.0031E-02 (2001,039,0900) | 9.6507E-03 (2001,039,0700) |
| 1675 | -324.272 | -409.921 | 1.1145E-02 (2001,039,0800) | 9.4721E-03 (2001,039,0900) | 9.3560E-03 (2001,039,0700) | 9.3549E-03 (2001,018,0900) |
| 1676 | -322.029 | -410.011 | 1.0555E-02 (2001,039,0800) | 9.0190E-03 (2001,039,0700) | 8.8967E-03 (2001,039,0900) | 8.7797E-03 (2001,018,0900) |
| 1677 | -319.786 | -410.101 | 9.9416E-03 (2001,039,0800) | 9.2390E-03 (2001,018,0900) | 9.2182E-03 (2001,018,0800) | 8.6379E-03 (2001,039,0700) |
| 1678 | -317.543 | -410.191 | 9.5976E-03 (2001,018,0800) | 9.3120E-03 (2001,039,0800) | 8.9540E-03 (2001,018,0900) | 8.2180E-03 (2001,039,0700) |
| 1679 | -315.300 | -410.279 | 8.5654E-03 (2001,039,0800) | 7.9460E-03 (2001,018,0800) | 7.5620E-03 (2001,039,0700) | 7.1485E-03 (2001,039,0900) |
| 1680 | -313.057 | -410.367 | 1.0640E-02 (2001,018,0800) | 8.4949E-03 (2001,018,0900) | 8.0382E-03 (2001,039,0800) | 7.4378E-03 (2001,018,0700) |
| 1681 | -310.814 | -410.455 | 9.6608E-03 (2001,018,0800) | 7.5999E-03 (2001,018,0700) | 7.4108E-03 (2001,039,0800) | 6.8194E-03 (2001,018,0900) |
| 1682 | -308.571 | -410.542 | 9.6759E-03 (2001,018,0800) | 8.1706E-03 (2001,018,0700) | 6.7934E-03 (2001,039,0800) | 6.3134E-03 (2001,018,0900) |
| 1683 | -301.842 | -410.799 | 9.4862E-03 (2001,018,0700) | 8.9078E-03 (2001,018,0800) | 5.6693E-03 (2001,018,0600) | 5.0639E-03 (2001,039,0800) |
| 1684 | -299.599 | -410.883 | 9.9776E-03 (2001,018,0700) | 8.7611E-03 (2001,018,0800) | 6.3316E-03 (2001,018,0600) | 4.5365E-03 (2001,039,0800) |
| 1685 | -297.356 | -410.967 | 1.0482E-02 (2001,018,0700) | 8.6419E-03 (2001,018,0800) | 7.0640E-03 (2001,018,0600) | 4.7927E-03 (2001,331,0200) |
| 1686 | -295.113 | -411.050 | 1.1687E-02 (2001,018,0700) | 9.6039E-03 (2001,018,0800) | 8.3293E-03 (2001,018,0600) | 7.8699E-03 (2001,331,0200) |
| 1687 | -272.680 | -411.846 | 8.8154E-03 (2001,018,0600) | 7.7022E-03 (2001,251,0700) | 7.6529E-03 (2001,285,0400) | 6.9696E-03 (2001,285,0500) |
| 1688 | -270.436 | -411.922 | 9.2159E-03 (2001,251,0700) | 9.0525E-03 (2001,018,0600) | 8.7811E-03 (2001,285,0400) | 7.8970E-03 (2001,285,0500) |
| 1689 | -268.193 | -411.998 | 9.2765E-03 (2001,285,0400) | 9.2273E-03 (2001,251,0700) | 8.5102E-03 (2001,018,0600) | 8.1529E-03 (2001,285,0500) |
| 1690 | -265.949 | -412.073 | 9.0239E-03 (2001,285,0400) | 7.6515E-03 (2001,285,0500) | 7.5420E-03 (2001,251,0700) | 7.3319E-03 (2001,018,0600) |
| 1691 | -263.706 | -412.147 | 9.8208E-03 (2001,285,0400) | 9.5492E-03 (2001,251,0700) | 8.5647E-03 (2001,285,0500) | 7.6608E-03 (2001,018,0500) |
| 1692 | -261.462 | -412.221 | 8.7245E-03 (2001,285,0400) | 7.3252E-03 (2001,285,0500) | 7.0117E-03 (2001,285,0300) | 6.8666E-03 (2001,251,0700) |
| 1693 | -259.219 | -412.294 | 8.2551E-03 (2001,285,0400) | 7.4816E-03 (2001,285,0300) | 6.9830E-03 (2001,285,0500) | 6.4813E-03 (2001,251,0700) |
| 1694 | -256.975 | -412.366 | 8.1237E-03 (2001,285,0300) | 8.0569E-03 (2001,285,0400) | 7.5966E-03 (2001,251,0700) | 7.1366E-03 (2001,285,0500) |
| 1695 | -254.732 | -412.438 | 7.7462E-03 (2001,285,0300) | 6.6683E-03 (2001,285,0400) | 5.7403E-03 (2001,285,0500) | 5.2502E-03 (2001,251,0700) |
| 1696 | -252.488 | -412.509 | 7.9208E-03 (2001,285,0300) | 6.1104E-03 (2001,285,0400) | 5.7293E-03 (2001,285,0600) | 5.5806E-03 (2001,285,0500) |
| 1697 | -250.245 | -412.580 | 9.0060E-03 (2001,251,0600) | 8.3795E-03 (2001,285,0300) | 8.2141E-03 (2001,251,0700) | 7.3985E-03 (2001,285,0800) |
| 1698 | -248.001 | -412.650 | 9.8966E-03 (2001,251,0600) | 8.5197E-03 (2001,032,0400) | 8.3344E-03 (2001,285,0800) | 8.2726E-03 (2001,251,0700) |
| 1699 | -245.757 | -412.719 | 9.8073E-03 (2001,251,0600) | 8.8848E-03 (2001,285,0800) | 8.2790E-03 (2001,032,0400) | 8.1929E-03 (2001,032,0600) |
| 1700 | -243.514 | -412.788 | 9.6644E-03 (2001,251,0600) | 9.2694E-03 (2001,285,0800) | 8.8095E-03 (2001,032,0600) | 8.0886E-03 (2001,285,0700) |
| 1701 | -241.270 | -412.856 | 9.4887E-03 (2001,285,0800) | 9.4769E-03 (2001,251,0600) | 9.3819E-03 (2001,032,0600) | 8.7439E-03 (2001,285,0700) |
| 1702 | -239.026 | -412.923 | 9.8876E-03 (2001,032,0600) | 9.5096E-03 (2001,285,0800) | 9.2484E-03 (2001,251,0600) | 9.2392E-03 (2001,285,0700) |
| 1703 | -236.783 | -412.990 | 1.0305E-02 (2001,032,0600) | 9.5426E-03 (2001,285,0700) | 9.3223E-03 (2001,285,0800) | 9.0627E-03 (2001,032,0500) |
| 1704 | -234.539 | -413.056 | 1.0631E-02 (2001,032,0600) | 9.6326E-03 (2001,285,0700) | 9.5696E-03 (2001,032,0500) | 8.9406E-03 (2001,285,0800) |
| 1705 | -232.295 | -413.121 | 1.0827E-02 (2001,032,0600) | 1.0018E-02 (2001,032,0500) | 9.5079E-03 (2001,285,0700) | 8.4683E-03 (2001,251,0600) |
| 1706 | -230.051 | -413.186 | 1.0899E-02 (2001,032,0600) | 1.0395E-02 (2001,032,0500) | 9.1665E-03 (2001,285,0700) | 8.2596E-03 (2001,019,0500) |
| 1707 | -227.808 | -413.250 | 1.0827E-02 (2001,032,0600) | 1.0651E-02 (2001,032,0500) | 8.6413E-03 (2001,285,0700) | 8.1151E-03 (2001,019,0500) |
| 1708 | -225.564 | -413.314 | 1.0770E-02 (2001,032,0500) | 1.0628E-02 (2001,032,0600) | 7.9589E-03 (2001,285,0700) | 7.9215E-03 (2001,019,0500) |
| 1709 | -223.320 | -413.377 | 1.0779E-02 (2001,032,0500) | 1.0288E-02 (2001,032,0600) | 7.5682E-03 (2001,019,0400) | 7.5147E-03 (2001,019,0500) |
| 1710 | -221.076 | -413.439 | 1.0627E-02 (2001,032,0500) | 9.8408E-03 (2001,032,0600) | 7.0228E-03 (2001,251,0600) | 6.7606E-03 (2001,251,0800) |
| 1711 | -218.832 | -413.501 | 6.7268E-03 (2001,032,0500) | 6.3489E-03 (2001,251,0800) | 6.2633E-03 (2001,032,0600) | 6.1878E-03 (2001,350,0300) |
| 1712 | -216.588 | -413.562 | 6.3070E-03 (2001,251,0800) | 5.8643E-03 (2001,350,0300) | 5.4221E-03 (2001,031,0800) | 5.1554E-03 (2001,019,0300) |
| 1713 | -214.344 | -413.622 | 6.3270E-03 (2001,251,0800) | 5.5979E-03 (2001,350,0300) | 5.5940E-03 (2001,032,0500) | 5.5036E-03 (2001,031,0800) |
| 1714 | -212.101 | -413.682 | 6.6633E-03 (2001,032,0500) | 6.3040E-03 (2001,251,0800) | 5.7594E-03 (2001,032,0600) | 5.5986E-03 (2001,031,0800) |
| 1715 | -209.857 | -413.741 | 5.8837E-03 (2001,251,0800) | 5.2819E-03 (2001,031,0800) | 5.2231E-03 (2001,031,0700) | 4.7791E-03 (2001,350,0300) |
| 1716 | -207.613 | -413.800 | 5.5918E-03 (2001,251,0800) | 5.4761E-03 (2001,031,0700) | 5.2980E-03 (2001,031,0800) | 4.7729E-03 (2001,032,0500) |
| 1717 | -328.643 | -406.956 | 1.2597E-02 (2001,039,0800) | 1.1156E-02 (2001,018,0900) | 1.0718E-02 (2001,039,0700) | 1.0320E-02 (2001,039,0900) |
| 1718 | -326.401 | -407.048 | 1.2022E-02 (2001,039,0800) | 1.1299E-02 (2001,018,0900) | 1.0429E-02 (2001,039,0700) | 9.7614E-03 (2001,039,0900) |
| 1719 | -324.159 | -407.139 | 1.1410E-02 (2001,039,0800) | 1.0085E-02 (2001,039,0700) | 9.7302E-03 (2001,018,0900) | 9.1855E-03 (2001,039,0900) |
| 1720 | -321.917 | -407.230 | 1.0773E-02 (2001,039,0800) | 9.6923E-03 (2001,039,0700) | 9.0182E-03 (2001,018,0900) | 8.5972E-03 (2001,039,0900) |
| 1721 | -319.675 | -407.320 | 1.0113E-02 (2001,039,0800) | 9.7021E-03 (2001,018,0900) | 9.5562E-03 (2001,018,0800) | 9.2529E-03 (2001,039,0700) |
| 1722 | -317.433 | -407.409 | 1.1329E-02 (2001,018,0800) | 1.0834E-02 (2001,018,0900) | 9.4427E-03 (2001,039,0800) | 8.7776E-03 (2001,039,0700) |
| 1723 | -315.191 | -407.498 | 9.8802E-03 (2001,018,0800) | 8.7698E-03 (2001,039,0800) | 8.3702E-03 (2001,018,0900) | 8.2730E-03 (2001,039,0700) |
| 1724 | -312.949 | -407.586 | 1.2138E-02 (2001,018,0800) | 1.0021E-02 (2001,018,0900) | 8.1005E-03 (2001,039,0800) | 8.0963E-03 (2001,019,0800) |
| 1725 | -310.706 | -407.673 | 1.0871E-02 (2001,018,0800) | 8.2157E-03 (2001,018,0900) | 8.0818E-03 (2001,018,0700) | 7.4385E-03 (2001,039,0800) |
| 1726 | -308.464 | -407.760 | 9.9409E-03 (2001,018,0800) | 8.3157E-03 (2001,018,0700) | 6.7976E-03 (2001,039,0800) | 6.6419E-03 (2001,039,0700) |
| 1727 | -306.222 | -407.847 | 9.5730E-03 (2001,018,0800) | 8.7242E-03 (2001,018,0700) | 6.1793E-03 (2001,039,0800) | 6.0851E-03 (2001,039,0700) |
| 1728 | -303.980 | -407.932 | 9.2919E-03 (2001,018,0800) | 9.1665E-03 (2001,018,0700) | 5.5849E-03 (2001,039,0800) | 5.5293E-03 (2001,039,0700) |
| 1729 | -301.737 | -408.017 | 7.3616E-03 (2001,018,0700) | 6.0835E-03 (2001,018,0800) | 4.9242E-03 (2001,039,0800) | 4.5008E-03 (2001,018,0600) |
| 1730 | -299.495 | -408.101 | 5.8489E-03 (2001,018,0700) | 4.3923E-03 (2001,039,0800) | 4.3359E-03 (2001,018,0800) | 4.0205E-03 (2001,141,0700) |
| 1731 | -297.253 | -408.185 | 1.0095E-02 (2001,018,0700) | 8.0284E-03 (2001,018,0800) | 7.0074E-03 (2001,018,0600) | 4.0410E-03 (2001,331,0200) |
| 1732 | -295.010 | -408.268 | 9.9716E-03 (2001,018,0700) | 7.4081E-03 (2001,018,0600) | 7.1550E-03 (2001,018,0800) | 3.9131E-03 (2001,141,0600) |
| 1733 | -292.768 | -408.351 | 1.0680E-02 (2001,018,0700) | 8.4387E-03 (2001,018,0600) | 7.4120E-03 (2001,018,0800) | 5.3101E-03 (2001,331,0200) |
| 1734 | -286.040 | -408.594 | 1.1171E-02 (2001,018,0700) | 1.0766E-02 (2001,018,0600) | 9.1561E-03 (2001,331,0200) | 7.0791E-03 (2001,251,0700) |
| 1735 | -281.555 | -408.753 | 1.1423E-02 (2001,018,0600) | 1.0205E-02 (2001,018,0700) | 1.0150E-02 (2001,331,0200) | 8.3917E-03 (2001,251,0700) |
| 1736 | -279.313 | -408.832 | 1.1614E-02 (2001,018,0600) | 1.0843E-02 (2001,331,0200) | 9.6004E-03 (2001,018,0700) | 9.0277E-03 (2001,251,0700) |
| 1737 | -274.828 | -408.988 | 1.1675E-02 (2001,331,0200) | 1.1452E-02 (2001,018,0600) | 1.0632E-02 (2001,032,0400) | 9.9948E-03 (2001,251,0700) |
| 1738 | -272.585 | -409.064 | 9.7060E-03 (2001,018,0600) | 8.7887E-03 (2001,251,0700) | 8.0017E-03 (2001,285,0400) | 7.5236E-03 (2001,018,0500) |
| 1739 | -270.342 | -409.141 | 7.6750E-03 (2001,285,0400) | 7.3242E-03 (2001,018,0600) | 5.9604E-03 (2001,285,0500) | 5.3609E-03 (2001,018,0500) |
| 1740 | -268.100 | -409.216 | 9.3501E-03 (2001,285,0400) | 9.0319E-03 (2001,251,0700) | 8.9048E-03 (2001,018,0600) | 8.1118E-03 (2001,018,0500) |
| 1741 | -265.857 | -409.291 | 1.0018E-02 (2001,285,0400) | 9.6442E-03 (2001,251,0700) | 8.7073E-03 (2001,018,0500) | 8.6913E-03 (2001,018,0600) |
| 1742 | -263.614 | -409.365 | 1.3137E-02 (2001,032,0400) | 1.0433E-02 (2001,285,0400) | 1.0385E-02 (2001,251,0700) | 9.8380E-03 (2001,251,0600) |
| 1743 | -261.372 | -409.439 | 1.3029E-02 (2001,032,0400) | 1.0310E-02 (2001,251,0600) | 1.0185E-02 (2001,285,0400) | 1.0183E-02 (2001,251,0700) |
| 1744 | -259.129 | -409.512 | 9.4535E-03 (2001,285,0400) | 9.2915E-03 (2001,251,0600) | 9.2782E-03 (2001,251,0700) | 8.7233E-03 (2001,285,0300) |
| 1745 | -256.886 | -409.584 | 1.1194E-02 (2001,032,0400) | 1.0988E-02 (2001,251,0600) | 9.5960E-03 (2001,251,0700) | 9.2302E-03 (2001,285,0300) |
| 1746 | -254.643 | -409.656 | 8.6041E-03 (2001,285,0300) | 7.2958E-03 (2001,285,0400) | 6.8981E-03 (2001,285,0500) | 6.8665E-03 (2001,251,0700) |
| 1747 | -252.400 | -409.727 | 8.4545E-03 (2001,285,0300) | 6.3681E-03 (2001,285,0400) | 6.3619E-03 (2001,251,0700) | 6.3319E-03 (2001,285,0500) |
| 1748 | -250.158 | -409.798 | 8.2596E-03 (2001,285,0300) | 6.5866E-03 (2001,285,0800) | 6.3162E-03 (2001,251,0700) | 6.2998E-03 (2001,285,0600) |
| 1749 | -247.915 | -409.867 | 7.9728E-03 (2001,285,0300) | 7.5522E-03 (2001,285,0800) | 7.1426E-03 (2001,251,0600) | 6.7694E-03 (2001,350,0400) |
| 1750 | -245.672 | -409.937 | 1.1041E-02 (2001,251,0600) | 9.0710E-03 (2001,032,0400) | 8.9464E-03 (2001,285,0800) | 8.4499E-03 (2001,019,0500) |
| 1751 | -243.429 | -410.005 | 1.0813E-02 (2001,251,0600) | 9.2954E-03 (2001,285,0800) | 8.5436E-03 (2001,032,0600) | 8.5306E-03 (2001,019,0500) |
| 1752 | -241.186 | -410.073 | 1.0537E-02 (2001,251,0600) | 9.4590E-03 (2001,285,0800) | 9.1251E-03 (2001,032,0600) | 9.0829E-03 (2001,285,0700) |
| 1753 | -238.943 | -410.141 | 1.0218E-02 (2001,251,0600) | 9.6463E-03 (2001,032,0600) | 9.6090E-03 (2001,285,0700) | 9.4242E-03 (2001,285,0800) |

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|---|---|---|---|---|---|---|
| 1754 | -236.700 | -410.207 | 1.0088E-02 (2001,032,0600) | 9.9278E-03 (2001,285,0700) | 9.8633E-03 (2001,251,0600) | 9.7501E-03 (2001,032,0500) |
| 1755 | -234.457 | -410.273 | 1.0431E-02 (2001,032,0600) | 1.0359E-02 (2001,032,0500) | 1.0022E-02 (2001,285,0700) | 9.5053E-03 (2001,251,0600) |
| 1756 | -232.214 | -410.339 | 1.0904E-02 (2001,032,0500) | 1.0660E-02 (2001,032,0600) | 9.8810E-03 (2001,285,0700) | 9.1389E-03 (2001,251,0600) |
| 1757 | -229.971 | -410.404 | 1.1343E-02 (2001,032,0500) | 1.0760E-02 (2001,032,0600) | 9.5119E-03 (2001,285,0700) | 8.7709E-03 (2001,251,0600) |
| 1758 | -227.728 | -410.468 | 1.1662E-02 (2001,032,0500) | 1.0724E-02 (2001,032,0600) | 8.9517E-03 (2001,285,0700) | 8.3902E-03 (2001,251,0600) |
| 1759 | -225.485 | -410.531 | 1.1841E-02 (2001,032,0500) | 1.0547E-02 (2001,032,0600) | 8.2344E-03 (2001,019,0400) | 8.2275E-03 (2001,285,0700) |
| 1760 | -223.242 | -410.594 | 1.1859E-02 (2001,032,0500) | 1.0257E-02 (2001,032,0600) | 8.0812E-03 (2001,019,0400) | 7.8420E-03 (2001,019,0500) |
| 1761 | -220.999 | -410.657 | 1.0638E-02 (2001,032,0500) | 8.9976E-03 (2001,032,0600) | 7.0026E-03 (2001,350,0400) | 6.9598E-03 (2001,251,0700) |
| 1762 | -218.756 | -410.718 | 7.9559E-03 (2001,032,0500) | 6.6960E-03 (2001,032,0600) | 6.6504E-03 (2001,350,0300) | 6.5357E-03 (2001,251,0800) |
| 1763 | -216.513 | -410.779 | 6.5811E-03 (2001,251,0800) | 6.3111E-03 (2001,350,0300) | 5.9909E-03 (2001,032,0500) | 5.6919E-03 (2001,031,0800) |
| 1764 | -214.270 | -410.840 | 6.5095E-03 (2001,251,0800) | 5.8946E-03 (2001,350,0300) | 5.5004E-03 (2001,031,0800) | 5.0936E-03 (2001,031,0700) |
| 1765 | -212.027 | -410.900 | 6.3918E-03 (2001,251,0800) | 5.5335E-03 (2001,350,0300) | 5.4658E-03 (2001,031,0800) | 5.2539E-03 (2001,031,0700) |
| 1766 | -209.784 | -410.959 | 8.5564E-03 (2001,032,0500) | 6.7210E-03 (2001,032,0600) | 6.5481E-03 (2001,251,0800) | 6.2899E-03 (2001,251,0700) |
| 1767 | -328.529 | -404.175 | 1.2836E-02 (2001,039,0800) | 1.1525E-02 (2001,018,0900) | 1.1520E-02 (2001,039,0700) | 9.9514E-03 (2001,039,0900) |
| 1768 | -326.288 | -404.267 | 1.2212E-02 (2001,039,0800) | 1.1521E-02 (2001,018,0900) | 1.1173E-02 (2001,039,0700) | 9.3767E-03 (2001,039,0900) |
| 1769 | -324.047 | -404.358 | 1.1551E-02 (2001,039,0800) | 1.0768E-02 (2001,039,0700) | 1.0592E-02 (2001,018,0900) | 8.7998E-03 (2001,018,0800) |
| 1770 | -317.323 | -404.628 | 1.1524E-02 (2001,018,0800) | 1.1189E-02 (2001,018,0900) | 9.4600E-03 (2001,039,0800) | 9.2787E-03 (2001,039,0700) |
| 1771 | -315.081 | -404.717 | 1.2048E-02 (2001,018,0800) | 1.0881E-02 (2001,018,0900) | 8.7530E-03 (2001,039,0800) | 8.7149E-03 (2001,039,0700) |
| 1772 | -312.840 | -404.805 | 1.2417E-02 (2001,018,0800) | 1.0412E-02 (2001,018,0900) | 8.2857E-03 (2001,019,0800) | 8.1310E-03 (2001,039,0700) |
| 1773 | -310.598 | -404.892 | 1.1497E-02 (2001,018,0800) | 8.8650E-03 (2001,018,0900) | 8.2907E-03 (2001,018,0700) | 7.5336E-03 (2001,039,0700) |
| 1774 | -308.357 | -404.979 | 1.0462E-02 (2001,018,0800) | 8.5192E-03 (2001,018,0700) | 7.1434E-03 (2001,018,0900) | 6.9277E-03 (2001,039,0700) |
| 1775 | -306.115 | -405.065 | 1.1284E-02 (2001,018,0800) | 9.4635E-03 (2001,018,0700) | 7.4763E-03 (2001,018,0900) | 6.3250E-03 (2001,039,0700) |
| 1776 | -303.874 | -405.151 | 8.7144E-03 (2001,018,0700) | 8.5055E-03 (2001,018,0800) | 5.6018E-03 (2001,039,0700) | 5.3867E-03 (2001,039,0800) |
| 1777 | -301.632 | -405.236 | 9.4216E-03 (2001,018,0700) | 8.7420E-03 (2001,018,0800) | 5.8883E-03 (2001,018,0600) | 5.1464E-03 (2001,039,0700) |
| 1778 | -299.391 | -405.320 | 1.1725E-02 (2001,018,0700) | 1.1632E-02 (2001,018,0800) | 7.9432E-03 (2001,350,0800) | 7.6136E-03 (2001,018,0600) |
| 1779 | -297.149 | -405.404 | 1.0636E-02 (2001,018,0700) | 8.7743E-03 (2001,018,0800) | 7.5111E-03 (2001,018,0600) | 4.5558E-03 (2001,331,0200) |
| 1780 | -294.907 | -405.487 | 9.0156E-03 (2001,018,0700) | 6.5791E-03 (2001,018,0600) | 6.1746E-03 (2001,018,0800) | 4.1502E-03 (2001,141,0600) |
| 1781 | -292.666 | -405.569 | 9.2918E-03 (2001,018,0700) | 7.3028E-03 (2001,018,0600) | 6.0692E-03 (2001,018,0800) | 4.5016E-03 (2001,141,0600) |
| 1782 | -290.424 | -405.651 | 1.0399E-02 (2001,018,0700) | 9.0723E-03 (2001,018,0600) | 6.5321E-03 (2001,018,0800) | 5.2383E-03 (2001,251,0700) |
| 1783 | -288.182 | -405.732 | 1.0635E-02 (2001,018,0700) | 9.9185E-03 (2001,018,0600) | 6.3490E-03 (2001,018,0800) | 6.0642E-03 (2001,331,0200) |
| 1784 | -285.941 | -405.812 | 9.8997E-03 (2001,018,0600) | 9.7816E-03 (2001,018,0700) | 6.0571E-03 (2001,251,0700) | 5.4838E-03 (2001,331,0200) |
| 1785 | -283.699 | -405.892 | 1.0487E-02 (2001,018,0600) | 9.6314E-03 (2001,018,0700) | 7.0302E-03 (2001,251,0700) | 6.1463E-03 (2001,331,0200) |
| 1786 | -281.457 | -405.972 | 1.0252E-02 (2001,018,0600) | 8.6404E-03 (2001,018,0700) | 6.8559E-03 (2001,251,0700) | 6.1594E-03 (2001,018,0500) |
| 1787 | -279.216 | -406.050 | 1.2197E-02 (2001,018,0600) | 1.0539E-02 (2001,331,0200) | 9.8701E-03 (2001,018,0700) | 8.8414E-03 (2001,251,0700) |
| 1788 | -274.732 | -406.206 | 1.2131E-02 (2001,018,0600) | 1.1522E-02 (2001,331,0200) | 1.0385E-02 (2001,032,0400) | 9.8328E-03 (2001,251,0700) |
| 1789 | -272.490 | -406.282 | 1.0033E-02 (2001,018,0600) | 8.4854E-03 (2001,251,0700) | 8.0694E-03 (2001,018,0500) | 7.9248E-03 (2001,285,0400) |
| 1790 | -270.248 | -406.359 | 1.0420E-02 (2001,018,0600) | 9.3303E-03 (2001,251,0700) | 9.2736E-03 (2001,018,0500) | 9.2113E-03 (2001,285,0400) |
| 1791 | -268.006 | -406.434 | 8.3140E-03 (2001,285,0400) | 7.4511E-03 (2001,018,0600) | 6.3139E-03 (2001,018,0500) | 6.0884E-03 (2001,251,0700) |
| 1792 | -265.764 | -406.509 | 1.0113E-02 (2001,285,0400) | 9.5719E-03 (2001,018,0500) | 9.2446E-03 (2001,251,0700) | 9.0990E-03 (2001,018,0600) |
| 1793 | -263.523 | -406.583 | 1.0192E-02 (2001,285,0400) | 9.5507E-03 (2001,018,0500) | 9.1013E-03 (2001,251,0700) | 8.8997E-03 (2001,251,0600) |
| 1794 | -261.281 | -406.657 | 1.1708E-02 (2001,251,0600) | 1.1701E-02 (2001,032,0400) | 1.0397E-02 (2001,285,0400) | 1.0041E-02 (2001,018,0500) |
| 1795 | -259.039 | -406.730 | 1.3205E-02 (2001,032,0400) | 1.2188E-02 (2001,251,0600) | 9.9409E-03 (2001,285,0400) | 9.7480E-03 (2001,018,0500) |
| 1796 | -256.797 | -406.802 | 1.2813E-02 (2001,032,0400) | 1.2459E-02 (2001,251,0600) | 9.7456E-03 (2001,285,0300) | 9.2882E-03 (2001,251,0700) |
| 1797 | -254.555 | -406.874 | 9.9872E-03 (2001,251,0600) | 9.4688E-03 (2001,285,0300) | 8.1112E-03 (2001,018,0500) | 8.0173E-03 (2001,285,0400) |
| 1798 | -252.313 | -406.945 | 1.2666E-02 (2001,251,0600) | 1.1669E-02 (2001,032,0400) | 9.5917E-03 (2001,285,0300) | 9.2170E-03 (2001,032,0300) |
| 1799 | -250.071 | -407.015 | 1.2606E-02 (2001,251,0600) | 1.1005E-02 (2001,032,0400) | 9.1623E-03 (2001,032,0300) | 9.1592E-03 (2001,285,0300) |
| 1800 | -247.828 | -407.085 | 1.2445E-02 (2001,251,0600) | 1.0355E-02 (2001,032,0400) | 8.9700E-03 (2001,032,0300) | 8.5298E-03 (2001,285,0300) |
| 1801 | -245.586 | -407.154 | 1.2196E-02 (2001,251,0600) | 9.7467E-03 (2001,032,0400) | 8.9551E-03 (2001,285,0800) | 8.6172E-03 (2001,032,0300) |
| 1802 | -243.344 | -407.223 | 1.1872E-02 (2001,251,0600) | 9.2384E-03 (2001,285,0800) | 9.2215E-03 (2001,032,0400) | 9.0368E-03 (2001,019,0500) |
| 1803 | -241.102 | -407.291 | 1.1494E-02 (2001,251,0600) | 9.4576E-03 (2001,285,0700) | 9.3433E-03 (2001,285,0800) | 9.0577E-03 (2001,019,0500) |
| 1804 | -238.860 | -407.358 | 1.1075E-02 (2001,251,0600) | 1.0003E-02 (2001,285,0700) | 9.5841E-03 (2001,032,0500) | 9.2498E-03 (2001,285,0800) |
| 1805 | -236.618 | -407.425 | 1.0627E-02 (2001,251,0600) | 1.0326E-02 (2001,285,0700) | 1.0319E-02 (2001,032,0500) | 9.6722E-03 (2001,032,0600) |
| 1806 | -234.376 | -407.491 | 1.1023E-02 (2001,032,0500) | 1.0409E-02 (2001,285,0700) | 1.0173E-02 (2001,251,0600) | 1.0035E-02 (2001,032,0600) |
| 1807 | -232.133 | -407.557 | 1.1648E-02 (2001,032,0500) | 1.0286E-02 (2001,032,0600) | 1.0241E-02 (2001,285,0700) | 9.7113E-03 (2001,251,0600) |
| 1808 | -229.891 | -407.621 | 1.2177E-02 (2001,032,0500) | 1.0413E-02 (2001,032,0600) | 9.8362E-03 (2001,285,0700) | 9.2529E-03 (2001,251,0600) |
| 1809 | -227.649 | -407.685 | 1.2562E-02 (2001,032,0500) | 1.0405E-02 (2001,032,0600) | 9.2234E-03 (2001,285,0700) | 8.8946E-03 (2001,350,0400) |
| 1810 | -225.407 | -407.749 | 1.2784E-02 (2001,032,0500) | 1.0284E-02 (2001,032,0600) | 8.6670E-03 (2001,019,0400) | 8.5844E-03 (2001,350,0400) |
| 1811 | -223.165 | -407.812 | 1.2843E-02 (2001,032,0500) | 1.0030E-02 (2001,032,0600) | 8.4904E-03 (2001,019,0400) | 8.1713E-03 (2001,350,0400) |
| 1812 | -220.922 | -407.874 | 1.2703E-02 (2001,032,0500) | 9.6821E-03 (2001,032,0600) | 8.2435E-03 (2001,019,0400) | 8.0901E-03 (2001,251,0700) |
| 1813 | -218.680 | -407.936 | 1.2369E-02 (2001,032,0500) | 9.2389E-03 (2001,032,0600) | 8.1012E-03 (2001,251,0700) | 7.9164E-03 (2001,019,0400) |
| 1814 | -216.438 | -407.997 | 1.1425E-02 (2001,032,0500) | 8.4210E-03 (2001,032,0600) | 7.9073E-03 (2001,251,0700) | 7.3830E-03 (2001,251,0800) |
| 1815 | -214.195 | -408.057 | 7.5393E-03 (2001,032,0500) | 6.9826E-03 (2001,251,0800) | 6.5188E-03 (2001,350,0300) | 6.2417E-03 (2001,251,0700) |
| 1816 | -211.953 | -408.117 | 5.6221E-03 (2001,251,0800) | 5.1999E-03 (2001,031,0800) | 5.0610E-03 (2001,031,0700) | 4.4383E-03 (2001,019,0300) |
| 1817 | -317.212 | -401.847 | 1.0879E-02 (2001,018,0800) | 1.0651E-02 (2001,018,0900) | 9.6994E-03 (2001,039,0700) | 9.3472E-03 (2001,039,0800) |
| 1818 | -314.971 | -401.935 | 1.2373E-02 (2001,018,0800) | 1.1307E-02 (2001,018,0900) | 9.3298E-03 (2001,019,0800) | 9.0778E-03 (2001,039,0700) |
| 1819 | -312.731 | -402.023 | 1.2801E-02 (2001,018,0800) | 1.0855E-02 (2001,018,0900) | 8.9924E-03 (2001,019,0800) | 8.4363E-03 (2001,039,0700) |
| 1820 | -310.490 | -402.111 | 1.3019E-02 (2001,018,0800) | 1.0226E-02 (2001,018,0900) | 8.7953E-03 (2001,018,0700) | 8.5373E-03 (2001,350,0800) |
| 1821 | -308.249 | -402.198 | 1.3014E-02 (2001,018,0800) | 9.4861E-03 (2001,018,0700) | 9.4481E-03 (2001,018,0900) | 8.3156E-03 (2001,350,0800) |
| 1822 | -306.009 | -402.284 | 9.9801E-03 (2001,018,0800) | 8.8131E-03 (2001,018,0700) | 6.8366E-03 (2001,032,0900) | 6.4955E-03 (2001,039,0700) |
| 1823 | -303.768 | -402.369 | 8.3890E-03 (2001,018,0700) | 8.2233E-03 (2001,018,0800) | 6.1548E-03 (2001,032,0900) | 5.6584E-03 (2001,039,0700) |
| 1824 | -301.527 | -402.454 | 1.1564E-02 (2001,018,0800) | 1.0848E-02 (2001,018,0700) | 6.8655E-03 (2001,032,0900) | 6.7319E-03 (2001,018,0600) |
| 1825 | -299.286 | -402.538 | 1.0290E-02 (2001,018,0700) | 9.2587E-03 (2001,018,0800) | 6.9274E-03 (2001,018,0600) | 5.9933E-03 (2001,032,0900) |
| 1826 | -297.046 | -402.622 | 1.2279E-02 (2001,018,0700) | 1.1589E-02 (2001,018,0800) | 8.5864E-03 (2001,018,0600) | 8.0088E-03 (2001,350,0800) |
| 1827 | -294.805 | -402.705 | 1.2104E-02 (2001,018,0700) | 1.0368E-02 (2001,018,0800) | 9.1028E-03 (2001,018,0600) | 6.8980E-03 (2001,331,0200) |
| 1828 | -292.564 | -402.787 | 1.0244E-02 (2001,018,0700) | 8.5327E-03 (2001,018,0600) | 6.9138E-03 (2001,018,0800) | 4.9842E-03 (2001,141,0600) |
| 1829 | -290.323 | -402.869 | 1.0628E-02 (2001,018,0700) | 9.4453E-03 (2001,018,0600) | 6.8259E-03 (2001,018,0800) | 5.3036E-03 (2001,141,0600) |
| 1830 | -288.082 | -402.950 | 1.0089E-02 (2001,018,0700) | 9.7110E-03 (2001,018,0600) | 5.8065E-03 (2001,018,0800) | 5.4287E-03 (2001,141,0600) |
| 1831 | -285.841 | -403.031 | 1.0472E-02 (2001,018,0600) | 1.0150E-02 (2001,018,0700) | 6.2052E-03 (2001,251,0700) | 5.7547E-03 (2001,018,0500) |
| 1832 | -283.600 | -403.111 | 8.9309E-03 (2001,018,0600) | 8.1904E-03 (2001,018,0700) | 5.5536E-03 (2001,251,0700) | 5.3981E-03 (2001,141,0600) |
| 1833 | -281.359 | -403.190 | 1.0881E-02 (2001,018,0600) | 8.9796E-03 (2001,018,0700) | 7.1250E-03 (2001,251,0700) | 6.7799E-03 (2001,018,0500) |
| 1834 | -279.118 | -403.269 | 1.2251E-02 (2001,018,0600) | 9.6765E-03 (2001,018,0700) | 8.5561E-03 (2001,331,0200) | 8.3999E-03 (2001,018,0500) |
| 1835 | -276.877 | -403.347 | 1.2861E-02 (2001,018,0600) | 1.0967E-02 (2001,331,0200) | 9.5896E-03 (2001,018,0500) | 9.5158E-03 (2001,018,0700) |
| 1836 | -272.395 | -403.501 | 1.2339E-02 (2001,018,0600) | 1.0917E-02 (2001,331,0200) | 1.0744E-02 (2001,018,0500) | 1.0697E-02 (2001,032,0400) |
| 1837 | -270.154 | -403.577 | 1.2002E-02 (2001,032,0400) | 1.1827E-02 (2001,018,0600) | 1.1169E-02 (2001,018,0500) | 1.0854E-02 (2001,331,0200) |
| 1838 | -267.913 | -403.652 | 9.7813E-03 (2001,018,0600) | 9.7660E-03 (2001,018,0500) | 9.4593E-03 (2001,285,0400) | 8.3480E-03 (2001,251,0700) |
| 1839 | -265.672 | -403.727 | 8.3593E-03 (2001,285,0400) | 6.9880E-03 (2001,018,0600) | 6.5373E-03 (2001,018,0500) | 6.1346E-03 (2001,285,0300) |
| 1840 | -263.431 | -403.801 | 1.0595E-02 (2001,018,0500) | 1.0359E-02 (2001,285,0400) | 1.0205E-02 (2001,251,0600) | 8.7659E-03 (2001,018,0600) |
| 1841 | -261.190 | -403.875 | 1.1788E-02 (2001,251,0600) | 1.0779E-02 (2001,018,0500) | 1.0397E-02 (2001,285,0400) | 9.1405E-03 (2001,285,0300) |
| 1842 | -258.948 | -403.948 | 1.3619E-02 (2001,251,0600) | 1.3350E-02 (2001,032,0400) | 1.0866E-02 (2001,018,0500) | 1.0190E-02 (2001,285,0400) |
| 1843 | -256.707 | -404.020 | 1.3859E-02 (2001,251,0600) | 1.2982E-02 (2001,032,0400) | 1.0365E-02 (2001,032,0300) | 1.0332E-02 (2001,018,0500) |
| 1844 | -254.466 | -404.092 | 1.3973E-02 (2001,251,0600) | 1.2512E-02 (2001,032,0400) | 1.0693E-02 (2001,032,0300) | 1.0153E-02 (2001,285,0300) |
| 1845 | -252.225 | -404.163 | 1.3951E-02 (2001,251,0600) | 1.1952E-02 (2001,032,0400) | 1.0849E-02 (2001,032,0300) | 9.8781E-03 (2001,285,0300) |
| 1846 | -249.984 | -404.233 | 1.3809E-02 (2001,251,0600) | 1.1362E-02 (2001,032,0400) | 1.0835E-02 (2001,032,0300) | 9.5359E-03 (2001,019,0500) |
| 1847 | -247.742 | -404.303 | 1.3563E-02 (2001,251,0600) | 1.0787E-02 (2001,032,0400) | 1.0629E-02 (2001,032,0300) | 9.5260E-03 (2001,019,0500) |
| 1848 | -245.501 | -404.372 | 1.3218E-02 (2001,251,0600) | 1.0275E-02 (2001,032,0400) | 1.0270E-02 (2001,032,0300) | 9.5290E-03 (2001,019,0500) |
| 1849 | -243.260 | -404.441 | 1.2793E-02 (2001,251,0600) | 9.8475E-03 (2001,032,0400) | 9.7476E-03 (2001,032,0300) | 9.5119E-03 (2001,019,0500) |
| 1850 | -241.018 | -404.509 | 1.2313E-02 (2001,251,0600) | 9.8821E-03 (2001,285,0700) | 9.5288E-03 (2001,032,0400) | 9.4959E-03 (2001,019,0500) |
| 1851 | -238.777 | -404.576 | 1.1780E-02 (2001,251,0600) | 1.0430E-02 (2001,285,0700) | 9.8910E-03 (2001,032,0500) | 9.4961E-03 (2001,350,0400) |
| 1852 | -236.536 | -404.643 | 1.1239E-02 (2001,251,0600) | 1.0740E-02 (2001,285,0700) | 1.0726E-02 (2001,032,0500) | 9.6814E-03 (2001,350,0400) |
| 1853 | -234.294 | -404.709 | 1.1512E-02 (2001,032,0500) | 1.0791E-02 (2001,285,0700) | 1.0691E-02 (2001,251,0600) | 9.7631E-03 (2001,350,0400) |
| 1854 | -232.053 | -404.774 | 1.2234E-02 (2001,032,0500) | 1.0577E-02 (2001,285,0700) | 1.0141E-02 (2001,251,0600) | 9.7312E-03 (2001,350,0400) |
| 1855 | -229.811 | -404.839 | 1.2834E-02 (2001,032,0500) | 1.0113E-02 (2001,285,0700) | 9.8663E-03 (2001,032,0600) | 9.6145E-03 (2001,350,0400) |
| 1856 | -211.879 | -405.335 | 5.3809E-03 (2001,031,0800) | 5.3336E-03 (2001,251,0800) | 5.2841E-03 (2001,031,0700) | 4.6406E-03 (2001,285,0200) |
| 1857 | -314.862 | -399.154 | 1.2701E-02 (2001,018,0800) | 1.1706E-02 (2001,018,0900) | 9.5522E-03 (2001,342,0200) | 9.4007E-03 (2001,019,0800) |
| 1858 | -312.622 | -399.242 | 1.3088E-02 (2001,018,0800) | 1.1146E-02 (2001,018,0900) | 8.8101E-03 (2001,342,0200) | 8.6890E-03 (2001,019,0800) |
| 1859 | -310.382 | -399.330 | 1.3339E-02 (2001,018,0800) | 1.0500E-02 (2001,018,0900) | 8.9780E-03 (2001,032,0900) | 8.7238E-03 (2001,018,0700) |
| 1860 | -308.142 | -399.416 | 1.3443E-02 (2001,018,0800) | 9.7854E-03 (2001,018,0900) | 9.4647E-03 (2001,018,0700) | 9.1286E-03 (2001,032,0900) |
| 1861 | -305.902 | -399.502 | 1.1101E-02 (2001,018,0800) | 9.2153E-03 (2001,018,0700) | 8.4967E-03 (2001,032,0900) | 7.7409E-03 (2001,018,0900) |
| 1862 | -303.662 | -399.588 | 9.5294E-03 (2001,018,0800) | 9.0684E-03 (2001,018,0700) | 7.8663E-03 (2001,032,0900) | 5.9166E-03 (2001,039,0700) |
| 1863 | -301.422 | -399.673 | 1.2299E-02 (2001,018,0800) | 1.1079E-02 (2001,018,0700) | 8.3964E-03 (2001,032,0900) | 7.0629E-03 (2001,018,0900) |
| 1864 | -299.182 | -399.757 | 1.2791E-02 (2001,018,0800) | 1.2114E-02 (2001,018,0700) | 8.7079E-03 (2001,350,0800) | 8.3038E-03 (2001,019,0700) |
| 1865 | -296.942 | -399.841 | 1.2595E-02 (2001,018,0700) | 1.2340E-02 (2001,018,0800) | 8.8190E-03 (2001,018,0600) | 8.7628E-03 (2001,350,0800) |
| 1866 | -294.702 | -399.924 | 1.2756E-02 (2001,018,0700) | 1.1510E-02 (2001,018,0800) | 9.5680E-03 (2001,018,0600) | 8.4070E-03 (2001,350,0700) |
| 1867 | -292.462 | -400.006 | 1.2182E-02 (2001,018,0700) | 9.9112E-03 (2001,018,0600) | 9.8606E-03 (2001,018,0800) | 6.6991E-03 (2001,331,0200) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1868 | -290.222 | -400.088 | 1.1006E-02 (2001,018,0700) | 9.8722E-03 (2001,018,0600) | 7.3734E-03 (2001,018,0800) | 5.6796E-03 (2001,141,0600) |
| 1869 | -287.982 | -400.169 | 9.5138E-03 (2001,018,0700) | 9.2502E-03 (2001,018,0600) | 5.5689E-03 (2001,141,0600) | 5.3557E-03 (2001,018,0800) |
| 1870 | -285.742 | -400.249 | 8.5960E-03 (2001,018,0600) | 8.1619E-03 (2001,018,0700) | 5.3970E-03 (2001,141,0600) | 4.1863E-03 (2001,018,0500) |
| 1871 | -283.502 | -400.329 | 8.1160E-03 (2001,018,0600) | 6.6381E-03 (2001,018,0700) | 5.3925E-03 (2001,141,0600) | 4.5502E-03 (2001,018,0500) |
| 1872 | -281.261 | -400.408 | 1.1632E-02 (2001,018,0600) | 9.5430E-03 (2001,018,0700) | 7.5277E-03 (2001,018,0500) | 6.8024E-03 (2001,251,0700) |
| 1873 | -279.021 | -400.487 | 1.0777E-02 (2001,018,0600) | 7.9507E-03 (2001,018,0700) | 7.3081E-03 (2001,018,0500) | 6.3885E-03 (2001,251,0700) |
| 1874 | -276.781 | -400.565 | 1.2329E-02 (2001,018,0600) | 9.3475E-03 (2001,018,0500) | 8.8627E-03 (2001,018,0700) | 7.7709E-03 (2001,251,0700) |
| 1875 | -274.541 | -400.642 | 1.3357E-02 (2001,018,0600) | 1.1429E-02 (2001,331,0200) | 1.1138E-02 (2001,018,0500) | 1.0333E-02 (2001,032,0400) |
| 1876 | -272.300 | -400.719 | 1.1754E-02 (2001,018,0600) | 1.0419E-02 (2001,018,0500) | 8.5564E-03 (2001,251,0600) | 8.1585E-03 (2001,285,0400) |
| 1877 | -270.060 | -400.795 | 1.2396E-02 (2001,018,0600) | 1.2166E-02 (2001,018,0500) | 1.2082E-02 (2001,032,0400) | 1.1773E-02 (2001,251,0600) |
| 1878 | -267.820 | -400.870 | 1.2440E-02 (2001,251,0600) | 1.2319E-02 (2001,018,0500) | 1.1537E-02 (2001,018,0600) | 1.0635E-02 (2001,032,0400) |
| 1879 | -265.579 | -400.945 | 8.3832E-03 (2001,285,0400) | 7.3489E-03 (2001,018,0600) | 7.2756E-03 (2001,018,0500) | 6.4073E-03 (2001,285,0300) |
| 1880 | -263.339 | -401.019 | 9.3401E-03 (2001,018,0500) | 9.1649E-03 (2001,285,0400) | 7.7291E-03 (2001,018,0600) | 7.6504E-03 (2001,285,0300) |
| 1881 | -261.099 | -401.093 | 1.1333E-02 (2001,251,0600) | 1.1281E-02 (2001,018,0500) | 1.0249E-02 (2001,285,0400) | 9.2790E-03 (2001,285,0300) |
| 1882 | -258.858 | -401.166 | 1.4494E-02 (2001,251,0600) | 1.1791E-02 (2001,018,0500) | 1.0793E-02 (2001,032,0400) | 1.0328E-02 (2001,285,0400) |
| 1883 | -256.618 | -401.238 | 1.5113E-02 (2001,251,0600) | 1.2844E-02 (2001,032,0400) | 1.1858E-02 (2001,032,0300) | 1.1399E-02 (2001,018,0500) |
| 1884 | -216.287 | -402.432 | 1.3015E-02 (2001,032,0500) | 1.0081E-02 (2001,251,0700) | 9.9168E-03 (2001,032,0400) | 8.9622E-03 (2001,251,0800) |
| 1885 | -214.046 | -402.493 | 5.6875E-03 (2001,031,0800) | 5.4330E-03 (2001,031,0700) | 5.2719E-03 (2001,251,0800) | 5.0073E-03 (2001,350,0300) |
| 1886 | -211.805 | -402.552 | 1.0039E-02 (2001,032,0500) | 8.7804E-03 (2001,251,0700) | 7.5416E-03 (2001,032,0400) | 7.3108E-03 (2001,350,0300) |
| 1887 | -314.752 | -396.373 | 1.2979E-02 (2001,018,0800) | 1.1951E-02 (2001,018,0900) | 1.0091E-02 (2001,342,0200) | 9.4913E-03 (2001,039,0700) |
| 1888 | -312.513 | -396.461 | 1.3471E-02 (2001,018,0800) | 1.1457E-02 (2001,018,0900) | 1.0052E-02 (2001,032,0900) | 9.4951E-03 (2001,342,0200) |
| 1889 | -310.274 | -396.548 | 1.3776E-02 (2001,018,0800) | 1.0797E-02 (2001,018,0900) | 1.0459E-02 (2001,032,0900) | 9.3065E-03 (2001,032,1000) |
| 1890 | -308.035 | -396.635 | 1.3939E-02 (2001,018,0800) | 1.0697E-02 (2001,032,0900) | 1.0088E-02 (2001,018,0900) | 9.4369E-03 (2001,018,0700) |
| 1891 | -305.796 | -396.721 | 1.0865E-02 (2001,018,0800) | 9.8356E-03 (2001,032,0900) | 8.8956E-03 (2001,018,0700) | 6.9871E-03 (2001,018,0900) |
| 1892 | -303.556 | -396.807 | 1.3691E-02 (2001,018,0800) | 1.0834E-02 (2001,018,0700) | 1.0540E-02 (2001,032,0900) | 8.4337E-03 (2001,018,0900) |
| 1893 | -301.317 | -396.892 | 1.2390E-02 (2001,018,0800) | 1.0901E-02 (2001,018,0700) | 9.8192E-03 (2001,032,0900) | 7.0640E-03 (2001,018,0900) |
| 1894 | -299.078 | -396.976 | 1.3424E-02 (2001,018,0800) | 1.2266E-02 (2001,018,0700) | 9.7401E-03 (2001,032,0900) | 9.0099E-03 (2001,350,0800) |
| 1895 | -296.839 | -397.059 | 1.2928E-02 (2001,018,0800) | 1.2744E-02 (2001,018,0700) | 9.0143E-03 (2001,019,0700) | 9.0142E-03 (2001,032,0900) |
| 1896 | -294.599 | -397.142 | 1.2685E-02 (2001,018,0700) | 1.1706E-02 (2001,018,0800) | 9.5359E-03 (2001,018,0600) | 7.9597E-03 (2001,032,0900) |
| 1897 | -292.360 | -397.225 | 1.1461E-02 (2001,018,0700) | 9.5443E-03 (2001,018,0600) | 8.7805E-03 (2001,018,0800) | 6.5121E-03 (2001,032,0900) |
| 1898 | -290.121 | -397.306 | 1.1223E-02 (2001,018,0700) | 1.0100E-02 (2001,018,0600) | 7.8005E-03 (2001,018,0800) | 5.9908E-03 (2001,141,0600) |
| 1899 | -287.882 | -397.387 | 1.2539E-02 (2001,018,0700) | 1.1675E-02 (2001,018,0600) | 9.0650E-03 (2001,018,0800) | 7.6985E-03 (2001,331,0200) |
| 1900 | -285.642 | -397.468 | 1.1750E-02 (2001,018,0600) | 1.1560E-02 (2001,018,0700) | 7.5285E-03 (2001,018,0800) | 6.8580E-03 (2001,018,0500) |
| 1901 | -283.403 | -397.548 | 1.1381E-02 (2001,018,0600) | 9.9784E-03 (2001,018,0700) | 7.0117E-03 (2001,018,0500) | 5.9873E-03 (2001,141,0600) |
| 1902 | -281.163 | -397.627 | 1.1384E-02 (2001,018,0600) | 9.1305E-03 (2001,018,0700) | 7.4768E-03 (2001,018,0500) | 6.0011E-03 (2001,251,0700) |
| 1903 | -278.924 | -397.705 | 1.1963E-02 (2001,018,0600) | 8.9642E-03 (2001,018,0700) | 8.5412E-03 (2001,018,0500) | 6.4598E-03 (2001,251,0700) |
| 1904 | -276.684 | -397.783 | 1.2092E-02 (2001,018,0600) | 9.3465E-03 (2001,018,0500) | 8.3870E-03 (2001,018,0700) | 7.2675E-03 (2001,251,0600) |
| 1905 | -274.445 | -397.861 | 1.1561E-02 (2001,018,0600) | 9.5996E-03 (2001,018,0500) | 7.2802E-03 (2001,018,0700) | 7.0182E-03 (2001,251,0600) |
| 1906 | -272.206 | -397.937 | 1.2085E-02 (2001,018,0600) | 1.1072E-02 (2001,018,0500) | 9.3290E-03 (2001,251,0600) | 7.8529E-03 (2001,285,0400) |
| 1907 | -269.966 | -398.013 | 1.0815E-02 (2001,018,0600) | 1.0625E-02 (2001,018,0500) | 8.3082E-03 (2001,285,0400) | 8.0181E-03 (2001,251,0600) |
| 1908 | -267.726 | -398.089 | 7.5911E-03 (2001,285,0400) | 6.2174E-03 (2001,018,0600) | 6.0112E-03 (2001,018,0500) | 5.5844E-03 (2001,285,0300) |
| 1909 | -265.487 | -398.164 | 8.0341E-03 (2001,285,0400) | 7.4035E-03 (2001,018,0500) | 7.3776E-03 (2001,018,0600) | 6.4549E-03 (2001,285,0300) |
| 1910 | -263.247 | -398.238 | 1.3005E-02 (2001,251,0600) | 1.2772E-02 (2001,018,0500) | 1.0520E-02 (2001,285,0400) | 9.6965E-03 (2001,018,0600) |
| 1911 | -261.008 | -398.311 | 1.0877E-02 (2001,018,0500) | 9.6096E-03 (2001,285,0400) | 8.9884E-03 (2001,285,0300) | 8.4984E-03 (2001,251,0600) |
| 1912 | -258.768 | -398.384 | 1.0325E-02 (2001,018,0500) | 9.3211E-03 (2001,285,0300) | 9.2029E-03 (2001,285,0400) | 7.8689E-03 (2001,251,0600) |
| 1913 | -256.528 | -398.456 | 1.6116E-02 (2001,251,0600) | 1.3256E-02 (2001,032,0300) | 1.2441E-02 (2001,018,0500) | 1.2374E-02 (2001,032,0400) |
| 1914 | -254.289 | -398.528 | 1.6095E-02 (2001,251,0600) | 1.3788E-02 (2001,032,0300) | 1.2046E-02 (2001,032,0400) | 1.1659E-02 (2001,018,0500) |
| 1915 | -213.972 | -399.710 | 7.7666E-03 (2001,350,0300) | 7.1715E-03 (2001,251,0700) | 6.6820E-03 (2001,031,0800) | 6.5371E-03 (2001,032,0500) |
| 1916 | -211.732 | -399.770 | 6.0098E-03 (2001,350,0300) | 5.9577E-03 (2001,031,0700) | 5.9384E-03 (2001,031,0800) | 5.3357E-03 (2001,350,0200) |
| 1917 | -209.492 | -399.829 | 6.6998E-03 (2001,350,0300) | 6.4297E-03 (2001,031,0700) | 6.2194E-03 (2001,031,0800) | 6.1758E-03 (2001,350,0200) |
| 1918 | -314.642 | -393.592 | 1.3239E-02 (2001,018,0800) | 1.2052E-02 (2001,018,0900) | 1.0665E-02 (2001,032,0900) | 1.0548E-02 (2001,342,0200) |
| 1919 | -312.404 | -393.680 | 1.3831E-02 (2001,018,0800) | 1.1615E-02 (2001,018,0900) | 1.1393E-02 (2001,032,0900) | 1.0391E-02 (2001,032,1000) |
| 1920 | -310.166 | -393.767 | 1.4338E-02 (2001,018,0800) | 1.1983E-02 (2001,032,0900) | 1.1101E-02 (2001,018,0900) | 1.0856E-02 (2001,032,1000) |
| 1921 | -307.927 | -393.854 | 1.4470E-02 (2001,018,0800) | 1.2298E-02 (2001,032,0900) | 1.0937E-02 (2001,032,1000) | 1.0309E-02 (2001,018,0900) |
| 1922 | -305.689 | -393.940 | 1.4535E-02 (2001,018,0800) | 1.2406E-02 (2001,032,0900) | 1.0396E-02 (2001,032,1000) | 1.0177E-02 (2001,018,0700) |
| 1923 | -303.451 | -394.025 | 1.4146E-02 (2001,018,0800) | 1.2167E-02 (2001,032,0900) | 1.0781E-02 (2001,018,0700) | 8.9760E-03 (2001,342,0100) |
| 1924 | -301.212 | -394.110 | 1.4293E-02 (2001,018,0800) | 1.1927E-02 (2001,032,0900) | 1.1669E-02 (2001,018,0700) | 8.9542E-03 (2001,350,0800) |
| 1925 | -298.974 | -394.194 | 1.4005E-02 (2001,018,0800) | 1.2343E-02 (2001,018,0700) | 1.1358E-02 (2001,032,0900) | 9.2025E-03 (2001,019,0700) |
| 1926 | -296.735 | -394.278 | 1.3360E-02 (2001,018,0800) | 1.2786E-02 (2001,018,0700) | 1.0490E-02 (2001,032,0900) | 8.8374E-03 (2001,018,0600) |
| 1927 | -294.497 | -394.361 | 1.3127E-02 (2001,018,0700) | 1.2659E-02 (2001,018,0800) | 9.6974E-03 (2001,018,0600) | 9.4780E-03 (2001,032,0900) |
| 1928 | -292.258 | -394.443 | 1.3388E-02 (2001,018,0700) | 1.1929E-02 (2001,018,0800) | 1.0583E-02 (2001,018,0600) | 9.3058E-03 (2001,350,0700) |
| 1929 | -290.020 | -394.525 | 1.3519E-02 (2001,018,0700) | 1.1436E-02 (2001,018,0600) | 1.1142E-02 (2001,018,0800) | 9.6646E-03 (2001,350,0700) |
| 1930 | -287.781 | -394.606 | 1.3526E-02 (2001,018,0700) | 1.2251E-02 (2001,018,0600) | 1.0334E-02 (2001,018,0800) | 1.0109E-02 (2001,350,0700) |
| 1931 | -285.543 | -394.686 | 1.3250E-02 (2001,018,0700) | 1.2921E-02 (2001,018,0600) | 1.0078E-02 (2001,350,0700) | 9.3400E-03 (2001,018,0800) |
| 1932 | -283.304 | -394.766 | 1.3488E-02 (2001,018,0600) | 1.2868E-02 (2001,018,0700) | 1.0141E-02 (2001,350,0700) | 9.5611E-03 (2001,331,0100) |
| 1933 | -281.065 | -394.845 | 1.1487E-02 (2001,018,0600) | 9.1966E-03 (2001,018,0700) | 7.7109E-03 (2001,018,0500) | 5.7964E-03 (2001,141,0600) |
| 1934 | -278.827 | -394.924 | 1.2074E-02 (2001,018,0600) | 9.0511E-03 (2001,018,0700) | 8.8198E-03 (2001,018,0500) | 6.4764E-03 (2001,251,0600) |
| 1935 | -276.588 | -395.002 | 1.1689E-02 (2001,018,0600) | 9.1518E-03 (2001,018,0500) | 7.9516E-03 (2001,018,0700) | 6.7696E-03 (2001,251,0600) |
| 1936 | -274.349 | -395.079 | 9.9555E-03 (2001,018,0600) | 7.7630E-03 (2001,018,0500) | 6.1664E-03 (2001,018,0700) | 5.5284E-03 (2001,285,0400) |
| 1937 | -272.111 | -395.156 | 9.9765E-03 (2001,018,0600) | 8.7547E-03 (2001,018,0500) | 6.4242E-03 (2001,285,0400) | 5.6085E-03 (2001,018,0700) |
| 1938 | -269.872 | -395.232 | 1.0800E-02 (2001,018,0500) | 1.0746E-02 (2001,018,0600) | 8.1824E-03 (2001,251,0600) | 7.7647E-03 (2001,285,0400) |
| 1939 | -267.633 | -395.307 | 1.2404E-02 (2001,018,0500) | 1.1079E-02 (2001,018,0600) | 1.0971E-02 (2001,251,0600) | 9.0179E-03 (2001,285,0400) |
| 1940 | -265.394 | -395.382 | 1.3570E-02 (2001,018,0500) | 1.3210E-02 (2001,251,0600) | 1.0976E-02 (2001,018,0600) | 9.9958E-03 (2001,285,0400) |
| 1941 | -263.156 | -395.456 | 1.4033E-02 (2001,251,0600) | 1.3766E-02 (2001,018,0500) | 1.0404E-02 (2001,285,0400) | 1.0128E-02 (2001,018,0600) |
| 1942 | -260.917 | -395.530 | 1.5350E-02 (2001,251,0600) | 1.3969E-02 (2001,018,0500) | 1.0652E-02 (2001,285,0400) | 1.0233E-02 (2001,285,0300) |
| 1943 | -258.678 | -395.602 | 1.4808E-02 (2001,251,0600) | 1.3319E-02 (2001,018,0500) | 1.0554E-02 (2001,285,0300) | 1.0338E-02 (2001,285,0400) |
| 1944 | -216.136 | -396.868 | 1.2986E-02 (2001,032,0500) | 1.2567E-02 (2001,032,0400) | 1.2066E-02 (2001,251,0700) | 9.5474E-03 (2001,350,0300) |
| 1945 | -213.897 | -396.928 | 1.1809E-02 (2001,032,0500) | 1.1594E-02 (2001,251,0700) | 1.1337E-02 (2001,032,0400) | 9.0723E-03 (2001,350,0300) |
| 1946 | -211.658 | -396.988 | 7.5886E-03 (2001,350,0300) | 6.7265E-03 (2001,031,0700) | 6.6961E-03 (2001,031,0800) | 6.6783E-03 (2001,251,0700) |
| 1947 | -209.419 | -397.047 | 1.0427E-02 (2001,251,0700) | 9.6931E-03 (2001,032,0500) | 9.1764E-03 (2001,032,0400) | 7.8959E-03 (2001,350,0300) |
| 1948 | -285.443 | -391.905 | 1.3527E-02 (2001,018,0700) | 1.2916E-02 (2001,018,0600) | 9.8484E-03 (2001,350,0700) | 9.7505E-03 (2001,018,0800) |
| 1949 | -283.205 | -391.985 | 1.1976E-02 (2001,018,0600) | 1.0800E-02 (2001,018,0700) | 7.7235E-03 (2001,018,0500) | 6.2500E-03 (2001,331,0100) |
| 1950 | -280.967 | -392.064 | 9.4803E-03 (2001,018,0600) | 7.3833E-03 (2001,018,0700) | 5.6518E-03 (2001,018,0500) | 5.2304E-03 (2001,141,0600) |
| 1951 | -278.730 | -392.142 | 1.2278E-02 (2001,018,0600) | 9.3662E-03 (2001,018,0700) | 9.1704E-03 (2001,018,0500) | 7.2155E-03 (2001,251,0600) |
| 1952 | -276.492 | -392.220 | 1.3200E-02 (2001,018,0600) | 1.0783E-02 (2001,018,0500) | 9.9199E-03 (2001,018,0700) | 8.8586E-03 (2001,251,0600) |
| 1953 | -274.254 | -392.298 | 1.2632E-02 (2001,018,0600) | 1.1154E-02 (2001,018,0500) | 9.2661E-03 (2001,251,0600) | 8.3771E-03 (2001,018,0700) |
| 1954 | -272.016 | -392.374 | 1.1830E-02 (2001,018,0600) | 1.1272E-02 (2001,018,0500) | 9.4142E-03 (2001,251,0600) | 7.0699E-03 (2001,018,0700) |
| 1955 | -269.778 | -392.450 | 1.2625E-02 (2001,018,0500) | 1.2027E-02 (2001,018,0600) | 1.0965E-02 (2001,251,0600) | 7.8526E-03 (2001,331,0100) |
| 1956 | -267.540 | -392.526 | 1.3219E-02 (2001,018,0500) | 1.1767E-02 (2001,251,0600) | 1.1535E-02 (2001,018,0600) | 8.6360E-03 (2001,285,0400) |
| 1957 | -265.302 | -392.600 | 1.4563E-02 (2001,018,0500) | 1.4186E-02 (2001,251,0600) | 1.1514E-02 (2001,018,0600) | 9.6928E-03 (2001,285,0400) |
| 1958 | -263.064 | -392.674 | 1.6467E-02 (2001,251,0600) | 1.5585E-02 (2001,018,0500) | 1.3723E-02 (2001,019,0500) | 1.2230E-02 (2001,032,0300) |
| 1959 | -260.826 | -392.748 | 1.6872E-02 (2001,251,0600) | 1.5413E-02 (2001,018,0500) | 1.3438E-02 (2001,032,0300) | 1.3325E-02 (2001,019,0500) |
| 1960 | -258.588 | -392.821 | 1.7063E-02 (2001,251,0600) | 1.4902E-02 (2001,018,0500) | 1.2570E-02 (2001,032,0300) | 1.1092E-02 (2001,285,0300) |
| 1961 | -213.823 | -394.146 | 1.2682E-02 (2001,251,0700) | 1.2678E-02 (2001,032,0400) | 1.1683E-02 (2001,032,0500) | 9.7284E-03 (2001,350,0300) |
| 1962 | -211.584 | -394.206 | 1.2431E-02 (2001,251,0700) | 1.1847E-02 (2001,032,0400) | 1.1011E-02 (2001,032,0500) | 9.2025E-03 (2001,350,0300) |
| 1963 | -285.344 | -389.124 | 1.3774E-02 (2001,018,0700) | 1.2788E-02 (2001,018,0600) | 1.0069E-02 (2001,018,0800) | 9.4051E-03 (2001,350,0700) |
| 1964 | -283.107 | -389.203 | 1.0805E-02 (2001,018,0600) | 9.4835E-03 (2001,018,0700) | 6.9076E-03 (2001,018,0500) | 5.9035E-03 (2001,032,0800) |
| 1965 | -280.869 | -389.283 | 1.0510E-02 (2001,018,0600) | 8.3440E-03 (2001,018,0700) | 7.0590E-03 (2001,018,0500) | 5.3654E-03 (2001,141,0600) |
| 1966 | -278.632 | -389.361 | 1.1553E-02 (2001,018,0600) | 8.7259E-03 (2001,018,0700) | 8.6388E-03 (2001,018,0500) | 6.4893E-03 (2001,251,0600) |
| 1967 | -276.395 | -389.439 | 1.2984E-02 (2001,018,0600) | 1.0739E-02 (2001,018,0500) | 9.7332E-03 (2001,018,0700) | 8.6731E-03 (2001,251,0600) |
| 1968 | -274.158 | -389.516 | 1.4911E-02 (2001,018,0600) | 1.3557E-02 (2001,018,0500) | 1.2942E-02 (2001,331,0100) | 1.2601E-02 (2001,350,0600) |
| 1969 | -269.684 | -389.669 | 1.5319E-02 (2001,018,0500) | 1.4234E-02 (2001,251,0600) | 1.4234E-02 (2001,018,0600) | 1.3268E-02 (2001,331,0100) |
| 1970 | -267.447 | -389.744 | 1.5858E-02 (2001,018,0500) | 1.5162E-02 (2001,251,0600) | 1.3524E-02 (2001,018,0600) | 1.2605E-02 (2001,331,0100) |
| 1971 | -211.510 | -391.424 | 1.2980E-02 (2001,251,0700) | 1.2443E-02 (2001,032,0400) | 1.0337E-02 (2001,032,0500) | 9.7302E-03 (2001,350,0300) |
| 1972 | -209.273 | -391.483 | 6.9055E-03 (2001,031,0700) | 6.4134E-03 (2001,031,0800) | 6.3435E-03 (2001,350,0200) | 6.2028E-03 (2001,032,0900) |
| 1973 | -278.535 | -386.580 | 1.0797E-02 (2001,018,0600) | 8.1045E-03 (2001,018,0700) | 8.0182E-03 (2001,018,0500) | 6.0765E-03 (2001,251,0600) |
| 1974 | -276.299 | -386.658 | 1.2977E-02 (2001,018,0600) | 1.0811E-02 (2001,018,0500) | 1.0103E-02 (2001,018,0700) | 8.4876E-03 (2001,251,0600) |
| 1975 | -215.910 | -388.522 | 1.4643E-02 (2001,032,0400) | 1.3839E-02 (2001,251,0700) | 1.1292E-02 (2001,350,0300) | 1.0544E-02 (2001,032,0500) |
| 1976 | -213.599 | -385.800 | 1.3663E-02 (2001,251,0700) | 1.3598E-02 (2001,032,0400) | 1.1157E-02 (2001,350,0300) | 9.7683E-03 (2001,031,0700) |
| 1977 | -211.363 | -385.860 | 1.3378E-02 (2001,251,0700) | 1.2788E-02 (2001,032,0400) | 1.0564E-02 (2001,350,0300) | 9.7668E-03 (2001,350,0200) |
| 1978 | -209.054 | -383.137 | 1.3161E-02 (2001,251,0700) | 1.2169E-02 (2001,032,0400) | 1.0685E-02 (2001,350,0200) | 1.0258E-02 (2001,031,0700) |
| 1979 | -206.746 | -380.413 | 8.9765E-03 (2001,350,0200) | 8.7164E-03 (2001,031,0700) | 8.5438E-03 (2001,031,0600) | 7.8567E-03 (2001,032,0900) |
| 1980 | -204.440 | -377.689 | 1.1890E-02 (2001,350,0200) | 1.1190E-02 (2001,031,0600) | 1.0830E-02 (2001,032,0800) | 1.0583E-02 (2001,031,0700) |
| 1981 | -202.136 | -374.965 | 1.0818E-02 (2001,031,0600) | 1.0584E-02 (2001,350,0200) | 1.0458E-02 (2001,032,0800) | 9.4621E-03 (2001,031,0700) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1982 | -202.065 | -372.183 | 9.8775E-03 (2001,031,0600) | 8.4978E-03 (2001,031,0500) | 8.4493E-03 (2001,359,0900) | 8.2568E-03 (2001,031,0700) |
| 1983 | -201.994 | -369.401 | 1.1871E-02 (2001,031,0600) | 1.0805E-02 (2001,032,0800) | 1.0767E-02 (2001,350,0200) | 1.0327E-02 (2001,031,0500) |
| 1984 | -199.763 | -369.458 | 1.0846E-02 (2001,031,0600) | 1.0513E-02 (2001,032,0800) | 1.0063E-02 (2001,031,0500) | 9.5339E-03 (2001,359,0900) |
| 1985 | -199.693 | -366.676 | 1.3157E-02 (2001,031,0600) | 1.2514E-02 (2001,031,0500) | 1.2303E-02 (2001,032,0800) | 1.1985E-02 (2001,350,0200) |
| 1986 | -195.231 | -366.787 | 1.3799E-02 (2001,123,0200) | 1.3347E-02 (2001,032,0800) | 1.2983E-02 (2001,031,0500) | 1.2895E-02 (2001,032,0700) |
| 1987 | -197.393 | -363.950 | 1.3313E-02 (2001,031,0500) | 1.3167E-02 (2001,123,0200) | 1.2618E-02 (2001,359,0800) | 1.2497E-02 (2001,031,0600) |
| 1988 | -192.798 | -358.497 | 1.8718E-02 (2001,123,0200) | 1.4798E-02 (2001,123,0100) | 1.3139E-02 (2001,123,0000) | 1.3116E-02 (2001,031,0500) |

**********
CALPOST Version 5.6394 Level 070622
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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1198 | -355.887 | -464.319 | 1.3818E-05 | 1593 | -221.307 | -421.787 | 3.1216E-05 |
| 1199 | -353.629 | -464.418 | 1.3851E-05 | 1594 | -219.061 | -421.849 | 3.0958E-05 |
| 1200 | -351.371 | -464.517 | 1.3333E-05 | 1595 | -216.814 | -421.910 | 2.9250E-05 |
| 1201 | -362.536 | -461.234 | 1.7049E-05 | 1596 | -214.568 | -421.971 | 2.7328E-05 |
| 1202 | -360.279 | -461.336 | 1.6483E-05 | 1597 | -212.322 | -422.030 | 2.6674E-05 |
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| 1543 | -259.580 | -423.423 | 2.9194E-05 | 1938 | -269.872 | -395.232 | 2.6362E-05 |
| 1544 | -257.333 | -423.496 | 2.9378E-05 | 1939 | -267.633 | -395.307 | 3.1530E-05 |
| 1545 | -255.086 | -423.568 | 2.7926E-05 | 1940 | -265.394 | -395.382 | 3.6048E-05 |
| 1546 | -252.840 | -423.639 | 2.0633E-05 | 1941 | -263.156 | -395.456 | 3.7362E-05 |
| 1547 | -250.593 | -423.709 | 2.0356E-05 | 1942 | -260.917 | -395.530 | 3.9979E-05 |
| 1548 | -248.346 | -423.779 | 1.9960E-05 | 1943 | -258.678 | -395.602 | 3.9002E-05 |
| 1549 | -246.099 | -423.849 | 2.4898E-05 | 1944 | -216.136 | -396.868 | 4.7865E-05 |
| 1550 | -243.853 | -423.917 | 2.2751E-05 | 1945 | -213.897 | -396.928 | 4.6824E-05 |
| 1551 | -241.606 | -423.986 | 2.7353E-05 | 1946 | -211.658 | -396.988 | 3.8349E-05 |
| 1552 | -239.359 | -424.053 | 2.9147E-05 | 1947 | -209.419 | -397.047 | 4.5416E-05 |
| 1553 | -237.112 | -424.120 | 2.5708E-05 | 1948 | -285.443 | -391.905 | 3.8599E-05 |
| 1554 | -234.865 | -424.186 | 2.5376E-05 | 1949 | -283.205 | -391.985 | 2.9346E-05 |
| 1555 | -232.618 | -424.252 | 2.6789E-05 | 1950 | -280.967 | -392.064 | 1.7476E-05 |
| 1556 | -230.371 | -424.317 | 2.5271E-05 | 1951 | -278.730 | -392.142 | 2.8163E-05 |
| 1557 | -228.125 | -424.381 | 2.8893E-05 | 1952 | -276.492 | -392.220 | 3.2247E-05 |
| 1558 | -225.878 | -424.445 | 2.9841E-05 | 1953 | -274.254 | -392.298 | 3.0596E-05 |
| 1559 | -223.631 | -424.508 | 2.9748E-05 | 1954 | -272.016 | -392.374 | 2.8770E-05 |
| 1560 | -221.384 | -424.570 | 2.9378E-05 | 1955 | -269.778 | -392.450 | 3.2278E-05 |
| 1561 | -219.137 | -424.632 | 2.9276E-05 | 1956 | -267.540 | -392.526 | 3.3458E-05 |
| 1562 | -216.890 | -424.693 | 2.7459E-05 | 1957 | -265.302 | -392.600 | 3.8657E-05 |
| 1563 | -214.643 | -424.754 | 2.5204E-05 | 1958 | -263.064 | -392.674 | 4.6921E-05 |
| 1564 | -212.396 | -424.813 | 2.2986E-05 | 1959 | -260.826 | -392.748 | 4.7283E-05 |
| 1565 | -210.149 | -424.873 | 2.1917E-05 | 1960 | -258.588 | -392.821 | 4.5253E-05 |
| 1566 | -207.902 | -424.931 | 2.0171E-05 | 1961 | -213.823 | -394.146 | 4.9379E-05 |
| 1567 | -205.654 | -424.989 | 2.6810E-05 | 1962 | -211.584 | -394.206 | 4.9098E-05 |
| 1568 | -203.407 | -425.047 | 2.6329E-05 | 1963 | -285.344 | -389.124 | 3.9150E-05 |
| 1569 | -349.306 | -417.225 | 3.3638E-05 | 1964 | -283.107 | -389.203 | 2.5367E-05 |
| 1570 | -329.101 | -418.081 | 2.8584E-05 | 1965 | -280.869 | -389.283 | 2.2515E-05 |
| 1571 | -326.856 | -418.173 | 2.5582E-05 | 1966 | -278.632 | -389.361 | 2.6050E-05 |
| 1572 | -302.157 | -419.144 | 2.8856E-05 | 1967 | -276.395 | -389.439 | 3.1967E-05 |
| 1573 | -266.227 | -420.420 | 2.4091E-05 | 1968 | -274.158 | -389.516 | 4.4008E-05 |
| 1574 | -263.981 | -420.494 | 2.3837E-05 | 1969 | -269.684 | -389.669 | 4.5889E-05 |
| 1575 | -261.735 | -420.568 | 2.6764E-05 | 1970 | -267.447 | -389.744 | 4.5896E-05 |
| 1576 | -259.489 | -420.641 | 3.0663E-05 | 1971 | -211.510 | -391.424 | 5.1097E-05 |
| 1577 | -257.244 | -420.713 | 3.0734E-05 | 1972 | -209.273 | -391.483 | 3.5714E-05 |
| 1578 | -254.998 | -420.785 | 2.1610E-05 | 1973 | -278.535 | -386.580 | 2.4200E-05 |
| 1579 | -252.752 | -420.856 | 1.9420E-05 | 1974 | -276.299 | -386.658 | 3.2976E-05 |
| 1580 | -250.506 | -420.927 | 2.2358E-05 | 1975 | -215.910 | -388.522 | 5.3873E-05 |
| 1581 | -248.260 | -420.997 | 2.5399E-05 | 1976 | -213.599 | -385.800 | 5.5379E-05 |
| 1582 | -246.014 | -421.066 | 2.7803E-05 | 1977 | -211.363 | -385.860 | 5.5243E-05 |
| 1583 | -243.768 | -421.135 | 2.6878E-05 | 1978 | -209.054 | -383.137 | 5.8031E-05 |
| 1584 | -241.522 | -421.203 | 2.5539E-05 | 1979 | -206.746 | -380.413 | 4.6302E-05 |
| 1585 | -239.276 | -421.270 | 3.0929E-05 | 1980 | -204.440 | -377.689 | 6.3020E-05 |
| 1586 | -237.030 | -421.337 | 3.1445E-05 | 1981 | -202.136 | -374.965 | 5.9749E-05 |
| 1587 | -234.784 | -421.403 | 3.1304E-05 | 1982 | -202.065 | -372.183 | 5.0517E-05 |
| 1588 | -232.538 | -421.469 | 3.1424E-05 | 1983 | -201.994 | -369.401 | 6.3676E-05 |
| 1589 | -230.291 | -421.534 | 3.1640E-05 | 1984 | -199.763 | -369.458 | 5.8574E-05 |
| 1590 | -228.045 | -421.598 | 2.7032E-05 | 1985 | -199.693 | -366.676 | 7.3443E-05 |
| 1591 | -225.799 | -421.662 | 3.1597E-05 | 1986 | -195.231 | -366.787 | 7.6435E-05 |
| 1592 | -223.553 | -421.725 | 3.1424E-05 | 1987 | -197.393 | -363.950 | 7.5106E-05 |
| | | | | 1988 | -192.798 | -358.497 | 7.2980E-05 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1988 | -192.798 | -358.497 | DISCRETE | 1.8718E-02 (2001,123,0200) | RANK 1 | 1 | HOUR |
| 1958 | -263.064 | -392.674 | DISCRETE | 1.5585E-02 (2001,018,0500) | RANK 2 | 1 | HOUR |
| 1969 | -269.684 | -389.669 | DISCRETE | 1.4234E-02 (2001,018,0600) | RANK 3 | 1 | HOUR |
| 1959 | -260.826 | -392.748 | DISCRETE | 1.3325E-02 (2001,019,0500) | RANK 4 | 1 | HOUR |
| 1986 | -195.231 | -366.787 | DISCRETE | 7.6435E-05 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Zion

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  1988*0, 224*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

OUTPUT FILES

| Default Name | Unit No. | File Name and Path |
|---|---|---|
| CALPOST.LST | 8 | C:\SPC_FF\CALPOST\2001\2001_ZION_NOX.LST |
| (TOPN) | 11 | C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_ZI.DAT |

CALPOST Version 5.6394 Level 070622

NOX 1

4 RANKED 1 HOUR AVERAGE CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR (YEAR,DAY,ENDING TIME) (ug/m**3)

| RECEPTOR | COORDINATES (km) | | 1 RANK | 2 RANK | 3 RANK | 4 RANK |
|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 3.8072E-02 (2001,016,0600) | 3.1418E-02 (2001,016,0500) | 3.1103E-02 (2001,016,0700) | 3.1063E-02 (2001,028,0800) |
| 1990 | -306.221 | -311.322 | 3.9113E-02 (2001,016,0600) | 3.1857E-02 (2001,016,0500) | 3.1702E-02 (2001,016,0700) | 3.0989E-02 (2001,028,0800) |
| 1991 | -304.745 | -311.379 | 3.9962E-02 (2001,016,0600) | 3.2164E-02 (2001,016,0700) | 3.2117E-02 (2001,016,0500) | 3.0810E-02 (2001,028,0800) |
| 1992 | -303.268 | -311.436 | 4.0575E-02 (2001,016,0600) | 3.2344E-02 (2001,016,0700) | 3.2169E-02 (2001,016,0500) | 3.0716E-02 (2001,342,0200) |
| 1993 | -301.791 | -311.492 | 4.0897E-02 (2001,016,0600) | 3.2058E-02 (2001,016,0700) | 3.2013E-02 (2001,016,0500) | 3.0920E-02 (2001,342,0200) |
| 1994 | -307.626 | -309.412 | 3.7584E-02 (2001,016,0600) | 3.1945E-02 (2001,016,0500) | 3.1395E-02 (2001,028,0800) | 3.0340E-02 (2001,028,0700) |
| 1995 | -306.150 | -309.469 | 3.8830E-02 (2001,016,0600) | 3.2076E-02 (2001,016,0500) | 3.1283E-02 (2001,028,0800) | 3.0770E-02 (2001,016,0700) |
| 1996 | -304.673 | -309.526 | 3.9923E-02 (2001,016,0600) | 3.3095E-02 (2001,016,0500) | 3.1426E-02 (2001,016,0700) | 3.1067E-02 (2001,028,0800) |
| 1997 | -303.197 | -309.583 | 4.0784E-02 (2001,016,0600) | 3.3367E-02 (2001,016,0500) | 3.1861E-02 (2001,016,0700) | 3.0752E-02 (2001,028,0800) |
| 1998 | -301.720 | -309.640 | 4.1344E-02 (2001,016,0600) | 3.3422E-02 (2001,016,0500) | 3.1631E-02 (2001,016,0700) | 3.0332E-02 (2001,028,0800) |
| 1999 | -300.244 | -309.696 | 4.1666E-02 (2001,016,0600) | 3.3304E-02 (2001,016,0500) | 3.2627E-02 (2001,342,0200) | 3.1366E-02 (2001,016,0700) |
| 2000 | -298.767 | -309.752 | 4.1642E-02 (2001,016,0600) | 3.4380E-02 (2001,342,0200) | 3.2969E-02 (2001,016,0500) | 3.0625E-02 (2001,016,0700) |
| 2001 | -317.886 | -307.150 | 3.4421E-02 (2001,028,0700) | 3.0726E-02 (2001,028,0600) | 2.8890E-02 (2001,028,0800) | 2.4476E-02 (2001,016,0600) |
| 2002 | -316.410 | -307.209 | 3.4375E-02 (2001,028,0700) | 3.0029E-02 (2001,028,0600) | 2.9694E-02 (2001,028,0800) | 2.6268E-02 (2001,016,0600) |
| 2003 | -314.934 | -307.268 | 3.4155E-02 (2001,028,0700) | 3.0353E-02 (2001,028,0800) | 2.9200E-02 (2001,028,0600) | 2.8073E-02 (2001,016,0600) |
| 2004 | -313.458 | -307.327 | 3.3769E-02 (2001,028,0700) | 3.0868E-02 (2001,028,0800) | 2.9893E-02 (2001,016,0600) | 2.8253E-02 (2001,028,0600) |
| 2005 | -311.982 | -307.385 | 3.3230E-02 (2001,028,0700) | 3.1713E-02 (2001,016,0600) | 3.1239E-02 (2001,028,0800) | 2.8910E-02 (2001,016,0500) |
| 2006 | -309.030 | -307.501 | 3.5177E-02 (2001,016,0600) | 3.1744E-02 (2001,028,0700) | 3.1581E-02 (2001,028,0800) | 3.1364E-02 (2001,016,0500) |
| 2007 | -307.554 | -307.559 | 3.6799E-02 (2001,016,0600) | 3.2389E-02 (2001,016,0500) | 3.1570E-02 (2001,028,0800) | 3.0841E-02 (2001,028,0700) |
| 2008 | -306.078 | -307.616 | 3.8228E-02 (2001,016,0600) | 3.3254E-02 (2001,016,0500) | 3.1423E-02 (2001,028,0800) | 2.9984E-02 (2001,016,0700) |
| 2009 | -304.602 | -307.673 | 3.9547E-02 (2001,016,0600) | 3.3948E-02 (2001,016,0500) | 3.1179E-02 (2001,028,0800) | 3.0875E-02 (2001,016,0700) |
| 2010 | -303.125 | -307.730 | 4.0593E-02 (2001,016,0600) | 3.4468E-02 (2001,016,0500) | 3.1042E-02 (2001,016,0700) | 3.0818E-02 (2001,028,0800) |
| 2011 | -301.649 | -307.787 | 4.1332E-02 (2001,016,0600) | 3.4666E-02 (2001,016,0500) | 3.0945E-02 (2001,016,0700) | 3.0369E-02 (2001,028,0800) |
| 2012 | -300.173 | -307.843 | 4.1962E-02 (2001,016,0600) | 3.4871E-02 (2001,016,0500) | 3.0959E-02 (2001,016,0700) | 2.9856E-02 (2001,028,0800) |
| 2013 | -298.697 | -307.899 | 4.2158E-02 (2001,016,0600) | 3.4750E-02 (2001,016,0500) | 3.0190E-02 (2001,016,0700) | 2.9260E-02 (2001,028,0800) |
| 2014 | -317.812 | -305.297 | 3.5115E-02 (2001,028,0700) | 3.1798E-02 (2001,028,0600) | 2.9012E-02 (2001,028,0800) | 2.5200E-02 (2001,357,2300) |
| 2015 | -316.336 | -305.356 | 3.5037E-02 (2001,028,0700) | 3.0829E-02 (2001,028,0600) | 2.9806E-02 (2001,028,0800) | 2.4474E-02 (2001,016,0600) |
| 2016 | -314.860 | -305.415 | 3.4775E-02 (2001,028,0700) | 3.0449E-02 (2001,028,0800) | 3.0164E-02 (2001,028,0600) | 2.6330E-02 (2001,016,0600) |
| 2017 | -313.385 | -305.474 | 3.4346E-02 (2001,028,0700) | 3.0952E-02 (2001,028,0800) | 2.9157E-02 (2001,028,0600) | 2.8542E-02 (2001,017,0300) |
| 2018 | -311.909 | -305.533 | 3.3750E-02 (2001,028,0700) | 3.1304E-02 (2001,028,0800) | 3.0116E-02 (2001,016,0600) | 2.9116E-02 (2001,017,0300) |
| 2019 | -308.957 | -305.649 | 3.3758E-02 (2001,016,0600) | 3.2160E-02 (2001,028,0700) | 3.1586E-02 (2001,028,0800) | 3.0757E-02 (2001,016,0500) |
| 2020 | -307.482 | -305.706 | 3.5561E-02 (2001,016,0600) | 3.2618E-02 (2001,016,0500) | 3.1547E-02 (2001,028,0800) | 3.1197E-02 (2001,028,0700) |
| 2021 | -306.006 | -305.764 | 3.7253E-02 (2001,016,0600) | 3.3704E-02 (2001,016,0500) | 3.1395E-02 (2001,028,0800) | 3.0153E-02 (2001,028,0700) |
| 2022 | -304.530 | -305.821 | 3.8764E-02 (2001,016,0600) | 3.4677E-02 (2001,016,0500) | 3.1953E-02 (2001,342,0200) | 3.1121E-02 (2001,028,0800) |
| 2023 | -303.054 | -305.878 | 4.0055E-02 (2001,016,0600) | 3.5426E-02 (2001,016,0500) | 3.0742E-02 (2001,028,0800) | 3.0566E-02 (2001,016,0700) |
| 2024 | -301.579 | -305.934 | 4.1144E-02 (2001,016,0600) | 3.5994E-02 (2001,016,0500) | 3.3201E-02 (2001,342,0200) | 3.0956E-02 (2001,016,0700) |
| 2025 | -300.103 | -305.990 | 4.1940E-02 (2001,016,0600) | 3.6340E-02 (2001,016,0500) | 3.2967E-02 (2001,342,0200) | 3.0882E-02 (2001,016,0700) |
| 2026 | -298.627 | -306.046 | 4.2408E-02 (2001,016,0600) | 3.6477E-02 (2001,016,0500) | 3.0386E-02 (2001,016,0700) | 2.9141E-02 (2001,028,0800) |
| 2027 | -319.212 | -303.385 | 3.5557E-02 (2001,028,0700) | 3.3423E-02 (2001,028,0600) | 2.8020E-02 (2001,028,0800) | 2.7189E-02 (2001,357,2300) |
| 2028 | -317.737 | -303.445 | 3.5642E-02 (2001,028,0700) | 3.2790E-02 (2001,028,0600) | 2.8943E-02 (2001,028,0800) | 2.6411E-02 (2001,357,2300) |
| 2029 | -316.262 | -303.504 | 3.5531E-02 (2001,028,0700) | 3.1993E-02 (2001,028,0600) | 2.9721E-02 (2001,028,0800) | 2.5583E-02 (2001,357,2300) |
| 2030 | -314.786 | -303.563 | 3.5225E-02 (2001,028,0700) | 3.1049E-02 (2001,028,0600) | 3.0346E-02 (2001,028,0800) | 2.4667E-02 (2001,016,0500) |
| 2031 | -313.311 | -303.622 | 3.4748E-02 (2001,028,0700) | 3.0826E-02 (2001,028,0800) | 2.9978E-02 (2001,028,0600) | 2.6362E-02 (2001,016,0500) |
| 2032 | -311.836 | -303.680 | 3.4118E-02 (2001,028,0700) | 3.1174E-02 (2001,028,0800) | 3.0109E-02 (2001,017,0300) | 2.9097E-02 (2001,031,0600) |
| 2033 | -310.360 | -303.738 | 3.3334E-02 (2001,028,0700) | 3.1358E-02 (2001,028,0800) | 3.0185E-02 (2001,016,0600) | 2.9662E-02 (2001,016,0500) |
| 2034 | -308.885 | -303.796 | 3.2423E-02 (2001,028,0700) | 3.2093E-02 (2001,016,0600) | 3.1415E-02 (2001,028,0800) | 3.1143E-02 (2001,016,0500) |
| 2035 | -307.409 | -303.854 | 3.3975E-02 (2001,016,0600) | 3.2557E-02 (2001,016,0500) | 3.1419E-02 (2001,028,0700) | 3.1351E-02 (2001,028,0800) |
| 2036 | -305.934 | -303.911 | 3.5854E-02 (2001,016,0600) | 3.3998E-02 (2001,016,0500) | 3.1174E-02 (2001,028,0800) | 3.0327E-02 (2001,028,0700) |
| 2037 | -304.459 | -303.968 | 3.7562E-02 (2001,016,0600) | 3.5176E-02 (2001,016,0500) | 3.0887E-02 (2001,028,0800) | 2.9159E-02 (2001,028,0700) |
| 2038 | -302.983 | -304.025 | 3.9101E-02 (2001,016,0600) | 3.6194E-02 (2001,016,0500) | 3.0501E-02 (2001,028,0800) | 2.9882E-02 (2001,016,0700) |
| 2039 | -301.508 | -304.082 | 4.0442E-02 (2001,016,0600) | 3.7033E-02 (2001,016,0500) | 3.6343E-02 (2001,342,0200) | 3.0491E-02 (2001,016,0700) |
| 2040 | -300.032 | -304.138 | 4.1494E-02 (2001,016,0600) | 3.9737E-02 (2001,342,0200) | 3.7685E-02 (2001,016,0500) | 3.0638E-02 (2001,016,0700) |
| 2041 | -298.557 | -304.194 | 4.2241E-02 (2001,016,0600) | 3.9470E-02 (2001,342,0200) | 3.8087E-02 (2001,016,0500) | 3.0416E-02 (2001,016,0700) |
| 2042 | -319.137 | -301.533 | 3.5927E-02 (2001,028,0700) | 3.4335E-02 (2001,028,0600) | 2.8237E-02 (2001,357,2300) | 2.7751E-02 (2001,028,0800) |
| 2043 | -317.662 | -301.592 | 3.5996E-02 (2001,028,0700) | 3.3668E-02 (2001,028,0600) | 2.8666E-02 (2001,028,0800) | 2.7540E-02 (2001,357,2300) |
| 2044 | -316.187 | -301.651 | 3.5849E-02 (2001,028,0700) | 3.2824E-02 (2001,028,0600) | 2.9429E-02 (2001,028,0800) | 2.6773E-02 (2001,357,2300) |
| 2045 | -314.712 | -301.710 | 3.5517E-02 (2001,028,0700) | 3.1824E-02 (2001,028,0600) | 3.0042E-02 (2001,028,0800) | 2.5617E-02 (2001,357,2300) |
| 2046 | -313.237 | -301.769 | 3.5001E-02 (2001,028,0700) | 3.0693E-02 (2001,028,0600) | 3.0509E-02 (2001,028,0800) | 2.7256E-02 (2001,017,0300) |
| 2047 | -311.762 | -301.827 | 3.4324E-02 (2001,028,0700) | 3.0845E-02 (2001,028,0800) | 3.0692E-02 (2001,017,0300) | 2.9453E-02 (2001,028,0600) |
| 2048 | -310.287 | -301.886 | 3.3502E-02 (2001,028,0700) | 3.1375E-02 (2001,017,0300) | 3.1027E-02 (2001,028,0800) | 2.9946E-02 (2001,323,0300) |
| 2049 | -308.812 | -301.944 | 3.2556E-02 (2001,028,0700) | 3.1692E-02 (2001,017,0300) | 3.1078E-02 (2001,028,0800) | 3.0800E-02 (2001,016,0500) |
| 2050 | -307.337 | -302.001 | 3.2480E-02 (2001,016,0500) | 3.2209E-02 (2001,016,0600) | 3.1492E-02 (2001,028,0700) | 3.0984E-02 (2001,028,0800) |
| 2051 | -305.862 | -302.059 | 3.4199E-02 (2001,016,0600) | 3.4024E-02 (2001,016,0500) | 3.0936E-02 (2001,017,0300) | 3.0801E-02 (2001,028,0800) |
| 2052 | -304.387 | -302.116 | 3.6076E-02 (2001,016,0600) | 3.5456E-02 (2001,016,0500) | 3.0568E-02 (2001,342,0200) | 3.0501E-02 (2001,028,0800) |
| 2053 | -302.912 | -302.172 | 3.7809E-02 (2001,016,0600) | 3.6756E-02 (2001,016,0500) | 3.5582E-02 (2001,342,0200) | 3.0749E-02 (2001,323,0300) |
| 2054 | -301.437 | -302.229 | 3.9346E-02 (2001,016,0600) | 3.7883E-02 (2001,016,0500) | 3.5651E-02 (2001,342,0200) | 2.9971E-02 (2001,016,0700) |
| 2055 | -299.962 | -302.285 | 4.0649E-02 (2001,016,0600) | 3.8798E-02 (2001,016,0500) | 3.7173E-02 (2001,342,0200) | 3.0287E-02 (2001,016,0700) |
| 2056 | -298.487 | -302.341 | 4.1641E-02 (2001,016,0600) | 3.9501E-02 (2001,016,0500) | 3.5585E-02 (2001,342,0200) | 3.0186E-02 (2001,016,0700) |
| 2057 | -319.062 | -299.680 | 3.6128E-02 (2001,028,0700) | 3.5134E-02 (2001,028,0600) | 2.9690E-02 (2001,357,2300) | 2.8801E-02 (2001,028,0500) |
| 2058 | -317.588 | -299.740 | 3.6164E-02 (2001,028,0700) | 3.4433E-02 (2001,028,0600) | 2.9340E-02 (2001,357,2300) | 2.8186E-02 (2001,028,0800) |
| 2059 | -316.113 | -299.799 | 3.5995E-02 (2001,028,0700) | 3.3545E-02 (2001,028,0600) | 2.8938E-02 (2001,028,0800) | 2.8694E-02 (2001,357,2300) |
| 2060 | -314.639 | -299.858 | 3.5619E-02 (2001,028,0700) | 3.2493E-02 (2001,028,0600) | 2.9533E-02 (2001,028,0800) | 2.7650E-02 (2001,017,0300) |
| 2061 | -313.164 | -299.917 | 3.5064E-02 (2001,028,0700) | 3.1300E-02 (2001,028,0600) | 2.9991E-02 (2001,028,0800) | 2.9276E-02 (2001,017,0300) |
| 2062 | -311.689 | -299.975 | 3.4359E-02 (2001,028,0700) | 3.0522E-02 (2001,017,0300) | 3.0304E-02 (2001,028,0800) | 2.9989E-02 (2001,028,0600) |
| 2063 | -310.214 | -300.033 | 3.3501E-02 (2001,028,0700) | 3.1961E-02 (2001,017,0300) | 3.1940E-02 (2001,323,0300) | 3.0488E-02 (2001,028,0800) |
| 2064 | -308.740 | -300.091 | 3.2757E-02 (2001,323,0300) | 3.2518E-02 (2001,028,0700) | 3.2511E-02 (2001,017,0300) | 3.0531E-02 (2001,028,0800) |
| 2065 | -307.265 | -300.149 | 3.3250E-02 (2001,323,0300) | 3.2644E-02 (2001,017,0300) | 3.2040E-02 (2001,016,0500) | 3.1425E-02 (2001,028,0700) |
| 2066 | -305.790 | -300.206 | 3.3793E-02 (2001,016,0500) | 3.2165E-02 (2001,016,0600) | 3.0239E-02 (2001,028,0700) | 3.0221E-02 (2001,028,0800) |
| 2067 | -304.316 | -300.263 | 3.5486E-02 (2001,016,0500) | 3.4263E-02 (2001,016,0600) | 3.2944E-02 (2001,323,0300) | 3.1615E-02 (2001,017,0300) |
| 2068 | -302.841 | -300.320 | 3.7048E-02 (2001,016,0500) | 3.6161E-02 (2001,016,0600) | 3.4903E-02 (2001,342,0200) | 3.3258E-02 (2001,323,0300) |
| 2069 | -301.366 | -300.376 | 3.8450E-02 (2001,016,0500) | 3.7899E-02 (2001,016,0600) | 3.7154E-02 (2001,342,0200) | 3.2606E-02 (2001,323,0300) |
| 2070 | -299.891 | -300.432 | 3.9664E-02 (2001,016,0500) | 3.9425E-02 (2001,016,0600) | 3.9071E-02 (2001,342,0200) | 3.4199E-02 (2001,323,0200) |
| 2071 | -298.417 | -300.488 | 4.0683E-02 (2001,016,0500) | 4.0679E-02 (2001,016,0600) | 4.0596E-02 (2001,342,0200) | 3.5753E-02 (2001,323,0200) |
| 2072 | -318.988 | -297.828 | 3.6107E-02 (2001,028,0700) | 3.5783E-02 (2001,028,0600) | 2.9813E-02 (2001,357,2300) | 2.9798E-02 (2001,028,0500) |
| 2073 | -317.513 | -297.887 | 3.6126E-02 (2001,028,0700) | 3.5051E-02 (2001,028,0600) | 2.9808E-02 (2001,357,2300) | 2.8702E-02 (2001,028,0500) |
| 2074 | -316.039 | -297.946 | 3.5931E-02 (2001,028,0700) | 3.4122E-02 (2001,028,0600) | 2.8976E-02 (2001,357,2300) | 2.8223E-02 (2001,028,0800) |
| 2075 | -314.565 | -298.005 | 3.5543E-02 (2001,028,0700) | 3.3023E-02 (2001,028,0600) | 2.9932E-02 (2001,323,0300) | 2.8882E-02 (2001,357,2300) |
| 2076 | -313.090 | -298.064 | 3.4967E-02 (2001,028,0700) | 3.1778E-02 (2001,028,0600) | 2.9417E-02 (2001,017,0300) | 2.9275E-02 (2001,028,0800) |
| 2077 | -311.616 | -298.122 | 3.4220E-02 (2001,028,0700) | 3.2619E-02 (2001,323,0300) | 3.1062E-02 (2001,017,0300) | 3.0412E-02 (2001,028,0600) |
| 2078 | -310.142 | -298.181 | 3.3756E-02 (2001,323,0300) | 3.3331E-02 (2001,028,0700) | 3.2241E-02 (2001,017,0300) | 2.9758E-02 (2001,028,0800) |
| 2079 | -308.667 | -298.238 | 3.4637E-02 (2001,323,0300) | 3.3059E-02 (2001,017,0300) | 3.2319E-02 (2001,028,0700) | 2.9796E-02 (2001,028,0800) |
| 2080 | -307.193 | -298.296 | 3.4979E-02 (2001,323,0300) | 3.3434E-02 (2001,017,0300) | 3.1335E-02 (2001,016,0500) | 3.1204E-02 (2001,028,0700) |
| 2081 | -305.719 | -298.353 | 3.3323E-02 (2001,016,0500) | 3.3204E-02 (2001,017,0300) | 3.2250E-02 (2001,323,0300) | 3.0051E-02 (2001,016,0600) |
| 2082 | -304.244 | -298.410 | 3.5695E-02 (2001,323,0300) | 3.5224E-02 (2001,016,0500) | 3.2942E-02 (2001,017,0300) | 3.2180E-02 (2001,016,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2083 | -302.770 | -298.467 | 3.7026E-02 (2001,016,0500) | 3.5482E-02 (2001,323,0300) | 3.4215E-02 (2001,016,0600) | 3.3793E-02 (2001,342,0200) |
| 2084 | -301.295 | -298.524 | 3.8713E-02 (2001,016,0500) | 3.6139E-02 (2001,016,0600) | 3.6059E-02 (2001,342,0200) | 3.4914E-02 (2001,323,0200) |
| 2085 | -299.821 | -298.580 | 4.0241E-02 (2001,016,0500) | 3.8036E-02 (2001,342,0200) | 3.7874E-02 (2001,016,0600) | 3.6954E-02 (2001,323,0200) |
| 2086 | -318.913 | -295.975 | 3.6273E-02 (2001,028,0600) | 3.5881E-02 (2001,028,0700) | 3.0892E-02 (2001,357,2300) | 3.0686E-02 (2001,028,0500) |
| 2087 | -317.439 | -296.035 | 3.5890E-02 (2001,028,0700) | 3.5515E-02 (2001,028,0600) | 3.0804E-02 (2001,357,2300) | 2.9554E-02 (2001,028,0500) |
| 2088 | -315.965 | -296.094 | 3.5670E-02 (2001,028,0700) | 3.4552E-02 (2001,028,0600) | 2.9515E-02 (2001,357,2300) | 2.8293E-02 (2001,028,0500) |
| 2089 | -314.491 | -296.153 | 3.5256E-02 (2001,028,0700) | 3.3409E-02 (2001,028,0600) | 2.8902E-02 (2001,357,2300) | 2.7897E-02 (2001,028,0800) |
| 2090 | -313.017 | -296.212 | 3.4652E-02 (2001,028,0700) | 3.2115E-02 (2001,028,0600) | 2.8470E-02 (2001,017,0300) | 2.8338E-02 (2001,028,0800) |
| 2091 | -311.543 | -296.270 | 3.3891E-02 (2001,028,0700) | 3.0698E-02 (2001,028,0600) | 3.0374E-02 (2001,017,0300) | 2.8652E-02 (2001,028,0800) |
| 2092 | -310.069 | -296.328 | 3.5246E-02 (2001,323,0300) | 3.2983E-02 (2001,028,0700) | 3.2259E-02 (2001,017,0300) | 2.9182E-02 (2001,028,0600) |
| 2093 | -308.595 | -296.386 | 3.6157E-02 (2001,323,0300) | 3.3323E-02 (2001,017,0300) | 3.1950E-02 (2001,028,0700) | 2.8880E-02 (2001,028,0800) |
| 2094 | -307.121 | -296.444 | 3.7032E-02 (2001,323,0300) | 3.3993E-02 (2001,017,0300) | 3.0811E-02 (2001,028,0700) | 3.0397E-02 (2001,016,0500) |
| 2095 | -305.647 | -296.501 | 3.6490E-02 (2001,323,0300) | 3.4115E-02 (2001,017,0300) | 3.2525E-02 (2001,016,0500) | 2.9595E-02 (2001,028,0700) |
| 2096 | -304.173 | -296.558 | 3.6634E-02 (2001,323,0300) | 3.4625E-02 (2001,016,0500) | 3.3843E-02 (2001,017,0300) | 3.0998E-02 (2001,323,0200) |
| 2097 | -302.699 | -296.615 | 3.6675E-02 (2001,016,0500) | 3.3170E-02 (2001,323,0300) | 3.2904E-02 (2001,017,0300) | 3.2028E-02 (2001,016,0600) |
| 2098 | -301.225 | -296.671 | 3.8636E-02 (2001,016,0500) | 3.7210E-02 (2001,323,0200) | 3.6995E-02 (2001,323,0300) | 3.4467E-02 (2001,342,0200) |
| 2099 | -318.838 | -294.123 | 3.6583E-02 (2001,028,0600) | 3.5450E-02 (2001,028,0700) | 3.2406E-02 (2001,357,2300) | 3.1467E-02 (2001,028,0500) |
| 2100 | -317.364 | -294.182 | 3.5804E-02 (2001,028,0600) | 3.5440E-02 (2001,028,0700) | 3.2313E-02 (2001,357,2300) | 3.0299E-02 (2001,028,0500) |
| 2101 | -315.890 | -294.242 | 3.5202E-02 (2001,028,0700) | 3.4815E-02 (2001,028,0600) | 3.0661E-02 (2001,357,2300) | 2.8992E-02 (2001,028,0500) |
| 2102 | -314.417 | -294.301 | 3.4788E-02 (2001,028,0700) | 3.3639E-02 (2001,028,0600) | 3.1973E-02 (2001,323,0300) | 3.0788E-02 (2001,357,2300) |
| 2103 | -312.943 | -294.359 | 3.4166E-02 (2001,028,0700) | 3.2302E-02 (2001,028,0600) | 3.1526E-02 (2001,323,0300) | 2.9136E-02 (2001,357,2300) |
| 2104 | -311.470 | -294.418 | 3.5097E-02 (2001,323,0300) | 3.3389E-02 (2001,028,0700) | 3.0838E-02 (2001,028,0600) | 3.0298E-02 (2001,017,0300) |
| 2105 | -309.996 | -294.476 | 3.6383E-02 (2001,323,0300) | 3.2461E-02 (2001,028,0700) | 3.1969E-02 (2001,017,0300) | 2.9283E-02 (2001,028,0600) |
| 2106 | -308.522 | -294.534 | 3.7542E-02 (2001,323,0300) | 3.3300E-02 (2001,017,0300) | 3.1417E-02 (2001,028,0700) | 2.7790E-02 (2001,028,0800) |
| 2107 | -307.049 | -294.591 | 3.8388E-02 (2001,323,0300) | 3.4224E-02 (2001,017,0300) | 3.0279E-02 (2001,028,0700) | 2.9161E-02 (2001,016,0500) |
| 2108 | -305.575 | -294.648 | 3.7058E-02 (2001,323,0300) | 3.4541E-02 (2001,017,0300) | 3.1425E-02 (2001,016,0500) | 2.9058E-02 (2001,028,0700) |
| 2109 | -304.101 | -294.705 | 3.7738E-02 (2001,323,0300) | 3.4573E-02 (2001,017,0300) | 3.3707E-02 (2001,016,0500) | 3.1847E-02 (2001,323,0200) |
| 2110 | -302.627 | -294.762 | 3.9363E-02 (2001,323,0300) | 3.6530E-02 (2001,323,0200) | 3.5971E-02 (2001,016,0500) | 3.4215E-02 (2001,017,0300) |
| 2111 | -301.154 | -294.819 | 3.9079E-02 (2001,323,0200) | 3.8874E-02 (2001,323,0300) | 3.8170E-02 (2001,016,0500) | 3.3235E-02 (2001,017,0300) |
| 2112 | -318.763 | -292.271 | 3.6711E-02 (2001,028,0600) | 3.4787E-02 (2001,028,0700) | 3.3092E-02 (2001,357,2300) | 3.2107E-02 (2001,028,0500) |
| 2113 | -317.289 | -292.330 | 3.5925E-02 (2001,028,0600) | 3.4773E-02 (2001,028,0700) | 3.2658E-02 (2001,357,2300) | 3.0918E-02 (2001,028,0500) |
| 2114 | -315.816 | -292.389 | 3.4918E-02 (2001,028,0600) | 3.4541E-02 (2001,028,0700) | 3.2332E-02 (2001,357,2300) | 3.0720E-02 (2001,323,0300) |
| 2115 | -314.343 | -292.448 | 3.4100E-02 (2001,028,0700) | 3.3710E-02 (2001,028,0600) | 3.2572E-02 (2001,323,0300) | 3.1459E-02 (2001,357,2300) |
| 2116 | -312.870 | -292.507 | 3.3626E-02 (2001,323,0300) | 3.3479E-02 (2001,028,0700) | 3.2338E-02 (2001,028,0600) | 2.9981E-02 (2001,357,2300) |
| 2117 | -311.396 | -292.565 | 3.5797E-02 (2001,323,0300) | 3.2697E-02 (2001,028,0700) | 3.0833E-02 (2001,028,0600) | 2.9488E-02 (2001,017,0300) |
| 2118 | -309.923 | -292.623 | 3.7122E-02 (2001,323,0300) | 3.1767E-02 (2001,028,0700) | 3.1361E-02 (2001,017,0300) | 2.9229E-02 (2001,028,0600) |
| 2119 | -308.450 | -292.681 | 3.8415E-02 (2001,323,0300) | 3.2979E-02 (2001,017,0300) | 3.0726E-02 (2001,028,0700) | 2.7550E-02 (2001,028,0600) |
| 2120 | -306.976 | -292.739 | 3.9157E-02 (2001,323,0300) | 3.4143E-02 (2001,017,0300) | 2.9588E-02 (2001,028,0700) | 2.9145E-02 (2001,323,0200) |
| 2121 | -305.503 | -292.796 | 3.4240E-02 (2001,017,0300) | 3.0150E-02 (2001,323,0300) | 3.0025E-02 (2001,016,0500) | 2.8360E-02 (2001,028,0700) |
| 2122 | -304.030 | -292.853 | 3.4436E-02 (2001,017,0300) | 3.2457E-02 (2001,016,0500) | 3.0060E-02 (2001,323,0300) | 2.8373E-02 (2001,016,0800) |
| 2123 | -302.556 | -292.910 | 3.4873E-02 (2001,016,0500) | 3.4033E-02 (2001,017,0300) | 2.8656E-02 (2001,016,0800) | 2.8437E-02 (2001,016,0400) |
| 2124 | -301.083 | -292.966 | 3.7281E-02 (2001,016,0500) | 3.3422E-02 (2001,017,0300) | 3.0601E-02 (2001,323,0300) | 2.9892E-02 (2001,016,0400) |
| 2125 | -318.688 | -290.418 | 3.6649E-02 (2001,028,0600) | 3.3910E-02 (2001,028,0700) | 3.3434E-02 (2001,357,2300) | 3.2618E-02 (2001,028,0500) |
| 2126 | -317.215 | -290.478 | 3.5852E-02 (2001,028,0600) | 3.3891E-02 (2001,028,0700) | 3.3218E-02 (2001,357,2300) | 3.1405E-02 (2001,028,0500) |
| 2127 | -315.742 | -290.537 | 3.4824E-02 (2001,028,0600) | 3.3652E-02 (2001,028,0700) | 3.2783E-02 (2001,357,2300) | 3.0982E-02 (2001,323,0300) |
| 2128 | -314.269 | -290.596 | 3.3594E-02 (2001,028,0600) | 3.3225E-02 (2001,028,0700) | 3.2794E-02 (2001,323,0300) | 3.1912E-02 (2001,357,2300) |
| 2129 | -312.796 | -290.654 | 3.4518E-02 (2001,323,0300) | 3.2605E-02 (2001,028,0700) | 3.2194E-02 (2001,028,0600) | 3.0694E-02 (2001,357,2300) |
| 2130 | -311.323 | -290.713 | 3.5207E-02 (2001,323,0300) | 3.1828E-02 (2001,028,0700) | 3.0664E-02 (2001,028,0600) | 2.8922E-02 (2001,357,2300) |
| 2131 | -309.850 | -290.771 | 3.7626E-02 (2001,323,0300) | 3.0910E-02 (2001,028,0700) | 3.0552E-02 (2001,017,0300) | 2.9025E-02 (2001,028,0600) |
| 2132 | -308.377 | -290.829 | 3.9002E-02 (2001,323,0300) | 3.2375E-02 (2001,017,0300) | 2.9881E-02 (2001,028,0700) | 2.7322E-02 (2001,028,0600) |
| 2133 | -306.904 | -290.886 | 4.0226E-02 (2001,323,0300) | 3.3816E-02 (2001,017,0300) | 3.0002E-02 (2001,323,0200) | 2.8764E-02 (2001,028,0700) |
| 2134 | -305.431 | -290.943 | 3.3771E-02 (2001,017,0300) | 2.8336E-02 (2001,016,0500) | 2.7538E-02 (2001,028,0700) | 2.6779E-02 (2001,016,0800) |
| 2135 | -303.958 | -291.000 | 4.1459E-02 (2001,323,0300) | 3.5752E-02 (2001,323,0200) | 3.5391E-02 (2001,017,0300) | 3.0864E-02 (2001,016,0500) |
| 2136 | -302.485 | -291.057 | 4.1859E-02 (2001,323,0300) | 3.8628E-02 (2001,323,0200) | 3.5418E-02 (2001,017,0300) | 3.3438E-02 (2001,016,0500) |
| 2137 | -301.012 | -291.114 | 4.1563E-02 (2001,323,0300) | 4.1450E-02 (2001,323,0200) | 3.6021E-02 (2001,016,0500) | 3.4938E-02 (2001,017,0300) |
| 2138 | -318.613 | -288.566 | 3.6384E-02 (2001,028,0600) | 3.3279E-02 (2001,357,2300) | 3.2944E-02 (2001,028,0500) | 3.2807E-02 (2001,028,0700) |
| 2139 | -317.140 | -288.625 | 3.5588E-02 (2001,028,0600) | 3.3265E-02 (2001,357,2300) | 3.2799E-02 (2001,028,0700) | 3.1722E-02 (2001,028,0500) |
| 2140 | -315.668 | -288.684 | 3.4561E-02 (2001,028,0600) | 3.2876E-02 (2001,357,2300) | 3.2576E-02 (2001,028,0700) | 3.0841E-02 (2001,323,0300) |
| 2141 | -314.195 | -288.743 | 3.3318E-02 (2001,028,0600) | 3.2672E-02 (2001,323,0300) | 3.2149E-02 (2001,028,0700) | 3.2114E-02 (2001,357,2300) |
| 2142 | -312.722 | -288.802 | 3.4473E-02 (2001,323,0300) | 3.1909E-02 (2001,028,0600) | 3.1550E-02 (2001,028,0700) | 3.0991E-02 (2001,357,2300) |
| 2143 | -311.250 | -288.860 | 3.6121E-02 (2001,323,0300) | 3.0787E-02 (2001,028,0700) | 3.0363E-02 (2001,028,0600) | 2.9558E-02 (2001,357,2300) |
| 2144 | -309.777 | -288.918 | 3.7741E-02 (2001,323,0300) | 2.9892E-02 (2001,028,0700) | 2.9455E-02 (2001,017,0300) | 2.8699E-02 (2001,028,0600) |
| 2145 | -308.305 | -288.976 | 3.9258E-02 (2001,323,0300) | 3.1485E-02 (2001,017,0300) | 2.8896E-02 (2001,028,0700) | 2.7337E-02 (2001,323,0200) |
| 2146 | -306.832 | -289.034 | 4.0215E-02 (2001,323,0300) | 3.3152E-02 (2001,017,0300) | 2.9973E-02 (2001,323,0200) | 2.7804E-02 (2001,028,0700) |
| 2147 | -305.359 | -289.091 | 4.1167E-02 (2001,323,0300) | 3.4443E-02 (2001,017,0300) | 3.2831E-02 (2001,323,0200) | 2.7379E-02 (2001,017,0400) |
| 2148 | -303.887 | -289.148 | 4.1166E-02 (2001,323,0300) | 3.5201E-02 (2001,017,0300) | 3.4799E-02 (2001,323,0200) | 2.8975E-02 (2001,016,0500) |
| 2149 | -302.414 | -289.205 | 4.2278E-02 (2001,323,0300) | 3.8931E-02 (2001,323,0200) | 3.5641E-02 (2001,017,0300) | 3.1629E-02 (2001,016,0500) |
| 2150 | -300.941 | -289.261 | 4.2129E-02 (2001,323,0300) | 4.1917E-02 (2001,323,0200) | 3.5433E-02 (2001,017,0300) | 3.4374E-02 (2001,016,0500) |
| 2151 | -320.010 | -286.654 | 3.6451E-02 (2001,028,0600) | 3.4117E-02 (2001,028,0500) | 3.2314E-02 (2001,357,2300) | 3.1291E-02 (2001,028,0700) |
| 2152 | -318.538 | -286.714 | 3.5934E-02 (2001,028,0600) | 3.3117E-02 (2001,028,0500) | 3.2803E-02 (2001,357,2300) | 3.1512E-02 (2001,028,0700) |
| 2153 | -317.066 | -286.773 | 3.5154E-02 (2001,028,0600) | 3.2929E-02 (2001,357,2300) | 3.1898E-02 (2001,028,0500) | 3.1510E-02 (2001,028,0700) |
| 2154 | -315.593 | -286.832 | 3.4123E-02 (2001,028,0600) | 3.2675E-02 (2001,357,2300) | 3.1297E-02 (2001,028,0700) | 3.0494E-02 (2001,028,0500) |
| 2155 | -314.121 | -286.891 | 3.2886E-02 (2001,028,0600) | 3.2260E-02 (2001,323,0300) | 3.2055E-02 (2001,357,2300) | 3.0899E-02 (2001,028,0700) |
| 2156 | -312.649 | -286.950 | 3.4019E-02 (2001,323,0300) | 3.1462E-02 (2001,028,0600) | 3.1064E-02 (2001,357,2300) | 3.0320E-02 (2001,028,0700) |
| 2157 | -311.177 | -287.008 | 3.5804E-02 (2001,323,0300) | 2.9892E-02 (2001,028,0600) | 2.9730E-02 (2001,357,2300) | 2.9594E-02 (2001,028,0700) |
| 2158 | -309.704 | -287.066 | 3.7535E-02 (2001,323,0300) | 2.8740E-02 (2001,028,0700) | 2.8214E-02 (2001,028,0600) | 2.8136E-02 (2001,017,0300) |
| 2159 | -308.232 | -287.124 | 3.7123E-02 (2001,323,0300) | 3.0161E-02 (2001,017,0300) | 2.7772E-02 (2001,028,0700) | 2.6461E-02 (2001,028,0600) |
| 2160 | -306.760 | -287.181 | 4.0180E-02 (2001,323,0300) | 3.2295E-02 (2001,017,0300) | 2.9898E-02 (2001,323,0200) | 2.6891E-02 (2001,017,0400) |
| 2161 | -305.288 | -287.239 | 4.0677E-02 (2001,323,0300) | 3.3745E-02 (2001,017,0300) | 3.2034E-02 (2001,323,0200) | 2.7375E-02 (2001,017,0400) |
| 2162 | -303.815 | -287.296 | 3.4551E-02 (2001,323,0300) | 3.4173E-02 (2001,017,0300) | 2.8013E-02 (2001,017,0200) | 2.6860E-02 (2001,323,0200) |
| 2163 | -302.343 | -287.352 | 4.2267E-02 (2001,323,0300) | 3.8801E-02 (2001,323,0200) | 3.5585E-02 (2001,017,0300) | 3.0809E-02 (2001,017,0200) |
| 2164 | -300.871 | -287.409 | 4.2144E-02 (2001,323,0300) | 4.1753E-02 (2001,323,0200) | 3.5673E-02 (2001,017,0300) | 3.2515E-02 (2001,017,0200) |
| 2165 | -325.822 | -284.560 | 3.5138E-02 (2001,028,0500) | 3.4765E-02 (2001,028,0600) | 3.2601E-02 (2001,028,0400) | 2.6873E-02 (2001,028,0700) |
| 2166 | -324.350 | -284.621 | 3.5469E-02 (2001,028,0600) | 3.5326E-02 (2001,028,0500) | 3.2508E-02 (2001,028,0400) | 2.7901E-02 (2001,028,0700) |
| 2167 | -322.878 | -284.681 | 3.5880E-02 (2001,028,0600) | 3.5207E-02 (2001,028,0500) | 3.2129E-02 (2001,028,0400) | 2.8982E-02 (2001,357,2300) |
| 2168 | -321.407 | -284.742 | 3.5982E-02 (2001,028,0600) | 3.4782E-02 (2001,028,0500) | 3.1467E-02 (2001,028,0400) | 3.0436E-02 (2001,357,2300) |
| 2169 | -319.935 | -284.802 | 3.5788E-02 (2001,028,0600) | 3.4070E-02 (2001,028,0500) | 3.1065E-02 (2001,357,2300) | 3.0534E-02 (2001,028,0400) |
| 2170 | -318.463 | -284.861 | 3.5294E-02 (2001,028,0600) | 3.3097E-02 (2001,028,0500) | 3.2002E-02 (2001,357,2300) | 3.0025E-02 (2001,028,0700) |
| 2171 | -314.047 | -285.039 | 3.2276E-02 (2001,028,0600) | 3.1717E-02 (2001,357,2300) | 3.1481E-02 (2001,323,0300) | 2.9477E-02 (2001,028,0700) |
| 2172 | -312.575 | -285.097 | 3.3346E-02 (2001,323,0300) | 3.0887E-02 (2001,357,2300) | 3.0862E-02 (2001,028,0600) | 2.8942E-02 (2001,028,0700) |
| 2173 | -311.103 | -285.156 | 3.5209E-02 (2001,323,0300) | 2.9696E-02 (2001,357,2300) | 2.9291E-02 (2001,028,0600) | 2.8254E-02 (2001,028,0700) |
| 2174 | -309.632 | -285.214 | 3.6746E-02 (2001,323,0300) | 2.8198E-02 (2001,357,2300) | 2.7731E-02 (2001,357,2200) | 2.7617E-02 (2001,028,0600) |
| 2175 | -327.217 | -282.647 | 3.4094E-02 (2001,028,0500) | 3.2862E-02 (2001,028,0600) | 3.2410E-02 (2001,028,0400) | 2.7182E-02 (2001,028,0300) |
| 2176 | -325.745 | -282.708 | 3.4665E-02 (2001,028,0500) | 3.3845E-02 (2001,028,0600) | 3.2690E-02 (2001,028,0400) | 2.7368E-02 (2001,028,0300) |
| 2177 | -324.274 | -282.769 | 3.4923E-02 (2001,028,0500) | 3.4563E-02 (2001,028,0600) | 3.2666E-02 (2001,028,0400) | 2.8016E-02 (2001,002,0900) |
| 2178 | -322.802 | -282.829 | 3.4991E-02 (2001,028,0600) | 3.4864E-02 (2001,028,0500) | 3.2335E-02 (2001,028,0400) | 2.9198E-02 (2001,002,0900) |
| 2179 | -321.331 | -282.889 | 3.5116E-02 (2001,028,0600) | 3.4494E-02 (2001,028,0500) | 3.1721E-02 (2001,028,0400) | 2.9503E-02 (2001,002,0900) |
| 2180 | -319.859 | -282.949 | 3.4940E-02 (2001,028,0600) | 3.3830E-02 (2001,028,0500) | 3.0820E-02 (2001,028,0400) | 3.0120E-02 (2001,357,2300) |
| 2181 | -318.388 | -283.009 | 3.4487E-02 (2001,028,0600) | 3.2914E-02 (2001,028,0500) | 3.0897E-02 (2001,357,2300) | 2.9668E-02 (2001,028,0400) |
| 2182 | -309.559 | -283.361 | 3.5696E-02 (2001,323,0300) | 2.8801E-02 (2001,357,2200) | 2.8027E-02 (2001,357,2300) | 2.6923E-02 (2001,028,0600) |
| 2183 | -327.140 | -280.795 | 3.3356E-02 (2001,028,0500) | 3.2260E-02 (2001,028,0400) | 3.1803E-02 (2001,028,0600) | 2.7443E-02 (2001,028,0300) |
| 2184 | -325.669 | -280.856 | 3.3990E-02 (2001,028,0500) | 3.2790E-02 (2001,028,0600) | 3.2603E-02 (2001,028,0400) | 2.7751E-02 (2001,028,0300) |
| 2185 | -324.198 | -280.917 | 3.4336E-02 (2001,028,0500) | 3.3512E-02 (2001,028,0600) | 3.2637E-02 (2001,028,0400) | 2.7751E-02 (2001,028,0300) |
| 2186 | -322.726 | -280.977 | 3.4344E-02 (2001,028,0500) | 3.3949E-02 (2001,028,0600) | 3.2367E-02 (2001,028,0400) | 2.7485E-02 (2001,028,0300) |
| 2187 | -321.255 | -281.037 | 3.4092E-02 (2001,028,0600) | 3.4051E-02 (2001,028,0500) | 3.1793E-02 (2001,028,0400) | 3.1243E-02 (2001,002,0900) |
| 2188 | -319.784 | -281.097 | 3.3958E-02 (2001,028,0600) | 3.3456E-02 (2001,028,0500) | 3.1569E-02 (2001,002,0900) | 3.0937E-02 (2001,028,0400) |
| 2189 | -318.313 | -281.157 | 3.3522E-02 (2001,028,0600) | 3.2577E-02 (2001,028,0500) | 3.1438E-02 (2001,002,0900) | 2.9811E-02 (2001,028,0400) |
| 2190 | -327.063 | -278.943 | 3.2474E-02 (2001,028,0500) | 3.1969E-02 (2001,028,0400) | 3.0628E-02 (2001,028,0600) | 2.7605E-02 (2001,028,0300) |
| 2191 | -325.592 | -279.004 | 3.3185E-02 (2001,028,0500) | 3.2378E-02 (2001,028,0400) | 3.1623E-02 (2001,028,0600) | 2.7995E-02 (2001,028,0300) |
| 2192 | -324.121 | -279.064 | 3.3583E-02 (2001,028,0500) | 3.2478E-02 (2001,028,0400) | 3.2346E-02 (2001,028,0600) | 2.9910E-02 (2001,002,0900) |
| 2193 | -322.650 | -279.125 | 3.3665E-02 (2001,028,0500) | 3.2793E-02 (2001,028,0600) | 3.2258E-02 (2001,028,0400) | 3.1371E-02 (2001,002,0900) |
| 2194 | -321.180 | -279.185 | 3.3434E-02 (2001,028,0500) | 3.2958E-02 (2001,028,0600) | 3.2399E-02 (2001,002,0900) | 3.1725E-02 (2001,028,0400) |
| 2195 | -319.709 | -279.245 | 3.2900E-02 (2001,028,0500) | 3.2840E-02 (2001,028,0600) | 3.2652E-02 (2001,002,0900) | 3.0915E-02 (2001,028,0400) |
| 2196 | -318.238 | -279.305 | 3.3262E-02 (2001,002,0900) | 3.2434E-02 (2001,028,0600) | 3.2087E-02 (2001,028,0500) | 2.9821E-02 (2001,028,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2197 | -326.986 | -277.091 | 3.1563E-02 (2001,028,0400) | 3.1482E-02 (2001,028,0500) | 2.9358E-02 (2001,028,0600) | 2.7726E-02 (2001,028,0300) |
| 2198 | -325.515 | -277.152 | 3.2228E-02 (2001,028,0500) | 3.2037E-02 (2001,028,0400) | 3.0349E-02 (2001,028,0600) | 2.8211E-02 (2001,028,0300) |
| 2199 | -324.045 | -277.212 | 3.2692E-02 (2001,028,0500) | 3.2199E-02 (2001,028,0400) | 3.1089E-02 (2001,028,0600) | 3.0254E-02 (2001,002,0900) |
| 2200 | -322.574 | -277.273 | 3.2855E-02 (2001,028,0500) | 3.2042E-02 (2001,028,0400) | 3.1991E-02 (2001,002,0900) | 3.1561E-02 (2001,028,0600) |
| 2201 | -328.379 | -275.177 | 3.0194E-02 (2001,028,0400) | 2.9322E-02 (2001,028,0500) | 2.6985E-02 (2001,028,0300) | 2.6776E-02 (2001,028,0600) |
| 2202 | -326.909 | -275.239 | 3.1037E-02 (2001,028,0400) | 3.0410E-02 (2001,028,0500) | 2.8005E-02 (2001,028,0600) | 2.7847E-02 (2001,028,0300) |
| 2203 | -325.439 | -275.300 | 3.1589E-02 (2001,028,0400) | 3.1226E-02 (2001,028,0500) | 2.9001E-02 (2001,028,0600) | 2.8433E-02 (2001,028,0300) |
| 2204 | -323.969 | -275.360 | 3.1829E-02 (2001,028,0400) | 3.1740E-02 (2001,028,0500) | 3.0296E-02 (2001,002,0900) | 2.9772E-02 (2001,028,0600) |
| 2205 | -322.498 | -275.421 | 3.2290E-02 (2001,002,0900) | 3.1965E-02 (2001,028,0500) | 3.1735E-02 (2001,028,0400) | 3.0253E-02 (2001,028,0600) |
| 2206 | -326.832 | -273.387 | 3.0407E-02 (2001,028,0400) | 2.9311E-02 (2001,028,0500) | 2.7999E-02 (2001,028,0300) | 2.6590E-02 (2001,028,0600) |
| 2207 | -325.362 | -273.448 | 3.1033E-02 (2001,028,0400) | 3.0189E-02 (2001,028,0500) | 2.8678E-02 (2001,028,0300) | 2.7605E-02 (2001,028,0600) |
| 2208 | -323.892 | -273.508 | 3.1360E-02 (2001,028,0400) | 3.0772E-02 (2001,028,0500) | 3.0027E-02 (2001,002,0900) | 2.9059E-02 (2001,028,0300) |
| 2209 | -322.422 | -273.569 | 3.2260E-02 (2001,002,0900) | 3.1357E-02 (2001,028,0400) | 3.1056E-02 (2001,028,0500) | 2.9123E-02 (2001,028,0300) |
| 2210 | -325.285 | -271.595 | 3.0396E-02 (2001,028,0400) | 2.9136E-02 (2001,028,0500) | 2.8924E-02 (2001,028,0300) | 2.6766E-02 (2001,002,0900) |
| 2211 | -323.816 | -271.656 | 3.0827E-02 (2001,028,0400) | 2.9810E-02 (2001,028,0500) | 2.9393E-02 (2001,002,0900) | 2.9387E-02 (2001,028,0300) |
| 2212 | -322.346 | -271.717 | 3.1988E-02 (2001,002,0900) | 3.0913E-02 (2001,028,0400) | 3.0187E-02 (2001,028,0500) | 2.9545E-02 (2001,028,0300) |

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CALPOST Version 5.6394 Level 070622

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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 1.2604E-04 | 2101 | -315.890 | -294.242 | 1.2043E-04 |
| 1990 | -306.221 | -311.322 | 1.2721E-04 | 2102 | -314.417 | -294.301 | 1.4685E-04 |
| 1991 | -304.745 | -311.379 | 1.3968E-04 | 2103 | -312.943 | -294.359 | 1.4591E-04 |
| 1992 | -303.268 | -311.436 | 1.5696E-04 | 2104 | -311.470 | -294.418 | 1.5653E-04 |
| 1993 | -301.791 | -311.492 | 1.5409E-04 | 2105 | -309.996 | -294.476 | 1.6133E-04 |
| 1994 | -307.626 | -309.412 | 1.2501E-04 | 2106 | -308.522 | -294.534 | 1.6605E-04 |
| 1995 | -306.150 | -309.469 | 1.2423E-04 | 2107 | -307.049 | -294.591 | 1.7062E-04 |
| 1996 | -304.673 | -309.526 | 1.3633E-04 | 2108 | -305.575 | -294.648 | 1.6932E-04 |
| 1997 | -303.197 | -309.583 | 1.5694E-04 | 2109 | -304.101 | -294.705 | 1.7419E-04 |
| 1998 | -301.720 | -309.640 | 1.4297E-04 | 2110 | -302.627 | -294.762 | 1.8292E-04 |
| 1999 | -300.244 | -309.696 | 1.5645E-04 | 2111 | -301.154 | -294.819 | 1.8640E-04 |
| 2000 | -298.767 | -309.752 | 1.5580E-04 | 2112 | -318.763 | -292.271 | 1.2816E-04 |
| 2001 | -317.886 | -307.150 | 1.1275E-04 | 2113 | -317.289 | -292.330 | 1.2948E-04 |
| 2002 | -316.410 | -307.209 | 1.1556E-04 | 2114 | -315.816 | -292.389 | 1.3900E-04 |
| 2003 | -314.934 | -307.268 | 1.1721E-04 | 2115 | -314.343 | -292.448 | 1.4419E-04 |
| 2004 | -313.458 | -307.327 | 1.2240E-04 | 2116 | -312.870 | -292.507 | 1.4738E-04 |
| 2005 | -311.982 | -307.385 | 1.2698E-04 | 2117 | -311.396 | -292.565 | 1.5427E-04 |
| 2006 | -309.030 | -307.501 | 1.3323E-04 | 2118 | -309.923 | -292.623 | 1.5852E-04 |
| 2007 | -307.554 | -307.559 | 1.6292E-04 | 2119 | -308.450 | -292.681 | 1.6420E-04 |
| 2008 | -306.078 | -307.616 | 1.4131E-04 | 2120 | -306.976 | -292.739 | 1.6780E-04 |
| 2009 | -304.602 | -307.673 | 1.6083E-04 | 2121 | -305.503 | -292.796 | 1.4898E-04 |
| 2010 | -303.125 | -307.730 | 1.3911E-04 | 2122 | -304.030 | -292.853 | 1.5160E-04 |
| 2011 | -301.649 | -307.787 | 1.2721E-04 | 2123 | -302.556 | -292.910 | 1.5094E-04 |
| 2012 | -300.173 | -307.843 | 1.4336E-04 | 2124 | -301.083 | -292.966 | 1.5975E-04 |
| 2013 | -298.697 | -307.899 | 1.2998E-04 | 2125 | -318.688 | -290.418 | 1.2664E-04 |
| 2014 | -317.812 | -305.297 | 1.1645E-04 | 2126 | -317.215 | -290.478 | 1.3129E-04 |
| 2015 | -316.336 | -305.356 | 1.1266E-04 | 2127 | -315.742 | -290.537 | 1.3638E-04 |
| 2016 | -314.860 | -305.415 | 1.2227E-04 | 2128 | -314.269 | -290.596 | 1.4134E-04 |
| 2017 | -313.385 | -305.474 | 1.5010E-04 | 2129 | -312.796 | -290.654 | 1.4631E-04 |
| 2018 | -311.909 | -305.533 | 1.5518E-04 | 2130 | -311.323 | -290.713 | 1.4877E-04 |
| 2019 | -308.957 | -305.649 | 1.2284E-04 | 2131 | -309.850 | -290.771 | 1.5652E-04 |
| 2020 | -307.482 | -305.706 | 1.3453E-04 | 2132 | -308.377 | -290.829 | 1.6167E-04 |
| 2021 | -306.006 | -305.764 | 1.6397E-04 | 2133 | -306.904 | -290.886 | 1.6686E-04 |
| 2022 | -304.530 | -305.821 | 1.6883E-04 | 2134 | -305.431 | -290.943 | 1.3633E-04 |
| 2023 | -303.054 | -305.878 | 1.5644E-04 | 2135 | -303.958 | -291.000 | 1.7702E-04 |
| 2024 | -301.579 | -305.934 | 1.6593E-04 | 2136 | -302.485 | -291.057 | 1.8193E-04 |
| 2025 | -300.103 | -305.990 | 1.6358E-04 | 2137 | -301.012 | -291.114 | 1.8656E-04 |
| 2026 | -298.627 | -306.046 | 1.5509E-04 | 2138 | -318.613 | -288.566 | 1.2372E-04 |
| 2027 | -319.212 | -303.385 | 1.1770E-04 | 2139 | -317.140 | -288.625 | 1.2832E-04 |
| 2028 | -317.737 | -303.445 | 1.1602E-04 | 2140 | -315.668 | -288.684 | 1.3309E-04 |
| 2029 | -316.262 | -303.504 | 1.1999E-04 | 2141 | -314.195 | -288.743 | 1.3802E-04 |
| 2030 | -314.786 | -303.563 | 1.2003E-04 | 2142 | -312.722 | -288.802 | 1.4305E-04 |
| 2031 | -313.311 | -303.622 | 1.2541E-04 | 2143 | -311.250 | -288.860 | 1.4817E-04 |
| 2032 | -311.836 | -303.680 | 1.6167E-04 | 2144 | -309.777 | -288.918 | 1.5348E-04 |
| 2033 | -310.360 | -303.738 | 1.3212E-04 | 2145 | -308.305 | -288.976 | 1.5888E-04 |
| 2034 | -308.885 | -303.796 | 1.2656E-04 | 2146 | -306.832 | -289.034 | 1.6341E-04 |
| 2035 | -307.409 | -303.854 | 1.2700E-04 | 2147 | -305.359 | -289.091 | 1.6878E-04 |
| 2036 | -305.934 | -303.911 | 1.4157E-04 | 2148 | -303.887 | -289.148 | 1.7234E-04 |
| 2037 | -304.459 | -303.968 | 1.5243E-04 | 2149 | -302.414 | -289.205 | 1.8045E-04 |
| 2038 | -302.983 | -304.025 | 1.6051E-04 | 2150 | -300.941 | -289.261 | 1.8556E-04 |
| 2039 | -301.508 | -304.082 | 1.7321E-04 | 2151 | -320.010 | -286.654 | 1.1618E-04 |
| 2040 | -300.032 | -304.138 | 1.7601E-04 | 2152 | -318.538 | -286.714 | 1.2060E-04 |
| 2041 | -298.557 | -304.194 | 1.7339E-04 | 2153 | -317.066 | -286.773 | 1.2516E-04 |
| 2042 | -319.137 | -301.533 | 1.1411E-04 | 2154 | -315.593 | -286.832 | 1.2982E-04 |
| 2043 | -317.662 | -301.592 | 1.1452E-04 | 2155 | -314.121 | -286.891 | 1.3455E-04 |
| 2044 | -316.187 | -301.651 | 1.2001E-04 | 2156 | -312.649 | -286.950 | 1.3953E-04 |
| 2045 | -314.712 | -301.710 | 1.2021E-04 | 2157 | -311.177 | -287.008 | 1.4475E-04 |
| 2046 | -313.237 | -301.769 | 1.2764E-04 | 2158 | -309.704 | -287.066 | 1.5015E-04 |
| 2047 | -311.762 | -301.827 | 1.6168E-04 | 2159 | -308.232 | -287.124 | 1.5083E-04 |
| 2048 | -310.287 | -301.886 | 1.6520E-04 | 2160 | -306.760 | -287.181 | 1.6131E-04 |
| 2049 | -308.812 | -301.944 | 1.6835E-04 | 2161 | -305.288 | -287.239 | 1.6496E-04 |
| 2050 | -307.337 | -302.001 | 1.3921E-04 | 2162 | -303.815 | -287.296 | 1.5306E-04 |
| 2051 | -305.862 | -302.059 | 1.6537E-04 | 2163 | -302.343 | -287.352 | 1.7829E-04 |
| 2052 | -304.387 | -302.116 | 1.7173E-04 | 2164 | -300.871 | -287.409 | 1.8358E-04 |
| 2053 | -302.912 | -302.172 | 1.7749E-04 | 2165 | -325.822 | -284.560 | 8.2677E-05 |
| 2054 | -301.437 | -302.229 | 1.7554E-04 | 2166 | -324.350 | -284.621 | 9.0928E-05 |
| 2055 | -299.962 | -302.285 | 1.7600E-04 | 2167 | -322.878 | -284.681 | 1.0443E-04 |
| 2056 | -298.487 | -302.341 | 1.7247E-04 | 2168 | -321.407 | -284.742 | 1.0930E-04 |
| 2057 | -319.062 | -299.680 | 1.2346E-04 | 2169 | -319.935 | -284.802 | 1.1183E-04 |
| 2058 | -317.588 | -299.740 | 1.3326E-04 | 2170 | -318.463 | -284.861 | 1.1754E-04 |
| 2059 | -316.113 | -299.799 | 1.4388E-04 | 2171 | -314.047 | -285.039 | 1.3097E-04 |
| 2060 | -314.639 | -299.858 | 1.2604E-04 | 2172 | -312.575 | -285.097 | 1.3596E-04 |
| 2061 | -313.164 | -299.917 | 1.3514E-04 | 2173 | -311.103 | -285.156 | 1.4117E-04 |
| 2062 | -311.689 | -299.975 | 1.3805E-04 | 2174 | -309.632 | -285.214 | 1.4658E-04 |
| 2063 | -310.214 | -300.033 | 1.6504E-04 | 2175 | -327.217 | -282.647 | 9.1588E-05 |
| 2064 | -308.740 | -300.091 | 1.6866E-04 | 2176 | -325.745 | -282.708 | 8.4218E-05 |
| 2065 | -307.265 | -300.149 | 1.7169E-04 | 2177 | -324.274 | -282.769 | 9.8075E-05 |
| 2066 | -305.790 | -300.206 | 1.3301E-04 | 2178 | -322.802 | -282.829 | 1.0297E-04 |
| 2067 | -304.316 | -300.263 | 1.7510E-04 | 2179 | -321.331 | -282.889 | 1.0519E-04 |
| 2068 | -302.841 | -300.320 | 1.7965E-04 | 2180 | -319.859 | -282.949 | 1.1040E-04 |
| 2069 | -301.366 | -300.376 | 1.8151E-04 | 2181 | -318.388 | -283.009 | 1.1425E-04 |
| 2070 | -299.891 | -300.432 | 1.8289E-04 | 2182 | -309.559 | -283.361 | 1.4256E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | 1.8345E-04 | 2183 | -327.140 | -280.795 | 8.9572E-05 |
| 2072 | -318.988 | -297.828 | 1.0415E-04 | 2184 | -325.669 | -280.856 | 8.8701E-05 |
| 2073 | -317.513 | -297.887 | 1.1755E-04 | 2185 | -324.198 | -280.917 | 8.9357E-05 |
| 2074 | -316.039 | -297.946 | 1.2056E-04 | 2186 | -322.726 | -280.977 | 8.9829E-05 |
| 2075 | -314.565 | -298.005 | 1.5118E-04 | 2187 | -321.255 | -281.037 | 1.0383E-04 |
| 2076 | -313.090 | -298.064 | 1.4937E-04 | 2188 | -319.784 | -281.097 | 1.0751E-04 |
| 2077 | -311.616 | -298.122 | 1.6023E-04 | 2189 | -318.313 | -281.157 | 1.1124E-04 |
| 2078 | -310.142 | -298.181 | 1.6435E-04 | 2190 | -327.063 | -278.943 | 8.8294E-05 |
| 2079 | -308.667 | -298.238 | 1.6819E-04 | 2191 | -325.592 | -279.004 | 8.6865E-05 |
| 2080 | -307.193 | -298.296 | 1.7059E-04 | 2192 | -324.121 | -279.064 | 9.4826E-05 |
| 2081 | -305.719 | -298.353 | 1.6531E-04 | 2193 | -322.650 | -279.125 | 9.8049E-05 |
| 2082 | -304.244 | -298.410 | 1.7809E-04 | 2194 | -321.180 | -279.185 | 1.0143E-04 |
| 2083 | -302.770 | -298.467 | 1.8129E-04 | 2195 | -319.709 | -279.245 | 1.0330E-04 |
| 2084 | -301.295 | -298.524 | 1.8373E-04 | 2196 | -318.238 | -279.305 | 1.0836E-04 |
| 2085 | -299.821 | -298.580 | 1.8571E-04 | 2197 | -326.986 | -277.091 | 8.6341E-05 |
| 2086 | -318.913 | -295.975 | 1.0913E-04 | 2198 | -325.515 | -277.152 | 8.8095E-05 |
| 2087 | -317.439 | -296.035 | 1.2007E-04 | 2199 | -324.045 | -277.212 | 9.2801E-05 |
| 2088 | -315.965 | -296.094 | 1.1334E-04 | 2200 | -322.574 | -277.273 | 9.6087E-05 |
| 2089 | -314.491 | -296.153 | 1.2478E-04 | 2201 | -328.379 | -275.177 | 7.3485E-05 |
| 2090 | -313.017 | -296.212 | 1.2506E-04 | 2202 | -326.909 | -275.239 | 7.9360E-05 |
| 2091 | -311.543 | -296.270 | 1.3888E-04 | 2203 | -325.439 | -275.300 | 8.4527E-05 |
| 2092 | -310.069 | -296.328 | 1.6297E-04 | 2204 | -323.969 | -275.360 | 9.1098E-05 |
| 2093 | -308.595 | -296.386 | 1.6667E-04 | 2205 | -322.498 | -275.421 | 9.4182E-05 |
| 2094 | -307.121 | -296.444 | 1.7152E-04 | 2206 | -326.832 | -273.387 | 8.1472E-05 |
| 2095 | -305.647 | -296.501 | 1.7222E-04 | 2207 | -325.362 | -273.448 | 8.6131E-05 |
| 2096 | -304.173 | -296.558 | 1.7573E-04 | 2208 | -323.892 | -273.508 | 8.9253E-05 |
| 2097 | -302.699 | -296.615 | 1.6929E-04 | 2209 | -322.422 | -273.569 | 9.1956E-05 |
| 2098 | -301.225 | -296.671 | 1.8547E-04 | 2210 | -325.285 | -271.595 | 8.3975E-05 |
| 2099 | -318.838 | -294.123 | 1.2486E-04 | 2211 | -323.816 | -271.656 | 8.6559E-05 |
| 2100 | -317.364 | -294.182 | 1.3520E-04 | 2212 | -322.346 | -271.717 | 9.0294E-05 |

**********
CALPOST Version 5.6394 Level 070622
**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 2026 | -298.627 | -306.046 | DISCRETE | 4.2408E-02 (2001,016,0600) | RANK 1 | 1 | HOUR |
| 2150 | -300.941 | -289.261 | DISCRETE | 4.1917E-02 (2001,323,0200) | RANK 2 | 1 | HOUR |
| 2071 | -298.417 | -300.488 | DISCRETE | 4.0596E-02 (2001,342,0200) | RANK 3 | 1 | HOUR |
| 2085 | -299.821 | -298.580 | DISCRETE | 3.6954E-02 (2001,323,0200) | RANK 4 | 1 | HOUR |
| 2137 | -301.012 | -291.114 | DISCRETE | 1.8656E-04 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Arches

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                            ! NDRECP =  115*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                           Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                  Multiplicative scaling factor: 0.0000E+00
                        Additive scaling factor: 0.0000E+00
                 Hourly background values used?: F


  Source information
                 Source contribution processing: 0
                  0= No source contributions
                  1= Contributions are summed
                  2= TRACEBACK mode for 1 receptor
                  3= Reported TOTAL is processed


  Receptor information
                   Gridded receptors processed?: F
                  Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1


  Visibility Processing is NOT Selected



  Output options
                     Units requested for output:   (ug/m**3)
```

```
 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                   1-hr averages:     T
                                   3-hr averages:     F
                                  24-hr averages:     F
                                 NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                    Top-N values at each receptor:     T
              Exceedance counts at each receptor:     F
       Output selected information for debugging:     F
                    Echo tables for selected days:     F
                    Time-series for selected days:     F
        Peak value Time-series for selected days:     F

 Top "n" table control
         Number of "top" values at each receptor:     4
         Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                         Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2002 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8759

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2002\POST_2002_NOX_AR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2002\SPC2002.CON


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          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2002\2002_ARCH_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_AR.DAT

*****************************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                    2 RANK                    3 RANK                    4 RANK
      1       -9.046  -154.175   1.3120E-02 (2002,029,0100)  1.2427E-02 (2002,067,0800)  1.1660E-02 (2002,109,0700)  1.1654E-02 (2002,106,0700)
      2       -7.599  -154.176   1.3371E-02 (2002,029,0100)  1.2211E-02 (2002,067,0800)  1.1613E-02 (2002,106,0700)  1.1264E-02 (2002,109,0700)
      3       -6.152  -154.178   1.3605E-02 (2002,029,0100)  1.1969E-02 (2002,067,0800)  1.1519E-02 (2002,106,0700)  1.0869E-02 (2002,109,0700)
      4       -3.257  -154.179   1.3518E-02 (2002,029,0100)  1.1389E-02 (2002,067,0800)  1.1234E-02 (2002,106,0700)  9.6203E-03 (2002,109,0700)
      5      -10.491  -152.321   1.3566E-02 (2002,067,0800)  1.3234E-02 (2002,029,0100)  1.1234E-02 (2002,109,0700)  1.0968E-02 (2002,106,0700)
      6       -9.044  -152.322   1.3441E-02 (2002,067,0800)  1.3336E-02 (2002,029,0100)  1.1036E-02 (2002,106,0700)  1.0882E-02 (2002,109,0700)
      7       -7.597  -152.324   1.3405E-02 (2002,029,0100)  1.3275E-02 (2002,067,0800)  1.1058E-02 (2002,106,0700)  1.0523E-02 (2002,109,0700)
      8       -6.150  -152.325   1.3483E-02 (2002,029,0100)  1.3069E-02 (2002,067,0800)  1.1046E-02 (2002,106,0700)  1.0149E-02 (2002,109,0700)
      9       -4.703  -152.326   1.3786E-02 (2002,029,0100)  1.2829E-02 (2002,067,0800)  1.0996E-02 (2002,106,0700)  9.8349E-03 (2002,109,0700)
     10       -3.256  -152.327   1.3941E-02 (2002,029,0100)  1.2552E-02 (2002,067,0800)  1.0901E-02 (2002,106,0700)  9.5377E-03 (2002,109,0600)
     11       -1.809  -152.328   1.4024E-02 (2002,029,0100)  1.2245E-02 (2002,067,0800)  1.0776E-02 (2002,106,0700)  9.3703E-03 (2002,109,0600)
     12       -0.362  -152.328   1.3766E-02 (2002,029,0100)  1.1911E-02 (2002,067,0800)  1.0605E-02 (2002,106,0700)  8.4246E-03 (2002,109,0700)
     13      -11.936  -150.466   1.4492E-02 (2002,067,0800)  1.2379E-02 (2002,029,0100)  1.0671E-02 (2002,109,0700)  1.0344E-02 (2002,013,0300)
     14      -10.489  -150.468   1.4477E-02 (2002,067,0800)  1.2513E-02 (2002,029,0100)  1.0326E-02 (2002,109,0700)  1.0188E-02 (2002,106,0700)
     15       -9.042  -150.470   1.4420E-02 (2002,067,0800)  1.2817E-02 (2002,029,0100)  1.0313E-02 (2002,106,0700)  1.0016E-02 (2002,109,0700)
     16       -7.595  -150.472   1.4310E-02 (2002,067,0800)  1.3093E-02 (2002,029,0100)  1.0408E-02 (2002,106,0700)  9.7316E-03 (2002,109,0700)
     17       -6.149  -150.473   1.4160E-02 (2002,067,0800)  1.3309E-02 (2002,029,0100)  1.0464E-02 (2002,106,0700)  9.4306E-03 (2002,109,0700)
     18       -4.702  -150.474   1.3965E-02 (2002,067,0800)  1.3656E-02 (2002,029,0100)  1.0473E-02 (2002,106,0700)  9.1556E-03 (2002,109,0700)
     19       -3.255  -150.475   1.3957E-02 (2002,029,0100)  1.3722E-02 (2002,067,0800)  1.0458E-02 (2002,106,0700)  9.2787E-03 (2002,029,0500)
     20       -1.808  -150.475   1.4228E-02 (2002,029,0100)  1.3450E-02 (2002,067,0800)  1.0391E-02 (2002,106,0700)  9.2303E-03 (2002,029,0600)
     21        1.085  -150.475   1.3865E-02 (2002,029,0100)  1.2783E-02 (2002,067,0800)  1.0146E-02 (2002,106,0700)  8.8175E-03 (2002,029,0200)
     22      -11.933  -148.614   1.5268E-02 (2002,067,0800)  1.1650E-02 (2002,029,0100)  1.0187E-02 (2002,013,0300)  9.6937E-03 (2002,109,0700)
     23      -10.486  -148.616   1.5339E-02 (2002,067,0800)  1.2200E-02 (2002,029,0100)  9.5924E-03 (2002,013,0300)  9.4844E-03 (2002,109,0700)
     24       -9.040  -148.618   1.5354E-02 (2002,067,0800)  1.2601E-02 (2002,029,0100)  9.5392E-03 (2002,106,0700)  9.2197E-03 (2002,109,0700)
     25       -7.594  -148.619   1.5314E-02 (2002,067,0800)  1.2741E-02 (2002,029,0100)  9.6743E-03 (2002,106,0700)  8.9501E-03 (2002,109,0700)
     26       -6.147  -148.621   1.5224E-02 (2002,067,0800)  1.2983E-02 (2002,029,0100)  9.7860E-03 (2002,106,0700)  8.7033E-03 (2002,109,0700)
     27       -4.701  -148.622   1.5086E-02 (2002,067,0800)  1.3302E-02 (2002,029,0100)  9.8654E-03 (2002,106,0700)  8.4316E-03 (2002,109,0700)
     28       -3.254  -148.622   1.4897E-02 (2002,067,0800)  1.3602E-02 (2002,029,0100)  9.8861E-03 (2002,106,0700)  9.0738E-03 (2002,029,0600)
     29       -1.808  -148.623   1.4660E-02 (2002,067,0800)  1.3862E-02 (2002,029,0100)  9.8884E-03 (2002,106,0700)  9.1147E-03 (2002,029,0600)
     30       -0.362  -148.623   1.4378E-02 (2002,067,0800)  1.3588E-02 (2002,029,0100)  9.8381E-03 (2002,106,0700)  8.4181E-03 (2002,029,0200)
     31      -11.930  -146.762   1.5973E-02 (2002,067,0800)  1.1059E-02 (2002,029,0100)  9.9892E-03 (2002,013,0300)  9.1321E-03 (2002,106,0600)
     32      -10.484  -146.764   1.6132E-02 (2002,067,0800)  1.1529E-02 (2002,029,0100)  9.4357E-03 (2002,013,0300)  8.6560E-03 (2002,106,0600)
     33       -9.038  -146.765   1.6234E-02 (2002,067,0800)  1.1968E-02 (2002,029,0100)  8.9141E-03 (2002,013,0300)  8.6920E-03 (2002,106,0700)
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| | | | | | | |
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| 34 | -7.592 | -146.767 | 1.6275E-02 (2002,067,0800) | 1.2176E-02 (2002,029,0100) | 8.8882E-03 (2002,106,0700) | 8.4051E-03 (2002,013,0300) |
| 35 | -6.146 | -146.768 | 1.6259E-02 (2002,067,0800) | 1.2457E-02 (2002,029,0100) | 9.0404E-03 (2002,106,0700) | 7.9323E-03 (2002,013,0300) |
| 36 | -4.700 | -146.769 | 1.6185E-02 (2002,067,0800) | 1.2826E-02 (2002,029,0100) | 9.1556E-03 (2002,106,0700) | 8.7966E-03 (2002,029,0600) |
| 37 | -3.254 | -146.770 | 1.6056E-02 (2002,067,0800) | 1.3131E-02 (2002,029,0100) | 9.2465E-03 (2002,106,0700) | 8.8695E-03 (2002,029,0600) |
| 38 | -1.808 | -146.770 | 1.5873E-02 (2002,067,0800) | 1.3269E-02 (2002,029,0100) | 9.2866E-03 (2002,106,0700) | 8.9183E-03 (2002,029,0600) |
| 39 | -0.362 | -146.771 | 1.5630E-02 (2002,067,0800) | 1.2856E-02 (2002,029,0100) | 9.2830E-03 (2002,106,0700) | 8.1506E-03 (2002,029,0200) |
| 40 | -10.481 | -144.911 | 1.6859E-02 (2002,067,0800) | 1.0713E-02 (2002,029,0100) | 9.2422E-03 (2002,013,0300) | 8.4242E-03 (2002,106,0600) |
| 41 | -9.036 | -144.913 | 1.7054E-02 (2002,067,0800) | 1.1115E-02 (2002,029,0100) | 8.7503E-03 (2002,013,0300) | 8.1706E-03 (2002,029,0500) |
| 42 | -7.590 | -144.915 | 1.7185E-02 (2002,067,0800) | 1.1493E-02 (2002,029,0100) | 8.2894E-03 (2002,013,0300) | 8.2838E-03 (2002,029,0600) |
| 43 | -6.144 | -144.916 | 1.7255E-02 (2002,067,0800) | 1.1770E-02 (2002,029,0100) | 8.4102E-03 (2002,029,0600) | 8.2337E-03 (2002,106,0700) |
| 44 | -4.699 | -144.917 | 1.7258E-02 (2002,067,0800) | 1.2038E-02 (2002,029,0100) | 8.5125E-03 (2002,029,0600) | 8.3977E-03 (2002,106,0700) |
| 45 | -3.253 | -144.918 | 1.7194E-02 (2002,067,0800) | 1.2269E-02 (2002,029,0100) | 8.5896E-03 (2002,029,0600) | 8.5193E-03 (2002,106,0700) |
| 46 | -1.807 | -144.918 | 1.7070E-02 (2002,067,0800) | 1.2159E-02 (2002,029,0100) | 8.5993E-03 (2002,106,0700) | 7.5910E-03 (2002,029,0200) |
| 47 | -10.479 | -143.059 | 1.7524E-02 (2002,067,0800) | 9.7516E-03 (2002,029,0100) | 9.0187E-03 (2002,013,0300) | 8.0777E-03 (2002,106,0600) |
| 48 | -9.033 | -143.061 | 1.7812E-02 (2002,067,0800) | 1.0182E-02 (2002,029,0100) | 8.5534E-03 (2002,013,0300) | 7.7801E-03 (2002,029,0600) |
| 49 | -7.588 | -143.062 | 1.8044E-02 (2002,067,0800) | 1.0467E-02 (2002,029,0100) | 8.1362E-03 (2002,013,0300) | 7.9267E-03 (2002,029,0600) |
| 50 | -6.143 | -143.064 | 1.8199E-02 (2002,067,0800) | 1.0639E-02 (2002,029,0100) | 8.0549E-03 (2002,029,0600) | 7.7434E-03 (2002,013,0300) |
| 51 | -4.697 | -143.065 | 1.8286E-02 (2002,067,0800) | 1.0868E-02 (2002,029,0100) | 8.1601E-03 (2002,029,0600) | 7.5944E-03 (2002,106,0700) |
| 52 | -3.252 | -143.065 | 1.8303E-02 (2002,067,0800) | 1.1042E-02 (2002,029,0100) | 8.2381E-03 (2002,029,0600) | 7.7444E-03 (2002,106,0700) |
| 53 | -1.807 | -143.066 | 1.8239E-02 (2002,067,0800) | 1.1061E-02 (2002,029,0100) | 7.8680E-03 (2002,106,0700) | 7.0726E-03 (2002,029,0200) |
| 54 | -10.476 | -141.207 | 1.8113E-02 (2002,067,0800) | 8.7534E-03 (2002,029,0100) | 8.7450E-03 (2002,013,0300) | 8.0639E-03 (2002,067,0700) |
| 55 | -9.031 | -141.209 | 1.8512E-02 (2002,067,0800) | 9.0684E-03 (2002,029,0100) | 8.3686E-03 (2002,013,0300) | 7.3974E-03 (2002,067,0700) |
| 56 | -7.586 | -141.210 | 1.8838E-02 (2002,067,0800) | 9.1616E-03 (2002,029,0100) | 7.9679E-03 (2002,013,0300) | 7.1208E-03 (2002,106,0600) |
| 57 | -6.141 | -141.211 | 1.9091E-02 (2002,067,0800) | 9.4240E-03 (2002,029,0100) | 7.6256E-03 (2002,013,0300) | 6.8569E-03 (2002,106,0600) |
| 58 | -4.696 | -141.212 | 1.9269E-02 (2002,067,0800) | 9.6066E-03 (2002,029,0100) | 7.2839E-03 (2002,013,0300) | 6.7722E-03 (2002,106,0700) |
| 59 | -3.251 | -141.213 | 1.9361E-02 (2002,067,0800) | 9.7942E-03 (2002,029,0100) | 6.9536E-03 (2002,106,0700) | 6.9354E-03 (2002,013,0300) |
| 60 | -1.806 | -141.214 | 1.9377E-02 (2002,067,0800) | 9.9782E-03 (2002,029,0100) | 7.1033E-03 (2002,106,0700) | 6.6029E-03 (2002,013,0300) |
| 61 | -0.361 | -141.214 | 1.9302E-02 (2002,067,0800) | 1.0120E-02 (2002,029,0100) | 7.2302E-03 (2002,106,0700) | 6.9845E-03 (2002,029,0200) |
| 62 | -14.808 | -139.347 | 1.6771E-02 (2002,067,0800) | 1.1376E-02 (2002,067,0700) | 9.5873E-03 (2002,013,0300) | 8.4561E-03 (2002,013,0200) |
| 63 | -13.363 | -139.350 | 1.7450E-02 (2002,067,0800) | 1.0571E-02 (2002,067,0700) | 9.2226E-03 (2002,013,0300) | 7.8449E-03 (2002,013,0200) |
| 64 | -11.918 | -139.352 | 1.8073E-02 (2002,067,0800) | 9.7884E-03 (2002,067,0700) | 8.8330E-03 (2002,013,0300) | 7.4387E-03 (2002,106,0000) |
| 65 | -10.474 | -139.354 | 1.8641E-02 (2002,067,0800) | 9.0248E-03 (2002,067,0700) | 8.4948E-03 (2002,013,0300) | 7.5608E-03 (2002,029,0100) |
| 66 | -9.029 | -139.356 | 1.9144E-02 (2002,067,0800) | 8.2925E-03 (2002,067,0700) | 8.1283E-03 (2002,013,0300) | 7.7441E-03 (2002,029,0100) |
| 67 | -7.584 | -139.358 | 1.9570E-02 (2002,067,0800) | 8.0204E-03 (2002,029,0100) | 7.8105E-03 (2002,013,0300) | 7.5916E-03 (2002,067,0700) |
| 68 | -6.140 | -139.359 | 1.9923E-02 (2002,067,0800) | 8.3465E-03 (2002,029,0100) | 7.4935E-03 (2002,013,0300) | 7.1920E-03 (2002,029,0600) |
| 69 | -4.695 | -139.360 | 2.0189E-02 (2002,067,0800) | 8.6216E-03 (2002,029,0100) | 7.2966E-03 (2002,029,0600) | 7.1644E-03 (2002,013,0300) |
| 70 | -3.250 | -139.361 | 2.0368E-02 (2002,067,0800) | 8.7183E-03 (2002,029,0100) | 6.8474E-03 (2002,013,0300) | 6.6724E-03 (2002,106,0000) |
| 71 | -1.806 | -139.361 | 2.0456E-02 (2002,067,0800) | 8.8988E-03 (2002,029,0100) | 6.8269E-03 (2002,029,0700) | 6.5580E-03 (2002,106,0000) |
| 72 | -0.361 | -139.361 | 2.0448E-02 (2002,067,0800) | 9.0790E-03 (2002,029,0100) | 7.0040E-03 (2002,029,0700) | 6.5096E-03 (2002,106,0000) |
| 73 | 1.083 | -139.361 | 2.0352E-02 (2002,067,0800) | 9.1746E-03 (2002,029,0100) | 7.1654E-03 (2002,029,0700) | 6.8121E-03 (2002,029,0200) |
| 74 | -14.804 | -137.495 | 1.6933E-02 (2002,067,0800) | 1.2518E-02 (2002,067,0700) | 9.1497E-03 (2002,013,0300) | 8.4999E-03 (2002,013,0200) |
| 75 | -13.360 | -137.498 | 1.7704E-02 (2002,067,0800) | 1.1652E-02 (2002,067,0700) | 8.8120E-03 (2002,013,0300) | 7.9042E-03 (2002,013,0200) |
| 76 | -11.915 | -137.500 | 1.8434E-02 (2002,067,0800) | 1.0813E-02 (2002,067,0700) | 8.5184E-03 (2002,013,0300) | 7.3330E-03 (2002,013,0200) |
| 77 | -10.471 | -137.502 | 1.9102E-02 (2002,067,0800) | 9.9973E-03 (2002,067,0700) | 8.1963E-03 (2002,013,0300) | 7.3056E-03 (2002,106,0000) |
| 78 | -9.027 | -137.504 | 1.9706E-02 (2002,067,0800) | 9.1979E-03 (2002,067,0700) | 7.9162E-03 (2002,013,0300) | 7.3777E-03 (2002,106,0000) |
| 79 | -7.583 | -137.506 | 2.0236E-02 (2002,067,0800) | 8.4360E-03 (2002,067,0700) | 7.6291E-03 (2002,013,0300) | 7.4754E-03 (2002,106,0000) |
| 80 | -6.138 | -137.507 | 2.0680E-02 (2002,067,0800) | 7.7047E-03 (2002,067,0700) | 7.5168E-03 (2002,106,0000) | 7.3369E-03 (2002,029,0100) |
| 81 | -4.694 | -137.508 | 2.1040E-02 (2002,067,0800) | 7.4413E-03 (2002,029,0100) | 7.2680E-03 (2002,106,0000) | 7.0408E-03 (2002,013,0300) |
| 82 | -3.250 | -137.509 | 2.1303E-02 (2002,067,0800) | 7.5958E-03 (2002,029,0100) | 7.1371E-03 (2002,106,0000) | 6.7269E-03 (2002,013,0300) |
| 83 | -1.805 | -137.509 | 2.1465E-02 (2002,067,0800) | 7.7259E-03 (2002,029,0100) | 6.9885E-03 (2002,106,0000) | 6.4803E-03 (2002,013,0300) |
| 84 | -16.245 | -135.640 | 1.6140E-02 (2002,067,0800) | 1.4551E-02 (2002,067,0700) | 9.0938E-03 (2002,013,0200) | 8.9209E-03 (2002,013,0300) |
| 85 | -14.801 | -135.643 | 1.7039E-02 (2002,067,0800) | 1.3631E-02 (2002,067,0700) | 8.6626E-03 (2002,013,0300) | 8.4900E-03 (2002,013,0200) |
| 86 | -13.357 | -135.645 | 1.7905E-02 (2002,067,0800) | 1.2716E-02 (2002,067,0700) | 8.4278E-03 (2002,013,0300) | 7.9218E-03 (2002,013,0200) |
| 87 | -11.913 | -135.648 | 1.8728E-02 (2002,067,0800) | 1.1821E-02 (2002,067,0700) | 8.1552E-03 (2002,013,0300) | 7.3727E-03 (2002,013,0200) |
| 88 | -10.469 | -135.650 | 1.9495E-02 (2002,067,0800) | 1.0952E-02 (2002,067,0700) | 7.9173E-03 (2002,013,0300) | 7.0805E-03 (2002,106,0000) |
| 89 | -9.025 | -135.652 | 2.0194E-02 (2002,067,0800) | 1.0099E-02 (2002,067,0700) | 7.6796E-03 (2002,013,0300) | 7.2479E-03 (2002,106,0000) |
| 90 | -7.581 | -135.653 | 2.0821E-02 (2002,067,0800) | 9.2721E-03 (2002,067,0700) | 7.3978E-03 (2002,013,0300) | 7.3862E-03 (2002,106,0000) |
| 91 | -6.137 | -135.655 | 2.1361E-02 (2002,067,0800) | 8.4826E-03 (2002,067,0700) | 7.2012E-03 (2002,106,0000) | 7.1445E-03 (2002,013,0300) |
| 92 | -4.693 | -135.656 | 2.1808E-02 (2002,067,0800) | 7.7197E-03 (2002,067,0700) | 7.1498E-03 (2002,106,0000) | 6.8534E-03 (2002,013,0300) |
| 93 | -3.249 | -135.656 | 2.2153E-02 (2002,067,0800) | 7.1140E-03 (2002,106,0000) | 6.9912E-03 (2002,067,0700) | 6.6342E-03 (2002,013,0300) |
| 94 | -1.805 | -135.657 | 2.2396E-02 (2002,067,0800) | 7.0043E-03 (2002,106,0000) | 6.5619E-03 (2002,029,0100) | 6.4090E-03 (2002,013,0300) |
| 95 | -16.241 | -133.788 | 1.6120E-02 (2002,067,0800) | 1.5651E-02 (2002,067,0700) | 9.0196E-03 (2002,013,0200) | 8.5105E-03 (2002,106,0400) |
| 96 | -14.797 | -133.791 | 1.7099E-02 (2002,067,0800) | 1.4689E-02 (2002,067,0700) | 8.5468E-03 (2002,106,0400) | 8.4457E-03 (2002,013,0200) |
| 97 | -13.353 | -133.793 | 1.8049E-02 (2002,067,0800) | 1.3735E-02 (2002,067,0700) | 8.5752E-03 (2002,106,0400) | 8.0011E-03 (2002,013,0300) |
| 98 | -11.910 | -133.796 | 1.8958E-02 (2002,067,0800) | 1.2785E-02 (2002,067,0700) | 8.5687E-03 (2002,106,0400) | 7.8121E-03 (2002,013,0300) |
| 99 | -10.466 | -133.798 | 1.9813E-02 (2002,067,0800) | 1.1865E-02 (2002,067,0700) | 8.5583E-03 (2002,106,0400) | 7.6231E-03 (2002,013,0300) |
| 100 | -9.023 | -133.799 | 2.0609E-02 (2002,067,0800) | 1.0965E-02 (2002,067,0700) | 8.4887E-03 (2002,106,0400) | 7.3881E-03 (2002,013,0300) |
| 101 | -7.579 | -133.801 | 2.1323E-02 (2002,067,0800) | 1.0080E-02 (2002,067,0700) | 8.3696E-03 (2002,106,0400) | 7.1697E-03 (2002,013,0300) |
| 102 | -4.692 | -133.803 | 2.2480E-02 (2002,067,0800) | 8.4204E-03 (2002,067,0700) | 8.0813E-03 (2002,106,0400) | 6.7382E-03 (2002,106,0000) |
| 103 | -3.248 | -133.804 | 2.2909E-02 (2002,067,0800) | 7.8949E-03 (2002,106,0400) | 7.6371E-03 (2002,067,0700) | 6.7569E-03 (2002,106,0000) |
| 104 | -14.793 | -131.938 | 1.7115E-02 (2002,067,0800) | 1.5671E-02 (2002,067,0700) | 1.0007E-02 (2002,106,0400) | 9.5389E-03 (2002,106,0300) |
| 105 | -13.350 | -131.941 | 1.8138E-02 (2002,067,0800) | 1.4676E-02 (2002,067,0700) | 1.0155E-02 (2002,106,0400) | 8.9407E-03 (2002,106,0300) |
| 106 | -11.907 | -131.943 | 1.9123E-02 (2002,067,0800) | 1.3690E-02 (2002,067,0700) | 1.0253E-02 (2002,106,0400) | 8.3497E-03 (2002,106,0300) |
| 107 | -10.464 | -131.945 | 2.0063E-02 (2002,067,0800) | 1.2723E-02 (2002,067,0700) | 1.0281E-02 (2002,106,0400) | 7.7591E-03 (2002,106,0300) |
| 108 | -9.020 | -131.947 | 2.0934E-02 (2002,067,0800) | 1.1772E-02 (2002,067,0700) | 1.0278E-02 (2002,106,0400) | 7.1838E-03 (2002,106,0300) |
| 109 | -16.233 | -130.083 | 1.7577E-02 (2002,067,0700) | 1.5980E-02 (2002,067,0800) | 1.2099E-02 (2002,106,0300) | 1.1096E-02 (2002,106,0400) |
| 110 | -14.790 | -130.086 | 1.7078E-02 (2002,067,0800) | 1.6542E-02 (2002,067,0700) | 1.1412E-02 (2002,106,0300) | 1.1406E-02 (2002,106,0400) |
| 111 | -13.347 | -130.089 | 1.8167E-02 (2002,067,0800) | 1.5520E-02 (2002,067,0700) | 1.1653E-02 (2002,106,0400) | 1.0727E-02 (2002,106,0300) |
| 112 | -11.904 | -130.091 | 1.9217E-02 (2002,067,0800) | 1.4503E-02 (2002,067,0700) | 1.1848E-02 (2002,106,0400) | 1.0040E-02 (2002,106,0300) |
| 113 | -17.671 | -128.228 | 1.9380E-02 (2002,067,0700) | 1.4697E-02 (2002,067,0800) | 1.4630E-02 (2002,106,0300) | 1.1652E-02 (2002,106,0400) |
| 114 | -16.229 | -128.231 | 1.8337E-02 (2002,067,0700) | 1.5846E-02 (2002,067,0800) | 1.3900E-02 (2002,106,0300) | 1.2139E-02 (2002,106,0400) |
| 115 | -14.786 | -128.234 | 1.7287E-02 (2002,067,0700) | 1.6991E-02 (2002,067,0800) | 1.3163E-02 (2002,106,0300) | 1.2580E-02 (2002,106,0400) |

**********

CALPOST Version 5.6394 Level 070622

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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1 | -9.046 | -154.175 | 5.9648E-05 | 58 | -4.696 | -141.212 | 5.0072E-05 |
| 2 | -7.599 | -154.176 | 5.8146E-05 | 59 | -3.251 | -141.213 | 4.8892E-05 |
| 3 | -6.152 | -154.178 | 5.6775E-05 | 60 | -1.806 | -141.214 | 4.7880E-05 |
| 4 | -3.257 | -154.179 | 5.1213E-05 | 61 | -0.361 | -141.214 | 4.6907E-05 |
| 5 | -10.491 | -152.321 | 6.2833E-05 | 62 | -14.808 | -139.347 | 5.8358E-05 |
| 6 | -9.044 | -152.322 | 5.9774E-05 | 63 | -13.363 | -139.350 | 5.7302E-05 |
| 7 | -7.597 | -152.324 | 5.7325E-05 | 64 | -11.918 | -139.352 | 5.6941E-05 |
| 8 | -6.150 | -152.325 | 5.4615E-05 | 65 | -10.474 | -139.354 | 5.5459E-05 |
| 9 | -4.703 | -152.326 | 5.4399E-05 | 66 | -9.029 | -139.356 | 5.2917E-05 |
| 10 | -3.256 | -152.327 | 5.3117E-05 | 67 | -7.584 | -139.358 | 5.1813E-05 |
| 11 | -1.809 | -152.328 | 5.2015E-05 | 68 | -6.140 | -139.359 | 5.1522E-05 |
| 12 | -0.362 | -152.328 | 4.8288E-05 | 69 | -4.695 | -139.360 | 5.1046E-05 |
| 13 | -11.936 | -150.466 | 6.1619E-05 | 70 | -3.250 | -139.361 | 4.8737E-05 |
| 14 | -10.489 | -150.468 | 5.8459E-05 | 71 | -1.806 | -139.361 | 4.7774E-05 |
| 15 | -9.042 | -150.470 | 5.6911E-05 | 72 | -0.361 | -139.361 | 4.7103E-05 |
| 16 | -7.595 | -150.472 | 5.5558E-05 | 73 | 1.083 | -139.361 | 4.5979E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | -6.149 | -150.473 | 5.4111E-05 | 74 | -14.804 | -137.495 | 5.8370E-05 |
| 18 | -4.702 | -150.474 | 5.3928E-05 | 75 | -13.360 | -137.498 | 5.7127E-05 |
| 19 | -3.255 | -150.475 | 5.4034E-05 | 76 | -11.915 | -137.500 | 5.5339E-05 |
| 20 | -1.808 | -150.475 | 5.3808E-05 | 77 | -10.471 | -137.502 | 5.4000E-05 |
| 21 | 1.085 | -150.475 | 4.8396E-05 | 78 | -9.027 | -137.504 | 5.3375E-05 |
| 22 | -11.933 | -148.614 | 5.8969E-05 | 79 | -7.583 | -137.506 | 5.2742E-05 |
| 23 | -10.486 | -148.616 | 5.8900E-05 | 80 | -6.138 | -137.507 | 5.1941E-05 |
| 24 | -9.040 | -148.618 | 5.7928E-05 | 81 | -4.694 | -137.508 | 5.0076E-05 |
| 25 | -7.594 | -148.619 | 5.5786E-05 | 82 | -3.250 | -137.509 | 4.8278E-05 |
| 26 | -6.147 | -148.621 | 5.4411E-05 | 83 | -1.805 | -137.509 | 4.6878E-05 |
| 27 | -4.701 | -148.622 | 5.3722E-05 | 84 | -16.245 | -135.640 | 5.8283E-05 |
| 28 | -3.254 | -148.622 | 5.3817E-05 | 85 | -14.801 | -135.643 | 5.7391E-05 |
| 29 | -1.808 | -148.623 | 5.3310E-05 | 86 | -13.357 | -135.645 | 5.5885E-05 |
| 30 | -0.362 | -148.623 | 4.9545E-05 | 87 | -11.913 | -135.648 | 5.4643E-05 |
| 31 | -11.930 | -146.762 | 5.9036E-05 | 88 | -10.469 | -135.650 | 5.3555E-05 |
| 32 | -10.484 | -146.764 | 5.8010E-05 | 89 | -9.025 | -135.652 | 5.2877E-05 |
| 33 | -9.038 | -146.765 | 5.7346E-05 | 90 | -7.581 | -135.653 | 5.2161E-05 |
| 34 | -7.592 | -146.767 | 5.5576E-05 | 91 | -6.137 | -135.655 | 5.0171E-05 |
| 35 | -6.146 | -146.768 | 5.4403E-05 | 92 | -4.693 | -135.656 | 4.8447E-05 |
| 36 | -4.700 | -146.769 | 5.4544E-05 | 93 | -3.249 | -135.656 | 4.7322E-05 |
| 37 | -3.254 | -146.770 | 5.3959E-05 | 94 | -1.805 | -135.657 | 4.5916E-05 |
| 38 | -1.808 | -146.770 | 5.2861E-05 | 95 | -16.241 | -133.788 | 5.8326E-05 |
| 39 | -0.362 | -146.771 | 4.7965E-05 | 96 | -14.797 | -133.791 | 5.6459E-05 |
| 40 | -10.481 | -144.911 | 5.7494E-05 | 97 | -13.353 | -133.793 | 5.5101E-05 |
| 41 | -9.036 | -144.913 | 5.7027E-05 | 98 | -11.910 | -133.796 | 5.4192E-05 |
| 42 | -7.590 | -144.915 | 5.6327E-05 | 99 | -10.466 | -133.798 | 5.3904E-05 |
| 43 | -6.144 | -144.916 | 5.5138E-05 | 100 | -9.023 | -133.799 | 5.2471E-05 |
| 44 | -4.699 | -144.917 | 5.4122E-05 | 101 | -7.579 | -133.801 | 5.0525E-05 |
| 45 | -3.253 | -144.918 | 5.3185E-05 | 102 | -4.692 | -133.803 | 4.7580E-05 |
| 46 | -1.807 | -144.918 | 5.0102E-05 | 103 | -3.248 | -133.804 | 4.6288E-05 |
| 47 | -10.479 | -143.059 | 5.7224E-05 | 104 | -14.793 | -131.938 | 5.5741E-05 |
| 48 | -9.033 | -143.061 | 5.6675E-05 | 105 | -13.350 | -131.941 | 5.5087E-05 |
| 49 | -7.588 | -143.062 | 5.5346E-05 | 106 | -11.907 | -131.943 | 5.4522E-05 |
| 50 | -6.143 | -143.064 | 5.3476E-05 | 107 | -10.464 | -131.945 | 5.2326E-05 |
| 51 | -4.697 | -143.065 | 5.2321E-05 | 108 | -9.020 | -131.947 | 5.0527E-05 |
| 52 | -3.252 | -143.065 | 5.0949E-05 | 109 | -16.233 | -130.083 | 5.6993E-05 |
| 53 | -1.807 | -143.066 | 4.8599E-05 | 110 | -14.790 | -130.086 | 5.5739E-05 |
| 54 | -10.476 | -141.207 | 5.6883E-05 | 111 | -13.347 | -130.089 | 5.4408E-05 |
| 55 | -9.031 | -141.209 | 5.5662E-05 | 112 | -11.904 | -130.091 | 5.2526E-05 |
| 56 | -7.586 | -141.210 | 5.2716E-05 | 113 | -17.671 | -128.228 | 5.8523E-05 |
| 57 | -6.141 | -141.211 | 5.1611E-05 | 114 | -16.229 | -128.231 | 5.6331E-05 |
| | | | | 115 | -14.786 | -128.234 | 5.4585E-05 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 103 | -3.248 | -133.804 | DISCRETE | 2.2909E-02 (2002,067,0800) | RANK 1 | 1 | HOUR |
| 115 | -14.786 | -128.234 | DISCRETE | 1.6991E-02 (2002,067,0800) | RANK 2 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 1.4630E-02 (2002,106,0300) | RANK 3 | 1 | HOUR |
| 115 | -14.786 | -128.234 | DISCRETE | 1.2580E-02 (2002,106,0400) | RANK 4 | 1 | HOUR |
| 5 | -10.491 | -152.321 | DISCRETE | 6.2833E-05 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Bryce Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*0, 213*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************




  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2002
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1

  Visibility Processing is NOT Selected
```

```
 Output options
                    Units requested for output:   (ug/m**3)

 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                  1-hr averages:     T
                                  3-hr averages:     F
                                 24-hr averages:     F
                               NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                  Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                  Echo tables for selected days:     F
                  Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                        Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2002 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8759

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2002\POST_2002_NOX_BR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2002\SPC2002.CON


 ------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2002\2002_BRYCE_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_BR.DAT

*************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                     2 RANK                     3 RANK                     4 RANK
    116     -243.891  -280.107   1.2950E-01 (2002,143,0500)  8.3806E-02 (2002,305,0000)  8.1468E-02 (2002,342,0700)  7.6242E-02 (2002,143,0600)
    117     -243.156  -280.129   1.2666E-01 (2002,143,0500)  8.3184E-02 (2002,305,0000)  8.2709E-02 (2002,342,0700)  7.3274E-02 (2002,143,0600)
    118     -242.420  -280.152   1.2344E-01 (2002,143,0500)  8.3822E-02 (2002,342,0700)  8.2578E-02 (2002,305,0000)  7.0214E-02 (2002,143,0600)
    119     -241.685  -280.175   1.1985E-01 (2002,143,0500)  8.4801E-02 (2002,342,0700)  8.1869E-02 (2002,305,0000)  6.7087E-02 (2002,143,0600)
    120     -243.862  -279.180   1.3670E-01 (2002,143,0500)  8.3539E-02 (2002,305,0000)  8.2647E-02 (2002,342,0700)  7.6499E-02 (2002,143,0600)
    121     -243.127  -279.203   1.3372E-01 (2002,143,0500)  8.3895E-02 (2002,342,0700)  8.2765E-02 (2002,305,0000)  7.3530E-02 (2002,143,0600)
    122     -242.392  -279.226   1.3033E-01 (2002,143,0500)  8.5009E-02 (2002,342,0700)  8.1955E-02 (2002,305,0000)  7.0467E-02 (2002,143,0600)
    123     -241.656  -279.248   1.2656E-01 (2002,143,0500)  8.5985E-02 (2002,342,0700)  8.1112E-02 (2002,305,0000)  6.7336E-02 (2002,143,0600)
    124     -240.921  -279.271   1.2240E-01 (2002,143,0500)  8.6816E-02 (2002,342,0700)  8.0153E-02 (2002,305,0000)  6.4162E-02 (2002,143,0600)
    125     -243.834  -278.254   1.4378E-01 (2002,143,0500)  8.3693E-02 (2002,342,0700)  8.2952E-02 (2002,305,0000)  7.6489E-02 (2002,143,0600)
    126     -243.098  -278.277   1.4067E-01 (2002,143,0500)  8.4941E-02 (2002,342,0700)  8.1904E-02 (2002,305,0000)  7.3532E-02 (2002,143,0600)
    127     -242.363  -278.299   1.3713E-01 (2002,143,0500)  8.6055E-02 (2002,342,0700)  8.0905E-02 (2002,305,0000)  7.0478E-02 (2002,143,0600)
    128     -241.628  -278.322   1.3318E-01 (2002,143,0500)  8.7026E-02 (2002,342,0700)  7.9907E-02 (2002,305,0000)  6.7354E-02 (2002,143,0600)
    129     -240.892  -278.345   1.2886E-01 (2002,143,0500)  8.7848E-02 (2002,342,0700)  7.8807E-02 (2002,305,0000)  6.4185E-02 (2002,143,0600)
    130     -240.157  -278.367   1.2422E-01 (2002,143,0500)  8.8517E-02 (2002,342,0700)  7.7679E-02 (2002,305,0000)  6.3198E-02 (2002,030,0500)
    131     -243.805  -277.328   1.5086E-01 (2002,143,0500)  8.4587E-02 (2002,342,0700)  8.1925E-02 (2002,305,0000)  7.6253E-02 (2002,143,0600)
    132     -243.070  -277.350   1.4763E-01 (2002,143,0500)  8.5836E-02 (2002,342,0700)  8.0737E-02 (2002,305,0000)  7.3315E-02 (2002,143,0600)
    133     -242.335  -277.373   1.4394E-01 (2002,143,0500)  8.6945E-02 (2002,342,0700)  7.9508E-02 (2002,305,0000)  7.0265E-02 (2002,143,0600)
    134     -241.599  -277.396   1.3974E-01 (2002,143,0500)  8.7910E-02 (2002,342,0700)  7.8276E-02 (2002,305,0000)  6.7135E-02 (2002,143,0600)
    135     -240.864  -277.418   1.3522E-01 (2002,143,0500)  8.8721E-02 (2002,342,0700)  7.7017E-02 (2002,305,0000)  6.3982E-02 (2002,143,0600)
    136     -240.129  -277.441   1.3036E-01 (2002,143,0500)  8.9375E-02 (2002,342,0700)  7.5774E-02 (2002,305,0000)  6.3283E-02 (2002,030,0500)
    137     -243.776  -276.401   1.5766E-01 (2002,143,0500)  8.5318E-02 (2002,342,0700)  8.0491E-02 (2002,305,0000)  7.5729E-02 (2002,143,0600)
    138     -243.041  -276.424   1.5432E-01 (2002,143,0500)  8.6565E-02 (2002,342,0700)  7.9161E-02 (2002,305,0000)  7.2824E-02 (2002,143,0600)
    139     -242.306  -276.447   1.5048E-01 (2002,143,0500)  8.7669E-02 (2002,342,0700)  7.7730E-02 (2002,305,0000)  7.1687E-02 (2002,143,0400)
    140     -241.571  -276.469   1.4617E-01 (2002,143,0500)  8.8623E-02 (2002,342,0700)  7.6333E-02 (2002,305,0000)  7.1258E-02 (2002,143,0400)
    141     -240.836  -276.492   1.4145E-01 (2002,143,0500)  8.9423E-02 (2002,342,0700)  7.4850E-02 (2002,305,0000)  7.0514E-02 (2002,143,0400)
    142     -240.101  -276.514   1.3637E-01 (2002,143,0500)  9.0065E-02 (2002,342,0700)  7.3445E-02 (2002,305,0000)  6.9474E-02 (2002,143,0400)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 143 | -243.747 | -275.475 | 1.6427E-01 (2002,143,0500) | 8.5876E-02 (2002,342,0700) | 7.9432E-02 (2002,143,0400) | 7.8729E-02 (2002,305,0000) |
| 144 | -243.012 | -275.498 | 1.6081E-01 (2002,143,0500) | 8.7117E-02 (2002,342,0700) | 7.9721E-02 (2002,143,0400) | 7.7168E-02 (2002,305,0000) |
| 145 | -242.277 | -275.520 | 1.5684E-01 (2002,143,0500) | 8.8213E-02 (2002,342,0700) | 7.9626E-02 (2002,143,0400) | 7.5588E-02 (2002,305,0000) |
| 146 | -241.542 | -275.543 | 1.5236E-01 (2002,143,0500) | 8.9159E-02 (2002,342,0700) | 7.9178E-02 (2002,143,0400) | 7.4019E-02 (2002,305,0000) |
| 147 | -240.807 | -275.565 | 1.4745E-01 (2002,143,0500) | 8.9947E-02 (2002,342,0700) | 7.8343E-02 (2002,143,0400) | 7.2393E-02 (2002,305,0000) |
| 148 | -240.072 | -275.588 | 1.4212E-01 (2002,143,0500) | 9.0572E-02 (2002,342,0700) | 7.7242E-02 (2002,143,0400) | 7.0786E-02 (2002,305,0000) |
| 149 | -244.454 | -274.526 | 1.7347E-01 (2002,143,0500) | 8.7069E-02 (2002,143,0400) | 8.4874E-02 (2002,342,0700) | 7.8419E-02 (2002,305,0000) |
| 150 | -243.719 | -274.548 | 1.7052E-01 (2002,143,0500) | 8.7765E-02 (2002,143,0400) | 8.6248E-02 (2002,342,0700) | 7.6683E-02 (2002,305,0000) |
| 151 | -242.984 | -274.571 | 1.6696E-01 (2002,143,0500) | 8.8099E-02 (2002,143,0400) | 8.7483E-02 (2002,342,0700) | 7.4907E-02 (2002,305,0000) |
| 152 | -244.425 | -273.599 | 1.7940E-01 (2002,143,0500) | 9.5843E-02 (2002,143,0400) | 8.5062E-02 (2002,342,0700) | 7.6199E-02 (2002,305,0000) |
| 153 | -243.690 | -273.622 | 1.7639E-01 (2002,143,0500) | 9.6693E-02 (2002,143,0400) | 8.6428E-02 (2002,342,0700) | 7.4266E-02 (2002,305,0000) |
| 154 | -242.955 | -273.645 | 1.7275E-01 (2002,143,0500) | 9.7105E-02 (2002,143,0400) | 8.7651E-02 (2002,342,0700) | 7.2332E-02 (2002,305,0000) |
| 155 | -244.396 | -272.673 | 1.8494E-01 (2002,143,0500) | 1.0504E-01 (2002,143,0400) | 8.5048E-02 (2002,342,0700) | 7.3737E-02 (2002,305,0000) |
| 156 | -243.661 | -272.696 | 1.8187E-01 (2002,143,0500) | 1.0602E-01 (2002,143,0400) | 8.6402E-02 (2002,342,0700) | 7.1568E-02 (2002,305,0000) |
| 157 | -242.927 | -272.719 | 1.7815E-01 (2002,143,0500) | 1.0652E-01 (2002,143,0400) | 8.7615E-02 (2002,342,0700) | 6.9449E-02 (2002,305,0000) |
| 158 | -244.367 | -271.747 | 1.8993E-01 (2002,143,0500) | 1.1476E-01 (2002,143,0400) | 8.4828E-02 (2002,342,0700) | 7.1828E-02 (2002,143,0600) |
| 159 | -243.633 | -271.769 | 1.8682E-01 (2002,143,0500) | 1.1588E-01 (2002,143,0400) | 8.6172E-02 (2002,342,0700) | 6.9361E-02 (2002,143,0600) |
| 160 | -242.898 | -271.792 | 1.8303E-01 (2002,143,0500) | 1.1649E-01 (2002,143,0400) | 8.7369E-02 (2002,342,0700) | 7.0038E-02 (2002,024,0400) |
| 161 | -244.339 | -270.820 | 1.9425E-01 (2002,143,0500) | 1.2485E-01 (2002,143,0400) | 8.4400E-02 (2002,342,0700) | 6.9812E-02 (2002,143,0600) |
| 162 | -243.604 | -270.843 | 1.9112E-01 (2002,143,0500) | 1.2613E-01 (2002,143,0400) | 8.5725E-02 (2002,342,0700) | 6.9632E-02 (2002,024,0400) |
| 163 | -242.869 | -270.866 | 1.8728E-01 (2002,143,0500) | 1.2684E-01 (2002,143,0400) | 8.6903E-02 (2002,342,0700) | 7.1203E-02 (2002,024,0400) |
| 164 | -242.135 | -270.889 | 1.8279E-01 (2002,143,0500) | 1.2698E-01 (2002,143,0400) | 8.7926E-02 (2002,342,0700) | 7.1731E-02 (2002,024,0400) |
| 165 | -244.310 | -269.894 | 1.9795E-01 (2002,143,0500) | 1.3523E-01 (2002,143,0400) | 8.3751E-02 (2002,342,0700) | 6.7920E-02 (2002,024,0400) |
| 166 | -243.575 | -269.917 | 1.9480E-01 (2002,143,0500) | 1.3672E-01 (2002,143,0400) | 8.5054E-02 (2002,342,0700) | 7.0615E-02 (2002,024,0400) |
| 167 | -242.841 | -269.940 | 1.9093E-01 (2002,143,0500) | 1.3759E-01 (2002,143,0400) | 8.6209E-02 (2002,342,0700) | 7.2324E-02 (2002,024,0400) |
| 168 | -242.106 | -269.962 | 1.8634E-01 (2002,143,0500) | 1.3782E-01 (2002,143,0400) | 8.7211E-02 (2002,342,0700) | 7.3000E-02 (2002,024,0400) |
| 169 | -242.812 | -269.013 | 1.9383E-01 (2002,143,0500) | 1.4859E-01 (2002,143,0400) | 8.5288E-02 (2002,342,0700) | 7.3504E-02 (2002,024,0400) |
| 170 | -242.078 | -269.036 | 1.8923E-01 (2002,143,0500) | 1.4890E-01 (2002,143,0400) | 8.6267E-02 (2002,342,0700) | 7.4282E-02 (2002,024,0400) |
| 171 | -241.343 | -269.059 | 1.8399E-01 (2002,143,0500) | 1.4850E-01 (2002,143,0400) | 8.7087E-02 (2002,342,0700) | 7.3936E-02 (2002,024,0400) |
| 172 | -240.609 | -269.081 | 1.7817E-01 (2002,143,0500) | 1.4740E-01 (2002,143,0400) | 8.7740E-02 (2002,342,0700) | 7.2488E-02 (2002,024,0400) |
| 173 | -239.874 | -269.104 | 1.7184E-01 (2002,143,0500) | 1.4560E-01 (2002,143,0400) | 8.8223E-02 (2002,342,0700) | 7.0010E-02 (2002,024,0400) |
| 174 | -242.049 | -268.110 | 1.9143E-01 (2002,143,0500) | 1.6033E-01 (2002,143,0400) | 8.5093E-02 (2002,342,0700) | 7.5470E-02 (2002,024,0400) |
| 175 | -241.315 | -268.132 | 1.8615E-01 (2002,143,0500) | 1.5997E-01 (2002,143,0400) | 8.5887E-02 (2002,342,0700) | 7.5244E-02 (2002,024,0400) |
| 176 | -240.580 | -268.155 | 1.8028E-01 (2002,143,0500) | 1.5886E-01 (2002,143,0400) | 8.6515E-02 (2002,342,0700) | 7.3875E-02 (2002,024,0400) |
| 177 | -239.846 | -268.177 | 1.7389E-01 (2002,143,0500) | 1.5687E-01 (2002,143,0400) | 8.6974E-02 (2002,342,0700) | 7.1417E-02 (2002,024,0400) |
| 178 | -239.112 | -268.200 | 1.6697E-01 (2002,143,0500) | 1.5421E-01 (2002,143,0400) | 8.7260E-02 (2002,342,0700) | 7.2692E-02 (2002,304,2300) |
| 179 | -242.020 | -267.183 | 1.9282E-01 (2002,143,0500) | 1.7192E-01 (2002,143,0400) | 8.3696E-02 (2002,342,0700) | 7.6702E-02 (2002,024,0400) |
| 180 | -241.286 | -267.206 | 1.8753E-01 (2002,143,0500) | 1.7164E-01 (2002,143,0400) | 8.4461E-02 (2002,342,0700) | 7.6595E-02 (2002,024,0400) |
| 181 | -240.552 | -267.228 | 1.8163E-01 (2002,143,0500) | 1.7050E-01 (2002,143,0400) | 8.5063E-02 (2002,342,0700) | 7.5292E-02 (2002,024,0400) |
| 182 | -239.818 | -267.251 | 1.7520E-01 (2002,143,0500) | 1.6856E-01 (2002,143,0400) | 8.5496E-02 (2002,342,0700) | 7.4039E-02 (2002,304,2300) |
| 183 | -239.083 | -267.273 | 1.6828E-01 (2002,143,0500) | 1.6577E-01 (2002,143,0400) | 8.5757E-02 (2002,342,0700) | 7.6785E-02 (2002,304,2300) |
| 184 | -241.258 | -266.280 | 1.8807E-01 (2002,143,0500) | 1.8333E-01 (2002,143,0400) | 8.2809E-02 (2002,342,0700) | 7.7963E-02 (2002,024,0400) |
| 185 | -240.524 | -266.302 | 1.8227E-01 (2002,143,0400) | 1.8218E-01 (2002,143,0500) | 8.3381E-02 (2002,342,0700) | 7.6764E-02 (2002,024,0400) |
| 186 | -239.789 | -266.325 | 1.8023E-01 (2002,143,0400) | 1.7574E-01 (2002,143,0500) | 8.3791E-02 (2002,342,0700) | 7.8069E-02 (2002,304,2300) |
| 187 | -239.055 | -266.347 | 1.7731E-01 (2002,143,0400) | 1.6885E-01 (2002,143,0500) | 8.4031E-02 (2002,342,0700) | 8.0635E-02 (2002,304,2300) |
| 188 | -238.321 | -266.369 | 1.7357E-01 (2002,143,0400) | 1.6157E-01 (2002,143,0500) | 8.4098E-02 (2002,342,0700) | 8.3187E-02 (2002,304,2300) |
| 189 | -237.587 | -266.392 | 1.6904E-01 (2002,143,0400) | 1.5399E-01 (2002,143,0500) | 8.5552E-02 (2002,304,2300) | 8.3992E-02 (2002,342,0700) |
| 190 | -236.853 | -266.414 | 1.6376E-01 (2002,143,0400) | 1.4618E-01 (2002,143,0500) | 8.7682E-02 (2002,304,2300) | 8.3711E-02 (2002,342,0700) |
| 191 | -236.118 | -266.436 | 1.5781E-01 (2002,143,0400) | 1.3826E-01 (2002,143,0500) | 8.9616E-02 (2002,304,2300) | 8.3256E-02 (2002,342,0700) |
| 192 | -235.384 | -266.458 | 1.5131E-01 (2002,143,0400) | 1.3031E-01 (2002,143,0500) | 9.1333E-02 (2002,304,2300) | 8.2628E-02 (2002,342,0700) |
| 193 | -234.650 | -266.480 | 1.4434E-01 (2002,143,0400) | 1.2238E-01 (2002,143,0500) | 9.2831E-02 (2002,304,2300) | 8.1991E-02 (2002,342,0600) |
| 194 | -233.916 | -266.502 | 1.3698E-01 (2002,143,0400) | 1.1448E-01 (2002,143,0500) | 9.3991E-02 (2002,304,2300) | 8.4046E-02 (2002,342,0600) |
| 195 | -233.181 | -266.524 | 1.2921E-01 (2002,143,0400) | 1.0682E-01 (2002,143,0500) | 9.4814E-02 (2002,304,2300) | 8.5946E-02 (2002,342,0600) |
| 196 | -232.447 | -266.545 | 1.2138E-01 (2002,143,0400) | 9.9388E-02 (2002,143,0500) | 9.5435E-02 (2002,304,2300) | 8.7679E-02 (2002,342,0600) |
| 197 | -231.713 | -266.567 | 1.1352E-01 (2002,143,0400) | 9.5698E-02 (2002,304,2300) | 9.2200E-02 (2002,143,0500) | 8.9235E-02 (2002,342,0600) |
| 198 | -241.229 | -265.353 | 1.9522E-01 (2002,143,0400) | 1.8783E-01 (2002,143,0500) | 8.0940E-02 (2002,342,0700) | 7.9334E-02 (2002,024,0400) |
| 199 | -240.495 | -265.376 | 1.9414E-01 (2002,143,0400) | 1.8197E-01 (2002,143,0500) | 8.1488E-02 (2002,342,0700) | 7.9198E-02 (2002,304,2300) |
| 200 | -239.761 | -265.398 | 1.9205E-01 (2002,143,0400) | 1.7553E-01 (2002,143,0500) | 8.1871E-02 (2002,342,0700) | 8.1868E-02 (2002,304,2300) |
| 201 | -239.027 | -265.421 | 1.8903E-01 (2002,143,0400) | 1.6865E-01 (2002,143,0500) | 8.4360E-02 (2002,304,2300) | 8.2087E-02 (2002,342,0700) |
| 202 | -238.293 | -265.443 | 1.8509E-01 (2002,143,0400) | 1.6138E-01 (2002,143,0500) | 8.6718E-02 (2002,304,2300) | 8.2133E-02 (2002,342,0700) |
| 203 | -237.559 | -265.465 | 1.8029E-01 (2002,143,0400) | 1.5382E-01 (2002,143,0500) | 8.8909E-02 (2002,304,2300) | 8.2008E-02 (2002,342,0700) |
| 204 | -236.825 | -265.487 | 1.7467E-01 (2002,143,0400) | 1.4604E-01 (2002,143,0500) | 9.0936E-02 (2002,304,2300) | 8.1710E-02 (2002,342,0700) |
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| 206 | -235.356 | -265.532 | 1.6132E-01 (2002,143,0400) | 1.3018E-01 (2002,143,0500) | 9.4252E-02 (2002,304,2300) | 8.1421E-02 (2002,342,0600) |
| 207 | -234.622 | -265.553 | 1.5387E-01 (2002,143,0400) | 1.2221E-01 (2002,143,0500) | 9.5552E-02 (2002,304,2300) | 8.3679E-02 (2002,342,0600) |
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| 211 | -231.686 | -265.641 | 1.2097E-01 (2002,143,0400) | 9.7808E-02 (2002,304,2300) | 9.2075E-02 (2002,143,0500) | 9.1177E-02 (2002,342,0600) |
| 212 | -240.467 | -264.449 | 2.0594E-01 (2002,143,0400) | 1.8094E-01 (2002,143,0500) | 8.2878E-02 (2002,304,2300) | 7.9797E-02 (2002,024,0400) |
| 213 | -239.733 | -264.472 | 2.0372E-01 (2002,143,0400) | 1.7458E-01 (2002,143,0500) | 8.5396E-02 (2002,304,2300) | 8.1295E-02 (2002,143,0300) |
| 214 | -238.999 | -264.494 | 2.0060E-01 (2002,143,0400) | 1.6776E-01 (2002,143,0500) | 8.7759E-02 (2002,304,2300) | 8.3097E-02 (2002,143,0300) |
| 215 | -238.265 | -264.517 | 1.9648E-01 (2002,143,0400) | 1.6053E-01 (2002,143,0500) | 8.9943E-02 (2002,304,2300) | 8.4334E-02 (2002,143,0300) |
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| 218 | -236.063 | -264.583 | 1.7878E-01 (2002,143,0400) | 1.3736E-01 (2002,143,0500) | 9.5400E-02 (2002,304,2300) | 8.5177E-02 (2002,143,0300) |
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| 222 | -233.126 | -264.671 | 1.4640E-01 (2002,143,0400) | 1.0613E-01 (2002,143,0500) | 9.9264E-02 (2002,304,2300) | 8.9533E-02 (2002,342,0600) |
| 223 | -232.392 | -264.693 | 1.3739E-01 (2002,143,0400) | 9.9532E-02 (2002,304,2300) | 9.8741E-02 (2002,143,0500) | 9.1370E-02 (2002,342,0600) |
| 224 | -231.658 | -264.714 | 1.2842E-01 (2002,143,0400) | 9.9400E-02 (2002,304,2300) | 9.3013E-02 (2002,342,0600) | 9.1611E-02 (2002,143,0500) |
| 225 | -238.971 | -263.568 | 2.1207E-01 (2002,143,0400) | 1.6617E-01 (2002,143,0500) | 9.4917E-02 (2002,143,0300) | 9.0842E-02 (2002,304,2300) |
| 226 | -238.237 | -263.590 | 2.0778E-01 (2002,143,0400) | 1.5897E-01 (2002,143,0500) | 9.6442E-02 (2002,143,0300) | 9.2818E-02 (2002,304,2300) |
| 227 | -237.503 | -263.613 | 2.0246E-01 (2002,143,0400) | 1.5149E-01 (2002,143,0500) | 9.7369E-02 (2002,143,0300) | 9.4627E-02 (2002,304,2300) |
| 228 | -236.769 | -263.635 | 1.9621E-01 (2002,143,0400) | 1.4384E-01 (2002,143,0500) | 9.7837E-02 (2002,143,0300) | 9.6231E-02 (2002,304,2300) |
| 229 | -236.035 | -263.657 | 1.8915E-01 (2002,143,0400) | 1.3605E-01 (2002,143,0500) | 9.7592E-02 (2002,304,2300) | 9.7521E-02 (2002,143,0300) |
| 230 | -235.301 | -263.679 | 1.8127E-01 (2002,143,0400) | 1.2821E-01 (2002,143,0500) | 9.8746E-02 (2002,304,2300) | 9.6569E-02 (2002,143,0300) |
| 231 | -234.567 | -263.701 | 1.7287E-01 (2002,143,0400) | 1.2040E-01 (2002,143,0500) | 9.9650E-02 (2002,304,2300) | 9.5054E-02 (2002,143,0300) |
| 232 | -233.833 | -263.723 | 1.6400E-01 (2002,143,0400) | 1.1265E-01 (2002,143,0500) | 1.0026E-01 (2002,304,2300) | 9.2888E-02 (2002,143,0300) |
| 233 | -233.099 | -263.745 | 1.5477E-01 (2002,143,0400) | 1.0510E-01 (2002,143,0500) | 1.0064E-01 (2002,304,2300) | 9.1241E-02 (2002,342,0600) |
| 234 | -232.365 | -263.766 | 1.4532E-01 (2002,143,0400) | 1.0069E-01 (2002,304,2300) | 9.7777E-02 (2002,143,0500) | 9.3123E-02 (2002,342,0600) |
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| 236 | -238.208 | -262.664 | 2.1868E-01 (2002,143,0400) | 1.5680E-01 (2002,143,0500) | 1.0970E-01 (2002,143,0300) | 9.5292E-02 (2002,304,2300) |
| 237 | -237.475 | -262.686 | 2.1314E-01 (2002,143,0400) | 1.4947E-01 (2002,143,0500) | 1.1086E-01 (2002,143,0300) | 9.6833E-02 (2002,304,2300) |
| 238 | -236.741 | -262.708 | 2.0661E-01 (2002,143,0400) | 1.4189E-01 (2002,143,0500) | 1.1143E-01 (2002,143,0300) | 9.8209E-02 (2002,304,2300) |
| 239 | -236.007 | -262.731 | 1.9918E-01 (2002,143,0400) | 1.3421E-01 (2002,143,0500) | 1.1116E-01 (2002,143,0300) | 9.9323E-02 (2002,304,2300) |
| 240 | -235.273 | -262.753 | 1.9099E-01 (2002,143,0400) | 1.2642E-01 (2002,143,0500) | 1.1022E-01 (2002,143,0300) | 1.0028E-01 (2002,304,2300) |
| 241 | -234.539 | -262.775 | 1.8214E-01 (2002,143,0400) | 1.1867E-01 (2002,143,0500) | 1.0852E-01 (2002,143,0300) | 1.0092E-01 (2002,304,2300) |
| 242 | -233.805 | -262.796 | 1.7277E-01 (2002,143,0400) | 1.1108E-01 (2002,143,0500) | 1.0606E-01 (2002,143,0300) | 1.0135E-01 (2002,304,2300) |
| 243 | -233.071 | -262.818 | 1.6297E-01 (2002,143,0400) | 1.0364E-01 (2002,143,0500) | 1.0299E-01 (2002,143,0300) | 1.0149E-01 (2002,304,2300) |
| 244 | -232.338 | -262.840 | 1.5294E-01 (2002,143,0400) | 1.0127E-01 (2002,304,2300) | 9.9258E-02 (2002,143,0300) | 9.6375E-02 (2002,143,0500) |
| 245 | -238.180 | -261.738 | 2.2927E-01 (2002,143,0400) | 1.5390E-01 (2002,143,0500) | 1.2397E-01 (2002,143,0300) | 9.7473E-02 (2002,304,2300) |
| 246 | -237.447 | -261.760 | 2.2351E-01 (2002,143,0400) | 1.4671E-01 (2002,143,0500) | 1.2543E-01 (2002,143,0300) | 9.8708E-02 (2002,304,2300) |
| 247 | -236.713 | -261.782 | 2.1670E-01 (2002,143,0400) | 1.3929E-01 (2002,143,0500) | 1.2610E-01 (2002,143,0300) | 9.9727E-02 (2002,304,2300) |
| 248 | -235.979 | -261.804 | 2.0893E-01 (2002,143,0400) | 1.3176E-01 (2002,143,0500) | 1.2597E-01 (2002,143,0300) | 1.0063E-01 (2002,304,2300) |
| 249 | -235.245 | -261.826 | 2.0023E-01 (2002,143,0400) | 1.2498E-01 (2002,143,0300) | 1.2413E-01 (2002,143,0500) | 1.0127E-01 (2002,304,2300) |
| 250 | -234.511 | -261.848 | 1.9094E-01 (2002,143,0400) | 1.2312E-01 (2002,143,0300) | 1.1657E-01 (2002,143,0500) | 1.0168E-01 (2002,304,2300) |
| 251 | -233.778 | -261.870 | 1.8111E-01 (2002,143,0400) | 1.2047E-01 (2002,143,0300) | 1.0911E-01 (2002,143,0500) | 1.0182E-01 (2002,304,2300) |
| 252 | -233.044 | -261.892 | 1.7086E-01 (2002,143,0400) | 1.1703E-01 (2002,143,0300) | 1.0175E-01 (2002,304,2300) | 1.0175E-01 (2002,143,0500) |
| 253 | -232.310 | -261.914 | 1.6036E-01 (2002,143,0400) | 1.1288E-01 (2002,143,0300) | 1.0136E-01 (2002,304,2300) | 9.6356E-02 (2002,342,0600) |
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| 255 | -235.217 | -260.900 | 2.0909E-01 (2002,143,0400) | 1.4093E-01 (2002,143,0300) | 1.2136E-01 (2002,143,0500) | 1.0179E-01 (2002,304,2300) |
| 256 | -234.484 | -260.922 | 1.9939E-01 (2002,143,0400) | 1.3893E-01 (2002,143,0300) | 1.1396E-01 (2002,143,0500) | 1.0190E-01 (2002,304,2300) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 257 | -233.750 | -260.944 | 1.8910E-01 (2002,143,0400) | 1.3601E-01 (2002,143,0300) | 1.0667E-01 (2002,143,0500) | 1.0177E-01 (2002,304,2300) |
| 258 | -233.016 | -260.966 | 1.7837E-01 (2002,143,0400) | 1.3219E-01 (2002,143,0300) | 1.0147E-01 (2002,304,2300) | 9.9482E-02 (2002,143,0500) |
| 259 | -232.283 | -260.987 | 1.6730E-01 (2002,143,0400) | 1.2761E-01 (2002,143,0300) | 1.0083E-01 (2002,304,2300) | 9.7815E-02 (2002,342,0600) |
| 260 | -231.549 | -261.009 | 1.5613E-01 (2002,143,0400) | 1.2215E-01 (2002,143,0300) | 9.9988E-02 (2002,304,2300) | 9.9628E-02 (2002,342,0600) |
| 261 | -230.815 | -261.031 | 1.4504E-01 (2002,143,0400) | 1.1617E-01 (2002,143,0300) | 1.0122E-01 (2002,342,0600) | 9.8794E-02 (2002,304,2300) |
| 262 | -235.923 | -259.952 | 2.2658E-01 (2002,143,0400) | 1.5893E-01 (2002,143,0300) | 1.2534E-01 (2002,143,0500) | 1.0179E-01 (2002,304,2300) |
| 263 | -235.190 | -259.974 | 2.1728E-01 (2002,143,0400) | 1.5791E-01 (2002,143,0300) | 1.1811E-01 (2002,143,0500) | 1.0185E-01 (2002,304,2300) |
| 264 | -234.456 | -259.996 | 2.0709E-01 (2002,143,0400) | 1.5574E-01 (2002,143,0300) | 1.1089E-01 (2002,143,0500) | 1.0165E-01 (2002,304,2300) |
| 265 | -233.723 | -260.018 | 1.9638E-01 (2002,143,0400) | 1.5261E-01 (2002,143,0300) | 1.0379E-01 (2002,143,0500) | 1.0129E-01 (2002,304,2300) |
| 266 | -232.989 | -260.039 | 1.8522E-01 (2002,143,0400) | 1.4842E-01 (2002,143,0300) | 1.0066E-01 (2002,304,2300) | 9.7082E-02 (2002,342,0600) |
| 267 | -232.255 | -260.061 | 1.7375E-01 (2002,143,0400) | 1.4333E-01 (2002,143,0300) | 9.9800E-02 (2002,304,2300) | 9.9147E-02 (2002,342,0600) |
| 268 | -231.522 | -260.083 | 1.6216E-01 (2002,143,0400) | 1.3735E-01 (2002,143,0300) | 1.0099E-01 (2002,342,0600) | 9.8708E-02 (2002,304,2300) |
| 269 | -230.788 | -260.104 | 1.5060E-01 (2002,143,0400) | 1.3066E-01 (2002,143,0300) | 1.0261E-01 (2002,342,0600) | 9.7342E-02 (2002,304,2300) |
| 270 | -230.054 | -260.126 | 1.3909E-01 (2002,143,0400) | 1.2337E-01 (2002,143,0300) | 1.0398E-01 (2002,342,0600) | 9.5670E-02 (2002,304,2300) |
| 271 | -235.895 | -259.025 | 2.3418E-01 (2002,143,0400) | 1.7689E-01 (2002,143,0300) | 1.2151E-01 (2002,143,0500) | 1.0168E-01 (2002,304,2300) |
| 272 | -235.162 | -259.047 | 2.2459E-01 (2002,143,0400) | 1.7593E-01 (2002,143,0300) | 1.1445E-01 (2002,143,0500) | 1.0146E-01 (2002,304,2300) |
| 273 | -234.428 | -259.069 | 2.1415E-01 (2002,143,0400) | 1.7381E-01 (2002,143,0300) | 1.0749E-01 (2002,143,0500) | 1.0100E-01 (2002,304,2300) |
| 274 | -233.695 | -259.091 | 2.0307E-01 (2002,143,0400) | 1.7040E-01 (2002,143,0300) | 1.0063E-01 (2002,143,0500) | 1.0030E-01 (2002,304,2300) |
| 275 | -232.961 | -259.113 | 1.9149E-01 (2002,143,0400) | 1.6586E-01 (2002,143,0300) | 9.9445E-02 (2002,304,2300) | 9.8242E-02 (2002,342,0600) |
| 276 | -232.228 | -259.135 | 1.7955E-01 (2002,143,0400) | 1.6023E-01 (2002,143,0300) | 1.0034E-01 (2002,342,0600) | 9.8280E-02 (2002,304,2300) |
| 277 | -231.494 | -259.156 | 1.6749E-01 (2002,143,0400) | 1.5355E-01 (2002,143,0300) | 1.0222E-01 (2002,342,0600) | 9.6911E-02 (2002,304,2300) |
| 278 | -230.761 | -259.178 | 1.5551E-01 (2002,143,0400) | 1.4609E-01 (2002,143,0300) | 1.0387E-01 (2002,342,0600) | 9.5364E-02 (2002,304,2300) |
| 279 | -230.027 | -259.200 | 1.4368E-01 (2002,143,0400) | 1.3790E-01 (2002,143,0300) | 1.0527E-01 (2002,342,0600) | 9.6037E-02 (2002,305,0600) |
| 280 | -229.294 | -259.221 | 1.3218E-01 (2002,143,0400) | 1.2925E-01 (2002,143,0300) | 1.0642E-01 (2002,342,0600) | 1.0583E-01 (2002,305,0600) |
| 281 | -235.134 | -258.121 | 2.3108E-01 (2002,143,0400) | 1.9488E-01 (2002,143,0300) | 1.1053E-01 (2002,143,0500) | 1.0068E-01 (2002,304,2300) |
| 282 | -234.401 | -258.143 | 2.2034E-01 (2002,143,0400) | 1.9266E-01 (2002,143,0300) | 1.0383E-01 (2002,143,0500) | 9.9866E-02 (2002,304,2300) |
| 283 | -233.667 | -258.165 | 2.0886E-01 (2002,143,0400) | 1.8907E-01 (2002,143,0300) | 9.8870E-02 (2002,304,2300) | 9.7179E-02 (2002,143,0500) |
| 284 | -232.934 | -258.187 | 1.9687E-01 (2002,143,0400) | 1.8417E-01 (2002,143,0300) | 9.9247E-02 (2002,342,0600) | 9.7722E-02 (2002,304,2300) |
| 285 | -232.200 | -258.208 | 1.8462E-01 (2002,143,0400) | 1.7800E-01 (2002,143,0300) | 1.0138E-01 (2002,342,0600) | 9.6318E-02 (2002,304,2300) |
| 286 | -231.467 | -258.230 | 1.7222E-01 (2002,143,0400) | 1.7074E-01 (2002,143,0300) | 1.0330E-01 (2002,342,0600) | 9.4727E-02 (2002,304,2300) |
| 287 | -230.734 | -258.252 | 1.6252E-01 (2002,143,0300) | 1.5986E-01 (2002,143,0400) | 1.0499E-01 (2002,342,0600) | 9.2858E-02 (2002,304,2300) |
| 288 | -230.000 | -258.273 | 1.5352E-01 (2002,143,0300) | 1.4757E-01 (2002,143,0400) | 1.0642E-01 (2002,342,0600) | 9.7338E-02 (2002,305,0600) |
| 289 | -229.267 | -258.295 | 1.4391E-01 (2002,143,0300) | 1.3572E-01 (2002,143,0400) | 1.0759E-01 (2002,342,0600) | 1.0739E-01 (2002,305,0600) |
| 290 | -234.373 | -257.217 | 2.2538E-01 (2002,143,0400) | 2.1270E-01 (2002,143,0300) | 9.9837E-02 (2002,143,0500) | 9.8375E-02 (2002,304,2300) |
| 291 | -233.640 | -257.239 | 2.1367E-01 (2002,143,0400) | 2.0893E-01 (2002,143,0300) | 9.7674E-02 (2002,342,0600) | 9.7026E-02 (2002,304,2300) |
| 292 | -232.906 | -257.260 | 2.0366E-01 (2002,143,0300) | 2.0144E-01 (2002,143,0400) | 1.0006E-01 (2002,342,0600) | 9.5543E-02 (2002,304,2300) |
| 293 | -232.173 | -257.282 | 1.9698E-01 (2002,143,0300) | 1.8888E-01 (2002,143,0400) | 1.0226E-01 (2002,342,0600) | 9.3921E-02 (2002,304,2300) |
| 294 | -231.440 | -257.304 | 1.8894E-01 (2002,143,0300) | 1.7605E-01 (2002,143,0400) | 1.0420E-01 (2002,342,0600) | 9.2043E-02 (2002,304,2300) |
| 295 | -230.706 | -257.326 | 1.7992E-01 (2002,143,0300) | 1.6338E-01 (2002,143,0400) | 1.0591E-01 (2002,342,0600) | 9.0028E-02 (2002,304,2300) |
| 296 | -229.973 | -257.347 | 1.6987E-01 (2002,143,0300) | 1.5089E-01 (2002,143,0400) | 1.0737E-01 (2002,342,0600) | 9.8558E-02 (2002,305,0600) |
| 297 | -229.240 | -257.369 | 1.5932E-01 (2002,143,0300) | 1.3874E-01 (2002,143,0400) | 1.0887E-01 (2002,305,0600) | 1.0855E-01 (2002,342,0600) |
| 298 | -232.879 | -256.334 | 2.2370E-01 (2002,143,0300) | 2.0487E-01 (2002,143,0400) | 1.0070E-01 (2002,342,0600) | 9.3077E-02 (2002,304,2300) |
| 299 | -232.146 | -256.356 | 2.1650E-01 (2002,143,0300) | 1.9206E-01 (2002,143,0400) | 1.0291E-01 (2002,342,0600) | 9.1090E-02 (2002,304,2300) |
| 300 | -231.412 | -256.378 | 2.0794E-01 (2002,143,0300) | 1.7911E-01 (2002,143,0400) | 1.0489E-01 (2002,342,0600) | 8.8959E-02 (2002,304,2300) |
| 301 | -230.679 | -256.399 | 1.9817E-01 (2002,143,0300) | 1.6618E-01 (2002,143,0400) | 1.0662E-01 (2002,342,0600) | 8.9229E-02 (2002,305,0600) |
| 302 | -229.946 | -256.421 | 1.8747E-01 (2002,143,0300) | 1.5332E-01 (2002,143,0400) | 1.0810E-01 (2002,342,0600) | 9.9678E-02 (2002,305,0600) |
| 303 | -229.213 | -256.442 | 1.7572E-01 (2002,143,0300) | 1.4092E-01 (2002,143,0400) | 1.1028E-01 (2002,305,0600) | 1.0930E-01 (2002,342,0600) |
| 304 | -232.118 | -255.430 | 2.3679E-01 (2002,143,0300) | 1.9431E-01 (2002,143,0400) | 1.0339E-01 (2002,342,0600) | 8.8032E-02 (2002,304,2300) |
| 305 | -231.385 | -255.451 | 2.2762E-01 (2002,143,0300) | 1.8116E-01 (2002,143,0400) | 1.0538E-01 (2002,342,0600) | 8.5589E-02 (2002,304,2300) |
| 306 | -230.652 | -255.473 | 2.1718E-01 (2002,143,0300) | 1.6792E-01 (2002,143,0400) | 1.0713E-01 (2002,342,0600) | 8.9981E-02 (2002,305,0600) |
| 307 | -229.919 | -255.494 | 2.0552E-01 (2002,143,0300) | 1.5501E-01 (2002,143,0400) | 1.0862E-01 (2002,342,0600) | 1.0062E-01 (2002,305,0600) |
| 308 | -229.185 | -255.516 | 1.9283E-01 (2002,143,0300) | 1.4246E-01 (2002,143,0400) | 1.1144E-01 (2002,305,0600) | 1.0983E-01 (2002,342,0600) |
| 309 | -228.452 | -255.537 | 1.7953E-01 (2002,143,0300) | 1.3029E-01 (2002,143,0400) | 1.2223E-01 (2002,305,0600) | 1.1076E-01 (2002,342,0600) |
| 310 | -227.719 | -255.559 | 1.6578E-01 (2002,143,0300) | 1.3277E-01 (2002,305,0600) | 1.1885E-01 (2002,143,0400) | 1.1140E-01 (2002,342,0600) |
| 311 | -232.091 | -254.503 | 2.5747E-01 (2002,143,0300) | 1.9542E-01 (2002,143,0400) | 1.0365E-01 (2002,342,0600) | 8.4585E-02 (2002,304,2300) |
| 312 | -231.358 | -254.525 | 2.4769E-01 (2002,143,0300) | 1.8204E-01 (2002,143,0400) | 1.0566E-01 (2002,342,0600) | 8.1930E-02 (2002,304,2300) |
| 313 | -230.625 | -254.547 | 2.3645E-01 (2002,143,0300) | 1.6884E-01 (2002,143,0400) | 1.0742E-01 (2002,342,0600) | 9.0508E-02 (2002,305,0600) |
| 314 | -229.891 | -254.568 | 2.2387E-01 (2002,143,0300) | 1.5585E-01 (2002,143,0400) | 1.0893E-01 (2002,342,0600) | 1.0143E-01 (2002,305,0600) |
| 315 | -229.158 | -254.590 | 2.1022E-01 (2002,143,0300) | 1.4315E-01 (2002,143,0400) | 1.1245E-01 (2002,305,0600) | 1.1015E-01 (2002,342,0600) |
| 316 | -228.425 | -254.611 | 1.9585E-01 (2002,143,0300) | 1.3096E-01 (2002,143,0400) | 1.2345E-01 (2002,305,0600) | 1.1109E-01 (2002,342,0600) |
| 317 | -227.692 | -254.632 | 1.8106E-01 (2002,143,0300) | 1.3426E-01 (2002,305,0600) | 1.1943E-01 (2002,143,0400) | 1.1173E-01 (2002,342,0600) |
| 318 | -232.063 | -253.577 | 2.7824E-01 (2002,143,0300) | 1.9525E-01 (2002,143,0400) | 1.0366E-01 (2002,342,0600) | 8.0884E-02 (2002,304,2300) |
| 319 | -231.330 | -253.599 | 2.6799E-01 (2002,143,0300) | 1.8200E-01 (2002,143,0400) | 1.0569E-01 (2002,342,0600) | 8.0253E-02 (2002,305,0600) |
| 320 | -230.597 | -253.620 | 2.5601E-01 (2002,143,0300) | 1.6879E-01 (2002,143,0400) | 1.0747E-01 (2002,342,0600) | 9.0928E-02 (2002,305,0600) |
| 321 | -229.864 | -253.642 | 2.4252E-01 (2002,143,0300) | 1.5572E-01 (2002,143,0400) | 1.0897E-01 (2002,342,0600) | 1.0204E-01 (2002,305,0600) |
| 322 | -229.131 | -253.663 | 2.2780E-01 (2002,143,0300) | 1.4299E-01 (2002,143,0400) | 1.1329E-01 (2002,305,0600) | 1.1021E-01 (2002,342,0600) |
| 323 | -228.398 | -253.685 | 2.1224E-01 (2002,143,0300) | 1.3087E-01 (2002,143,0400) | 1.2453E-01 (2002,305,0600) | 1.1115E-01 (2002,342,0600) |
| 324 | -227.665 | -253.706 | 1.9635E-01 (2002,143,0300) | 1.3547E-01 (2002,305,0600) | 1.1936E-01 (2002,143,0400) | 1.1178E-01 (2002,342,0600) |
| 325 | -229.837 | -252.716 | 2.6095E-01 (2002,143,0300) | 1.5462E-01 (2002,143,0400) | 1.0877E-01 (2002,342,0600) | 1.0256E-01 (2002,305,0600) |
| 326 | -229.104 | -252.737 | 2.4539E-01 (2002,143,0300) | 1.4207E-01 (2002,143,0400) | 1.1402E-01 (2002,305,0600) | 1.1000E-01 (2002,342,0600) |
| 327 | -228.371 | -252.759 | 2.2887E-01 (2002,143,0300) | 1.2997E-01 (2002,143,0400) | 1.2540E-01 (2002,305,0600) | 1.1095E-01 (2002,342,0600) |
| 328 | -227.638 | -252.780 | 2.1180E-01 (2002,143,0300) | 1.3651E-01 (2002,305,0600) | 1.1848E-01 (2002,143,0400) | 1.1158E-01 (2002,342,0600) |

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CALPOST Version 5.6394 Level 070622
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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 116 | -243.891 | -280.107 | 4.1462E-04 | 222 | -233.126 | -264.671 | 6.1037E-04 |
| 117 | -243.156 | -280.129 | 4.1836E-04 | 223 | -232.392 | -264.693 | 6.1558E-04 |
| 118 | -242.420 | -280.152 | 4.2206E-04 | 224 | -231.658 | -264.714 | 6.2031E-04 |
| 119 | -241.685 | -280.175 | 4.2556E-04 | 225 | -238.971 | -263.568 | 5.8281E-04 |
| 120 | -243.862 | -279.180 | 4.2051E-04 | 226 | -238.237 | -263.590 | 5.8854E-04 |
| 121 | -243.127 | -279.203 | 4.2442E-04 | 227 | -237.503 | -263.613 | 5.9375E-04 |
| 122 | -242.392 | -279.226 | 4.2825E-04 | 228 | -236.769 | -263.635 | 5.9872E-04 |
| 123 | -241.656 | -279.248 | 4.3188E-04 | 229 | -236.035 | -263.657 | 6.0343E-04 |
| 124 | -240.921 | -279.271 | 4.3535E-04 | 230 | -235.301 | -263.679 | 6.0790E-04 |
| 125 | -243.834 | -278.254 | 4.2645E-04 | 231 | -234.567 | -263.701 | 6.1241E-04 |
| 126 | -243.098 | -278.277 | 4.3056E-04 | 232 | -233.833 | -263.723 | 6.1707E-04 |
| 127 | -242.363 | -278.299 | 4.3452E-04 | 233 | -233.099 | -263.745 | 6.2167E-04 |
| 128 | -241.628 | -278.322 | 4.3821E-04 | 234 | -232.365 | -263.766 | 6.2675E-04 |
| 129 | -240.892 | -278.345 | 4.4178E-04 | 235 | -231.631 | -263.788 | 6.3204E-04 |
| 130 | -240.157 | -278.367 | 4.4531E-04 | 236 | -238.208 | -262.664 | 5.9897E-04 |
| 131 | -243.805 | -277.328 | 4.3247E-04 | 237 | -237.475 | -262.686 | 6.0463E-04 |
| 132 | -243.070 | -277.350 | 4.3686E-04 | 238 | -236.741 | -262.708 | 6.0978E-04 |
| 133 | -242.335 | -277.373 | 4.4096E-04 | 239 | -236.007 | -262.731 | 6.1465E-04 |
| 134 | -241.599 | -277.396 | 4.4477E-04 | 240 | -235.273 | -262.753 | 6.1939E-04 |
| 135 | -240.864 | -277.418 | 4.4857E-04 | 241 | -234.539 | -262.775 | 6.2401E-04 |
| 136 | -240.129 | -277.441 | 4.5217E-04 | 242 | -233.805 | -262.796 | 6.2878E-04 |
| 137 | -243.776 | -276.401 | 4.3859E-04 | 243 | -233.071 | -262.818 | 6.3374E-04 |
| 138 | -243.041 | -276.424 | 4.4320E-04 | 244 | -232.338 | -262.840 | 6.3884E-04 |
| 139 | -242.306 | -276.447 | 4.4750E-04 | 245 | -238.180 | -261.738 | 6.0973E-04 |
| 140 | -241.571 | -276.469 | 4.5155E-04 | 246 | -237.447 | -261.760 | 6.1561E-04 |
| 141 | -240.836 | -276.492 | 4.5538E-04 | 247 | -236.713 | -261.782 | 6.2098E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 142 | -240.101 | -276.514 | 4.5899E-04 | 248 | -235.979 | -261.804 | 6.2613E-04 |
| 143 | -243.747 | -275.475 | 4.4478E-04 | 249 | -235.245 | -261.826 | 6.3124E-04 |
| 144 | -243.012 | -275.498 | 4.4963E-04 | 250 | -234.511 | -261.848 | 6.3609E-04 |
| 145 | -242.277 | -275.520 | 4.5402E-04 | 251 | -233.778 | -261.870 | 6.4101E-04 |
| 146 | -241.542 | -275.543 | 4.5820E-04 | 252 | -233.044 | -261.892 | 6.4610E-04 |
| 147 | -240.807 | -275.565 | 4.6223E-04 | 253 | -232.310 | -261.914 | 6.5133E-04 |
| 148 | -240.072 | -275.588 | 4.6604E-04 | 254 | -235.951 | -260.878 | 6.3798E-04 |
| 149 | -244.454 | -274.526 | 4.4561E-04 | 255 | -235.217 | -260.900 | 6.4327E-04 |
| 150 | -243.719 | -274.548 | 4.5107E-04 | 256 | -234.484 | -260.922 | 6.4835E-04 |
| 151 | -242.984 | -274.571 | 4.5613E-04 | 257 | -233.750 | -260.944 | 6.5341E-04 |
| 152 | -244.425 | -273.599 | 4.5181E-04 | 258 | -233.016 | -260.966 | 6.5856E-04 |
| 153 | -243.690 | -273.622 | 4.5762E-04 | 259 | -232.283 | -260.987 | 6.6396E-04 |
| 154 | -242.955 | -273.645 | 4.6285E-04 | 260 | -231.549 | -261.009 | 6.6952E-04 |
| 155 | -244.396 | -272.673 | 4.5817E-04 | 261 | -230.815 | -261.031 | 6.7492E-04 |
| 156 | -243.661 | -272.696 | 4.6424E-04 | 262 | -235.923 | -259.952 | 6.5009E-04 |
| 157 | -242.927 | -272.719 | 4.6994E-04 | 263 | -235.190 | -259.974 | 6.5560E-04 |
| 158 | -244.367 | -271.747 | 4.6465E-04 | 264 | -234.456 | -259.996 | 6.6090E-04 |
| 159 | -243.633 | -271.769 | 4.7105E-04 | 265 | -233.723 | -260.018 | 6.6615E-04 |
| 160 | -242.898 | -271.792 | 4.7689E-04 | 266 | -232.989 | -260.039 | 6.7151E-04 |
| 161 | -244.339 | -270.820 | 4.7126E-04 | 267 | -232.255 | -260.061 | 6.7700E-04 |
| 162 | -243.604 | -270.843 | 4.7788E-04 | 268 | -231.522 | -260.083 | 6.8257E-04 |
| 163 | -242.869 | -270.866 | 4.8388E-04 | 269 | -230.788 | -260.104 | 6.8820E-04 |
| 164 | -242.135 | -270.889 | 4.8954E-04 | 270 | -230.054 | -260.126 | 6.9412E-04 |
| 165 | -244.310 | -269.894 | 4.7774E-04 | 271 | -235.895 | -259.025 | 6.6223E-04 |
| 166 | -243.575 | -269.917 | 4.8457E-04 | 272 | -235.162 | -259.047 | 6.6803E-04 |
| 167 | -242.841 | -269.940 | 4.9100E-04 | 273 | -234.428 | -259.069 | 6.7368E-04 |
| 168 | -242.106 | -269.962 | 4.9702E-04 | 274 | -233.695 | -259.091 | 6.7912E-04 |
| 169 | -242.812 | -269.013 | 4.9842E-04 | 275 | -232.961 | -259.113 | 6.8454E-04 |
| 170 | -242.078 | -269.036 | 5.0484E-04 | 276 | -232.228 | -259.135 | 6.9007E-04 |
| 171 | -241.343 | -269.059 | 5.1072E-04 | 277 | -231.494 | -259.156 | 6.9587E-04 |
| 172 | -240.609 | -269.081 | 5.1619E-04 | 278 | -230.761 | -259.178 | 7.0168E-04 |
| 173 | -239.874 | -269.104 | 5.2117E-04 | 279 | -230.027 | -259.200 | 7.0847E-04 |
| 174 | -242.049 | -268.110 | 5.1275E-04 | 280 | -229.294 | -259.221 | 7.1495E-04 |
| 175 | -241.315 | -268.132 | 5.1907E-04 | 281 | -235.134 | -258.121 | 6.8047E-04 |
| 176 | -240.580 | -268.155 | 5.2481E-04 | 282 | -234.401 | -258.143 | 6.8649E-04 |
| 177 | -239.846 | -268.177 | 5.3002E-04 | 283 | -233.667 | -258.165 | 6.9229E-04 |
| 178 | -239.112 | -268.200 | 5.3491E-04 | 284 | -232.934 | -258.187 | 6.9785E-04 |
| 179 | -242.020 | -267.183 | 5.2091E-04 | 285 | -232.200 | -258.208 | 7.0355E-04 |
| 180 | -241.286 | -267.206 | 5.2765E-04 | 286 | -231.467 | -258.230 | 7.0970E-04 |
| 181 | -240.552 | -267.228 | 5.3363E-04 | 287 | -230.734 | -258.252 | 7.1604E-04 |
| 182 | -239.818 | -267.251 | 5.3914E-04 | 288 | -230.000 | -258.273 | 7.2287E-04 |
| 183 | -239.083 | -267.273 | 5.4404E-04 | 289 | -229.267 | -258.295 | 7.2984E-04 |
| 184 | -241.258 | -266.280 | 5.3625E-04 | 290 | -234.373 | -257.217 | 6.9957E-04 |
| 185 | -240.524 | -266.302 | 5.4259E-04 | 291 | -233.640 | -257.239 | 7.0551E-04 |
| 186 | -239.789 | -266.325 | 5.4822E-04 | 292 | -232.906 | -257.260 | 7.1150E-04 |
| 187 | -239.055 | -266.347 | 5.5349E-04 | 293 | -232.173 | -257.282 | 7.1759E-04 |
| 188 | -238.321 | -266.369 | 5.5852E-04 | 294 | -231.440 | -257.304 | 7.2402E-04 |
| 189 | -237.587 | -266.392 | 5.6314E-04 | 295 | -230.706 | -257.326 | 7.3067E-04 |
| 190 | -236.853 | -266.414 | 5.6745E-04 | 296 | -229.973 | -257.347 | 7.3748E-04 |
| 191 | -236.118 | -266.436 | 5.7160E-04 | 297 | -229.240 | -257.369 | 7.4446E-04 |
| 192 | -235.384 | -266.458 | 5.7580E-04 | 298 | -232.879 | -256.334 | 7.2553E-04 |
| 193 | -234.650 | -266.480 | 5.8011E-04 | 299 | -232.146 | -256.356 | 7.3199E-04 |
| 194 | -233.916 | -266.502 | 5.8424E-04 | 300 | -231.412 | -256.378 | 7.3861E-04 |
| 195 | -233.181 | -266.524 | 5.8889E-04 | 301 | -230.679 | -256.399 | 7.4541E-04 |
| 196 | -232.447 | -266.545 | 5.9345E-04 | 302 | -229.946 | -256.421 | 7.5214E-04 |
| 197 | -231.713 | -266.567 | 5.9876E-04 | 303 | -229.213 | -256.442 | 7.5885E-04 |
| 198 | -241.229 | -265.353 | 5.4481E-04 | 304 | -232.118 | -255.430 | 7.4664E-04 |
| 199 | -240.495 | -265.376 | 5.5145E-04 | 305 | -231.385 | -255.451 | 7.5352E-04 |
| 200 | -239.761 | -265.398 | 5.5771E-04 | 306 | -230.652 | -255.473 | 7.6053E-04 |
| 201 | -239.027 | -265.421 | 5.6324E-04 | 307 | -229.919 | -255.494 | 7.6750E-04 |
| 202 | -238.293 | -265.443 | 5.6848E-04 | 308 | -229.185 | -255.516 | 7.7508E-04 |
| 203 | -237.559 | -265.465 | 5.7326E-04 | 309 | -228.452 | -255.537 | 7.8269E-04 |
| 204 | -236.825 | -265.487 | 5.7779E-04 | 310 | -227.719 | -255.559 | 7.8966E-04 |
| 205 | -236.090 | -265.509 | 5.8221E-04 | 311 | -232.091 | -254.503 | 7.6145E-04 |
| 206 | -235.356 | -265.532 | 5.8645E-04 | 312 | -231.358 | -254.525 | 7.6863E-04 |
| 207 | -234.622 | -265.553 | 5.9071E-04 | 313 | -230.625 | -254.547 | 7.7597E-04 |
| 208 | -233.888 | -265.575 | 5.9496E-04 | 314 | -229.891 | -254.568 | 7.8348E-04 |
| 209 | -233.154 | -265.597 | 5.9991E-04 | 315 | -229.158 | -254.590 | 7.9132E-04 |
| 210 | -232.420 | -265.619 | 6.0439E-04 | 316 | -228.425 | -254.611 | 7.9881E-04 |
| 211 | -231.686 | -265.641 | 6.0963E-04 | 317 | -227.692 | -254.632 | 8.0627E-04 |
| 212 | -240.467 | -264.449 | 5.6045E-04 | 318 | -232.063 | -253.577 | 7.7645E-04 |
| 213 | -239.733 | -264.472 | 5.6700E-04 | 319 | -231.330 | -253.599 | 7.8423E-04 |
| 214 | -238.999 | -264.494 | 5.7295E-04 | 320 | -230.597 | -253.620 | 7.9191E-04 |
| 215 | -238.265 | -264.517 | 5.7852E-04 | 321 | -229.864 | -253.642 | 7.9965E-04 |
| 216 | -237.531 | -264.539 | 5.8349E-04 | 322 | -229.131 | -253.663 | 8.0758E-04 |
| 217 | -236.797 | -264.561 | 5.8819E-04 | 323 | -228.398 | -253.685 | 8.1550E-04 |
| 218 | -236.063 | -264.583 | 5.9271E-04 | 324 | -227.665 | -253.706 | 8.2342E-04 |
| 219 | -235.329 | -264.605 | 5.9703E-04 | 325 | -229.837 | -252.716 | 8.1584E-04 |
| 220 | -234.595 | -264.627 | 6.0130E-04 | 326 | -229.104 | -252.737 | 8.2404E-04 |
| 221 | -233.860 | -264.649 | 6.0593E-04 | 327 | -228.371 | -252.759 | 8.3222E-04 |
| | | | | 328 | -227.638 | -252.780 | 8.4031E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 318 | -232.063 | -253.577 | DISCRETE | 2.7824E-01 (2002,143,0300) | RANK | 1 | 1 | HOUR |
| 290 | -234.373 | -257.217 | DISCRETE | 2.1270E-01 (2002,143,0300) | RANK | 2 | 1 | HOUR |
| 254 | -235.951 | -260.878 | DISCRETE | 1.2877E-01 (2002,143,0500) | RANK | 3 | 1 | HOUR |
| 324 | -227.665 | -253.706 | DISCRETE | 1.1178E-01 (2002,342,0600) | RANK | 4 | 1 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 8.4031E-04 | RANK | 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                  CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Canyonlands

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  328*0, 506*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
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*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2002
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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| | | | | | | |
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| 344 | -22.263 | -220.844 | 2.2035E-02 (2002,114,0400) | 1.9208E-02 (2002,328,0700) | 1.9180E-02 (2002,056,0400) | 1.5338E-02 (2002,328,0800) |
| 345 | -20.803 | -220.848 | 2.1693E-02 (2002,114,0400) | 1.8986E-02 (2002,056,0400) | 1.8569E-02 (2002,328,0700) | 1.5014E-02 (2002,328,0800) |
| 346 | -19.344 | -220.851 | 2.1276E-02 (2002,114,0400) | 1.8799E-02 (2002,056,0400) | 1.7937E-02 (2002,328,0700) | 1.4680E-02 (2002,328,0800) |
| 347 | -17.884 | -220.855 | 2.0799E-02 (2002,114,0400) | 1.8609E-02 (2002,056,0400) | 1.7272E-02 (2002,328,0700) | 1.4314E-02 (2002,328,0800) |
| 348 | -16.424 | -220.858 | 2.0272E-02 (2002,114,0400) | 1.8428E-02 (2002,056,0400) | 1.6570E-02 (2002,328,0700) | 1.3896E-02 (2002,328,0800) |
| 349 | -14.964 | -220.861 | 1.9703E-02 (2002,114,0400) | 1.8229E-02 (2002,056,0400) | 1.5900E-02 (2002,328,0700) | 1.3499E-02 (2002,328,0800) |
| 350 | -25.177 | -218.982 | 2.1653E-02 (2002,114,0400) | 2.0360E-02 (2002,328,0700) | 1.9630E-02 (2002,056,0400) | 1.7383E-02 (2002,114,0300) |
| 351 | -23.718 | -218.986 | 2.1527E-02 (2002,114,0400) | 1.9732E-02 (2002,328,0700) | 1.9608E-02 (2002,056,0400) | 1.6780E-02 (2002,114,0300) |
| 352 | -22.258 | -218.991 | 2.1312E-02 (2002,114,0400) | 1.9583E-02 (2002,056,0400) | 1.9082E-02 (2002,328,0700) | 1.6202E-02 (2002,114,0300) |
| 353 | -20.799 | -218.995 | 2.1029E-02 (2002,114,0400) | 1.9547E-02 (2002,056,0400) | 1.8456E-02 (2002,328,0700) | 1.5630E-02 (2002,114,0300) |
| 354 | -19.339 | -218.998 | 2.0668E-02 (2002,114,0400) | 1.9505E-02 (2002,056,0400) | 1.7800E-02 (2002,328,0700) | 1.5048E-02 (2002,114,0300) |
| 355 | -17.879 | -219.002 | 2.0247E-02 (2002,114,0400) | 1.9448E-02 (2002,056,0400) | 1.7086E-02 (2002,328,0700) | 1.4479E-02 (2002,114,0300) |
| 356 | -16.420 | -219.005 | 1.9775E-02 (2002,114,0400) | 1.9382E-02 (2002,056,0400) | 1.6454E-02 (2002,328,0700) | 1.3897E-02 (2002,114,0300) |
| 357 | -26.630 | -217.124 | 2.0732E-02 (2002,328,0700) | 2.0456E-02 (2002,114,0400) | 1.9367E-02 (2002,056,0400) | 1.9074E-02 (2002,114,0300) |
| 358 | -25.171 | -217.129 | 2.0483E-02 (2002,114,0400) | 2.0113E-02 (2002,328,0700) | 1.9527E-02 (2002,056,0400) | 1.8468E-02 (2002,114,0300) |
| 359 | -23.712 | -217.133 | 2.0421E-02 (2002,114,0400) | 1.9686E-02 (2002,056,0400) | 1.9456E-02 (2002,328,0700) | 1.7841E-02 (2002,114,0300) |
| 360 | -22.253 | -217.138 | 2.0265E-02 (2002,114,0400) | 1.9822E-02 (2002,056,0400) | 1.8874E-02 (2002,328,0700) | 1.7231E-02 (2002,114,0300) |
| 361 | -20.794 | -217.142 | 2.0034E-02 (2002,114,0400) | 1.9945E-02 (2002,056,0400) | 1.8221E-02 (2002,328,0700) | 1.6630E-02 (2002,114,0300) |
| 362 | -19.334 | -217.145 | 2.0046E-02 (2002,056,0400) | 1.9739E-02 (2002,114,0400) | 1.7546E-02 (2002,328,0700) | 1.6019E-02 (2002,114,0300) |
| 363 | -17.875 | -217.149 | 2.0116E-02 (2002,056,0400) | 1.9384E-02 (2002,114,0400) | 1.6859E-02 (2002,328,0700) | 1.5424E-02 (2002,114,0300) |
| 364 | -16.416 | -217.152 | 2.0164E-02 (2002,056,0400) | 1.8979E-02 (2002,114,0400) | 1.6162E-02 (2002,328,0700) | 1.4814E-02 (2002,114,0300) |
| 365 | -47.048 | -215.175 | 2.6321E-02 (2002,328,0700) | 2.6272E-02 (2002,114,0300) | 2.3961E-02 (2002,328,0600) | 1.7062E-02 (2002,013,0500) |
| 366 | -45.589 | -215.183 | 2.6325E-02 (2002,328,0700) | 2.6213E-02 (2002,114,0300) | 2.4508E-02 (2002,328,0600) | 2.0388E-02 (2002,355,0600) |
| 367 | -44.130 | -215.192 | 2.6063E-02 (2002,114,0300) | 2.6016E-02 (2002,328,0700) | 2.4247E-02 (2002,328,0600) | 2.0367E-02 (2002,355,0600) |
| 368 | -42.671 | -215.200 | 2.5832E-02 (2002,114,0300) | 2.5631E-02 (2002,328,0700) | 2.3899E-02 (2002,328,0600) | 1.9944E-02 (2002,355,0600) |
| 369 | -41.212 | -215.208 | 2.5548E-02 (2002,114,0300) | 2.5258E-02 (2002,328,0700) | 2.3495E-02 (2002,328,0600) | 1.9372E-02 (2002,355,0600) |
| 370 | -39.754 | -215.215 | 2.5149E-02 (2002,114,0300) | 2.4833E-02 (2002,328,0700) | 2.3068E-02 (2002,328,0600) | 1.8704E-02 (2002,355,0600) |
| 371 | -38.295 | -215.223 | 2.4700E-02 (2002,114,0300) | 2.4418E-02 (2002,328,0700) | 2.2595E-02 (2002,328,0600) | 1.7957E-02 (2002,355,0600) |
| 372 | -36.836 | -215.230 | 2.4205E-02 (2002,114,0300) | 2.3990E-02 (2002,328,0700) | 2.2105E-02 (2002,328,0600) | 1.7468E-02 (2002,355,0600) |
| 373 | -35.377 | -215.236 | 2.3654E-02 (2002,114,0300) | 2.3542E-02 (2002,328,0700) | 2.1561E-02 (2002,328,0600) | 1.6930E-02 (2002,056,0400) |
| 374 | -33.918 | -215.243 | 2.3073E-02 (2002,114,0300) | 2.3054E-02 (2002,328,0700) | 2.0998E-02 (2002,328,0600) | 1.7286E-02 (2002,114,0400) |
| 375 | -32.459 | -215.249 | 2.2546E-02 (2002,328,0700) | 2.2476E-02 (2002,114,0300) | 2.0403E-02 (2002,328,0600) | 1.7798E-02 (2002,114,0400) |
| 376 | -31.001 | -215.255 | 2.2027E-02 (2002,328,0700) | 2.1847E-02 (2002,114,0300) | 1.9782E-02 (2002,328,0600) | 1.8227E-02 (2002,114,0400) |
| 377 | -29.542 | -215.261 | 2.1499E-02 (2002,328,0700) | 2.1216E-02 (2002,114,0300) | 1.9147E-02 (2002,328,0600) | 1.8556E-02 (2002,114,0400) |
| 378 | -28.083 | -215.266 | 2.0971E-02 (2002,328,0700) | 2.0594E-02 (2002,114,0300) | 1.8785E-02 (2002,114,0400) | 1.8591E-02 (2002,056,0400) |
| 379 | -26.624 | -215.271 | 2.0341E-02 (2002,328,0700) | 1.9947E-02 (2002,114,0300) | 1.8949E-02 (2002,114,0400) | 1.8938E-02 (2002,056,0400) |
| 380 | -25.165 | -215.276 | 1.9728E-02 (2002,328,0700) | 1.9321E-02 (2002,114,0300) | 1.9272E-02 (2002,056,0400) | 1.9024E-02 (2002,114,0400) |
| 381 | -23.706 | -215.280 | 1.9587E-02 (2002,056,0400) | 1.9086E-02 (2002,328,0700) | 1.9015E-02 (2002,114,0400) | 1.8681E-02 (2002,114,0300) |
| 382 | -22.247 | -215.285 | 1.9888E-02 (2002,056,0400) | 1.8920E-02 (2002,114,0400) | 1.8504E-02 (2002,328,0700) | 1.8056E-02 (2002,114,0300) |
| 383 | -20.789 | -215.289 | 2.0160E-02 (2002,056,0400) | 1.8755E-02 (2002,114,0400) | 1.7799E-02 (2002,328,0700) | 1.7446E-02 (2002,114,0300) |
| 384 | -19.330 | -215.293 | 2.0387E-02 (2002,056,0400) | 1.8528E-02 (2002,114,0400) | 1.7190E-02 (2002,328,0700) | 1.6810E-02 (2002,114,0300) |
| 385 | -17.871 | -215.296 | 2.0582E-02 (2002,056,0400) | 1.8240E-02 (2002,114,0400) | 1.6523E-02 (2002,328,0700) | 1.6198E-02 (2002,114,0300) |
| 386 | -16.412 | -215.299 | 2.0717E-02 (2002,056,0400) | 1.7912E-02 (2002,114,0400) | 1.5796E-02 (2002,328,0700) | 1.5567E-02 (2002,114,0300) |
| 387 | -51.412 | -213.294 | 2.7208E-02 (2002,328,0700) | 2.6530E-02 (2002,328,0600) | 2.6130E-02 (2002,114,0300) | 2.2806E-02 (2002,355,0500) |
| 388 | -49.953 | -213.304 | 2.6848E-02 (2002,328,0700) | 2.6401E-02 (2002,114,0300) | 2.6266E-02 (2002,328,0600) | 2.1558E-02 (2002,355,0500) |
| 389 | -48.495 | -213.313 | 2.6549E-02 (2002,114,0300) | 2.6436E-02 (2002,328,0700) | 2.5940E-02 (2002,328,0600) | 1.8969E-02 (2002,355,0600) |
| 390 | -47.037 | -213.322 | 2.6649E-02 (2002,114,0300) | 1.9337E-02 (2002,328,0700) | 1.8841E-02 (2002,328,0600) | 1.6721E-02 (2002,114,0200) |
| 391 | -45.578 | -213.330 | 2.6614E-02 (2002,114,0300) | 2.5729E-02 (2002,328,0700) | 2.5343E-02 (2002,328,0600) | 1.8575E-02 (2002,355,0600) |
| 392 | -44.120 | -213.339 | 2.6494E-02 (2002,114,0300) | 2.5403E-02 (2002,328,0700) | 2.5004E-02 (2002,328,0600) | 1.9586E-02 (2002,355,0600) |
| 393 | -42.661 | -213.347 | 2.6304E-02 (2002,114,0300) | 2.4942E-02 (2002,328,0700) | 2.4544E-02 (2002,328,0600) | 1.7103E-02 (2002,355,0600) |
| 394 | -41.203 | -213.355 | 2.5997E-02 (2002,114,0300) | 2.4641E-02 (2002,328,0700) | 2.4173E-02 (2002,328,0600) | 1.8699E-02 (2002,355,0600) |
| 395 | -39.744 | -213.362 | 2.5655E-02 (2002,114,0300) | 2.4234E-02 (2002,328,0700) | 2.3692E-02 (2002,328,0600) | 1.8183E-02 (2002,355,0600) |
| 396 | -38.286 | -213.370 | 2.5203E-02 (2002,114,0300) | 2.3818E-02 (2002,328,0700) | 2.3170E-02 (2002,328,0600) | 1.7447E-02 (2002,355,0600) |
| 397 | -36.827 | -213.377 | 2.4733E-02 (2002,114,0300) | 2.3389E-02 (2002,328,0700) | 2.2630E-02 (2002,328,0600) | 1.6990E-02 (2002,355,0600) |
| 398 | -35.369 | -213.383 | 2.4183E-02 (2002,114,0300) | 2.2949E-02 (2002,328,0700) | 2.2056E-02 (2002,328,0600) | 1.6285E-02 (2002,355,0600) |
| 399 | -33.910 | -213.390 | 2.3615E-02 (2002,114,0300) | 2.2469E-02 (2002,328,0700) | 2.1443E-02 (2002,328,0600) | 1.5882E-02 (2002,056,0400) |
| 400 | -32.452 | -213.396 | 2.3024E-02 (2002,114,0300) | 2.1979E-02 (2002,328,0700) | 2.0803E-02 (2002,328,0600) | 1.6358E-02 (2002,056,0400) |
| 401 | -30.993 | -213.402 | 2.2403E-02 (2002,114,0300) | 2.1520E-02 (2002,328,0700) | 2.0193E-02 (2002,328,0600) | 1.6851E-02 (2002,056,0400) |
| 402 | -29.535 | -213.408 | 2.1775E-02 (2002,114,0300) | 2.0930E-02 (2002,328,0700) | 1.9456E-02 (2002,328,0600) | 1.7353E-02 (2002,056,0400) |
| 403 | -28.076 | -213.413 | 2.1149E-02 (2002,114,0300) | 2.0420E-02 (2002,328,0700) | 1.8792E-02 (2002,328,0600) | 1.7861E-02 (2002,056,0400) |
| 404 | -26.618 | -213.418 | 2.0517E-02 (2002,114,0300) | 1.9826E-02 (2002,328,0700) | 1.8368E-02 (2002,056,0400) | 1.8077E-02 (2002,328,0600) |
| 405 | -25.159 | -213.423 | 1.9885E-02 (2002,114,0300) | 1.9198E-02 (2002,328,0700) | 1.8857E-02 (2002,056,0400) | 1.7344E-02 (2002,328,0600) |
| 406 | -23.701 | -213.428 | 1.9319E-02 (2002,056,0400) | 1.9256E-02 (2002,114,0300) | 1.8572E-02 (2002,328,0700) | 1.7357E-02 (2002,114,0400) |
| 407 | -22.242 | -213.432 | 1.9763E-02 (2002,056,0400) | 1.8632E-02 (2002,114,0300) | 1.7947E-02 (2002,328,0700) | 1.7321E-02 (2002,114,0400) |
| 408 | -20.784 | -213.436 | 2.0151E-02 (2002,056,0400) | 1.8014E-02 (2002,114,0300) | 1.7303E-02 (2002,328,0700) | 1.7221E-02 (2002,114,0400) |
| 409 | -19.325 | -213.440 | 2.0504E-02 (2002,056,0400) | 1.7376E-02 (2002,114,0300) | 1.7060E-02 (2002,114,0400) | 1.6665E-02 (2002,328,0700) |
| 410 | -17.867 | -213.443 | 2.0784E-02 (2002,056,0400) | 1.6856E-02 (2002,114,0400) | 1.6765E-02 (2002,114,0300) | 1.6060E-02 (2002,328,0700) |
| 411 | -16.408 | -213.446 | 2.1022E-02 (2002,056,0400) | 1.6601E-02 (2002,114,0400) | 1.6128E-02 (2002,114,0300) | 1.5376E-02 (2002,328,0700) |
| 412 | -51.400 | -211.441 | 2.7398E-02 (2002,328,0600) | 2.6352E-02 (2002,328,0700) | 2.5765E-02 (2002,114,0300) | 2.2583E-02 (2002,355,0500) |
| 413 | -49.942 | -211.451 | 2.7094E-02 (2002,328,0600) | 2.6052E-02 (2002,114,0300) | 2.6012E-02 (2002,328,0700) | 2.1507E-02 (2002,355,0500) |
| 414 | -48.483 | -211.460 | 2.6831E-02 (2002,328,0600) | 2.6302E-02 (2002,114,0300) | 2.5704E-02 (2002,328,0700) | 2.1016E-02 (2002,355,0500) |
| 415 | -47.025 | -211.469 | 2.6461E-02 (2002,328,0600) | 2.6418E-02 (2002,114,0300) | 2.5334E-02 (2002,328,0700) | 2.0134E-02 (2002,355,0600) |
| 416 | -45.567 | -211.478 | 2.6465E-02 (2002,114,0300) | 2.2627E-02 (2002,328,0600) | 2.1958E-02 (2002,328,0700) | 1.8441E-02 (2002,114,0200) |
| 417 | -44.109 | -211.486 | 2.6376E-02 (2002,114,0300) | 2.5395E-02 (2002,328,0600) | 2.4482E-02 (2002,328,0700) | 1.7931E-02 (2002,114,0200) |
| 418 | -42.651 | -211.494 | 2.6221E-02 (2002,114,0300) | 1.9665E-02 (2002,328,0600) | 1.8609E-02 (2002,328,0700) | 1.7416E-02 (2002,114,0200) |
| 419 | -41.193 | -211.502 | 2.5965E-02 (2002,114,0300) | 2.4700E-02 (2002,328,0600) | 2.3816E-02 (2002,328,0700) | 1.6905E-02 (2002,114,0200) |
| 420 | -39.735 | -211.510 | 2.5641E-02 (2002,114,0300) | 2.4138E-02 (2002,328,0600) | 2.3387E-02 (2002,328,0700) | 1.6417E-02 (2002,114,0200) |
| 421 | -38.277 | -211.517 | 2.5233E-02 (2002,114,0300) | 2.3602E-02 (2002,328,0600) | 2.3011E-02 (2002,328,0700) | 1.5936E-02 (2002,114,0200) |
| 422 | -36.818 | -211.524 | 2.4780E-02 (2002,114,0300) | 2.3042E-02 (2002,328,0600) | 2.2614E-02 (2002,328,0700) | 1.6589E-02 (2002,355,0600) |
| 423 | -35.360 | -211.531 | 2.4265E-02 (2002,114,0300) | 2.2426E-02 (2002,328,0600) | 2.2186E-02 (2002,328,0700) | 1.6001E-02 (2002,355,0600) |
| 424 | -33.902 | -211.537 | 2.3728E-02 (2002,114,0300) | 2.1768E-02 (2002,328,0600) | 2.1722E-02 (2002,328,0700) | 1.5336E-02 (2002,355,0600) |
| 425 | -32.444 | -211.543 | 2.3149E-02 (2002,114,0300) | 2.1269E-02 (2002,328,0700) | 2.1103E-02 (2002,328,0600) | 1.5096E-02 (2002,056,0400) |
| 426 | -30.986 | -211.549 | 2.2557E-02 (2002,114,0300) | 2.0743E-02 (2002,328,0700) | 2.0393E-02 (2002,328,0600) | 1.5723E-02 (2002,056,0400) |
| 427 | -29.528 | -211.555 | 2.1964E-02 (2002,114,0300) | 2.0272E-02 (2002,328,0700) | 1.9706E-02 (2002,328,0600) | 1.6366E-02 (2002,056,0400) |
| 428 | -28.070 | -211.560 | 2.1361E-02 (2002,114,0300) | 1.9714E-02 (2002,328,0700) | 1.8947E-02 (2002,328,0600) | 1.7014E-02 (2002,056,0400) |
| 429 | -26.611 | -211.565 | 2.0747E-02 (2002,114,0300) | 1.9141E-02 (2002,328,0700) | 1.8202E-02 (2002,328,0600) | 1.7658E-02 (2002,056,0400) |
| 430 | -25.153 | -211.570 | 2.0141E-02 (2002,114,0300) | 1.8563E-02 (2002,328,0700) | 1.8277E-02 (2002,056,0400) | 1.7464E-02 (2002,328,0600) |
| 431 | -23.695 | -211.575 | 1.9535E-02 (2002,114,0300) | 1.8875E-02 (2002,056,0400) | 1.7936E-02 (2002,328,0700) | 1.6695E-02 (2002,328,0600) |
| 432 | -22.237 | -211.579 | 1.9422E-02 (2002,056,0400) | 1.8925E-02 (2002,114,0300) | 1.7356E-02 (2002,328,0700) | 1.6494E-02 (2002,056,0200) |
| 433 | -20.779 | -211.583 | 1.9914E-02 (2002,056,0400) | 1.8323E-02 (2002,114,0300) | 1.6711E-02 (2002,328,0700) | 1.6244E-02 (2002,056,0200) |
| 434 | -19.321 | -211.587 | 2.0361E-02 (2002,056,0400) | 1.7697E-02 (2002,114,0300) | 1.6118E-02 (2002,328,0700) | 1.5898E-02 (2002,056,0200) |
| 435 | -17.862 | -211.590 | 2.0716E-02 (2002,056,0400) | 1.7089E-02 (2002,114,0300) | 1.5504E-02 (2002,328,0700) | 1.5443E-02 (2002,056,0200) |
| 436 | -16.404 | -211.594 | 2.1033E-02 (2002,056,0400) | 1.6464E-02 (2002,114,0300) | 1.5094E-02 (2002,114,0400) | 1.4881E-02 (2002,056,0200) |
| 437 | -48.472 | -209.607 | 2.7343E-02 (2002,328,0600) | 2.5438E-02 (2002,114,0300) | 2.4543E-02 (2002,328,0700) | 2.1688E-02 (2002,114,0200) |
| 438 | -47.014 | -209.616 | 2.6816E-02 (2002,328,0600) | 2.5633E-02 (2002,114,0300) | 2.4179E-02 (2002,328,0700) | 2.1079E-02 (2002,114,0200) |
| 439 | -45.556 | -209.625 | 2.6545E-02 (2002,328,0600) | 2.5726E-02 (2002,114,0300) | 2.3859E-02 (2002,328,0700) | 2.0458E-02 (2002,114,0200) |
| 440 | -44.099 | -209.633 | 2.5689E-02 (2002,114,0300) | 2.5299E-02 (2002,328,0600) | 2.3237E-02 (2002,328,0700) | 1.9881E-02 (2002,114,0200) |
| 441 | -42.641 | -209.641 | 2.5587E-02 (2002,114,0300) | 2.5405E-02 (2002,328,0600) | 2.3099E-02 (2002,328,0700) | 1.9301E-02 (2002,114,0200) |
| 442 | -41.183 | -209.649 | 2.5392E-02 (2002,114,0300) | 1.8729E-02 (2002,114,0200) | 1.8346E-02 (2002,328,0600) | 1.7077E-02 (2002,056,0300) |
| 443 | -39.725 | -209.657 | 2.5114E-02 (2002,114,0300) | 2.2593E-02 (2002,328,0600) | 2.1670E-02 (2002,328,0700) | 1.8187E-02 (2002,114,0200) |
| 444 | -38.267 | -209.664 | 2.4749E-02 (2002,114,0300) | 2.3883E-02 (2002,328,0600) | 2.2024E-02 (2002,328,0700) | 1.7645E-02 (2002,114,0200) |
| 445 | -36.810 | -209.671 | 2.4335E-02 (2002,114,0300) | 2.3026E-02 (2002,328,0600) | 2.1546E-02 (2002,328,0700) | 1.7102E-02 (2002,114,0200) |
| 446 | -35.352 | -209.678 | 2.3879E-02 (2002,114,0300) | 2.2651E-02 (2002,328,0600) | 2.1254E-02 (2002,328,0700) | 1.6580E-02 (2002,114,0200) |
| 447 | -33.894 | -209.684 | 2.3377E-02 (2002,114,0300) | 2.1945E-02 (2002,328,0600) | 2.0806E-02 (2002,328,0700) | 1.6041E-02 (2002,114,0200) |
| 448 | -32.436 | -209.690 | 2.2854E-02 (2002,114,0300) | 2.1243E-02 (2002,328,0600) | 2.0361E-02 (2002,328,0700) | 1.6063E-02 (2002,056,0200) |
| 449 | -30.978 | -209.696 | 2.2306E-02 (2002,114,0300) | 2.0547E-02 (2002,328,0600) | 1.9920E-02 (2002,328,0700) | 1.6675E-02 (2002,056,0200) |
| 450 | -29.521 | -209.702 | 2.1756E-02 (2002,114,0300) | 1.9764E-02 (2002,328,0600) | 1.9395E-02 (2002,328,0700) | 1.7131E-02 (2002,056,0200) |
| 451 | -28.063 | -209.707 | 2.1188E-02 (2002,114,0300) | 1.9012E-02 (2002,328,0600) | 1.8875E-02 (2002,328,0700) | 1.7476E-02 (2002,056,0200) |
| 452 | -26.605 | -209.713 | 2.0609E-02 (2002,114,0300) | 1.8328E-02 (2002,328,0700) | 1.8220E-02 (2002,328,0600) | 1.7695E-02 (2002,056,0200) |
| 453 | -25.147 | -209.717 | 2.0048E-02 (2002,114,0300) | 1.7777E-02 (2002,056,0200) | 1.7763E-02 (2002,328,0700) | 1.7521E-02 (2002,056,0400) |
| 454 | -23.689 | -209.722 | 1.9490E-02 (2002,114,0300) | 1.8221E-02 (2002,056,0400) | 1.7737E-02 (2002,056,0200) | 1.7186E-02 (2002,328,0700) |
| 455 | -22.232 | -209.726 | 1.8910E-02 (2002,114,0300) | 1.8844E-02 (2002,056,0400) | 1.7560E-02 (2002,056,0200) | 1.6603E-02 (2002,328,0700) |
| 456 | -20.774 | -209.730 | 1.9424E-02 (2002,056,0400) | 1.8339E-02 (2002,114,0300) | 1.7257E-02 (2002,056,0200) | 1.6009E-02 (2002,328,0700) |
| 457 | -19.316 | -209.734 | 1.9932E-02 (2002,056,0400) | 1.7741E-02 (2002,114,0300) | 1.6848E-02 (2002,056,0200) | 1.5410E-02 (2002,328,0700) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 458 | -17.858 | -209.737 | 2.0365E-02 (2002,056,0400) | 1.7158E-02 (2002,114,0300) | 1.6335E-02 (2002,056,0200) | 1.4811E-02 (2002,328,0700) |
| 459 | -16.400 | -209.741 | 2.0716E-02 (2002,056,0400) | 1.6540E-02 (2002,114,0300) | 1.5741E-02 (2002,056,0200) | 1.4861E-02 (2002,056,0300) |
| 460 | -48.460 | -207.754 | 2.7768E-02 (2002,328,0600) | 2.4040E-02 (2002,114,0300) | 2.3541E-02 (2002,114,0200) | 2.3278E-02 (2002,328,0700) |
| 461 | -47.003 | -207.763 | 2.7341E-02 (2002,328,0600) | 2.4289E-02 (2002,114,0300) | 2.2981E-02 (2002,328,0700) | 2.2882E-02 (2002,114,0200) |
| 462 | -45.546 | -207.772 | 2.6848E-02 (2002,328,0600) | 2.4405E-02 (2002,114,0300) | 2.2611E-02 (2002,328,0700) | 2.2215E-02 (2002,114,0200) |
| 463 | -44.088 | -207.780 | 2.6376E-02 (2002,328,0600) | 2.4466E-02 (2002,114,0300) | 2.2318E-02 (2002,328,0700) | 2.1573E-02 (2002,114,0200) |
| 464 | -42.631 | -207.789 | 2.5877E-02 (2002,328,0600) | 2.4410E-02 (2002,114,0300) | 2.2015E-02 (2002,328,0700) | 2.0949E-02 (2002,114,0200) |
| 465 | -41.173 | -207.796 | 2.5269E-02 (2002,328,0600) | 2.4281E-02 (2002,114,0300) | 2.1612E-02 (2002,328,0700) | 2.0333E-02 (2002,114,0200) |
| 466 | -39.716 | -207.804 | 2.4049E-02 (2002,114,0300) | 2.2781E-02 (2002,328,0600) | 2.0567E-02 (2002,328,0700) | 1.9741E-02 (2002,114,0200) |
| 467 | -38.258 | -207.811 | 2.3766E-02 (2002,114,0300) | 2.3138E-02 (2002,328,0600) | 2.0571E-02 (2002,328,0700) | 1.9150E-02 (2002,114,0200) |
| 468 | -36.801 | -207.818 | 2.3406E-02 (2002,114,0300) | 2.3252E-02 (2002,328,0600) | 2.0491E-02 (2002,328,0700) | 1.8574E-02 (2002,114,0200) |
| 469 | -35.343 | -207.825 | 2.3024E-02 (2002,114,0300) | 2.2452E-02 (2002,328,0600) | 2.0061E-02 (2002,328,0700) | 1.7993E-02 (2002,114,0200) |
| 470 | -33.886 | -207.831 | 2.2574E-02 (2002,114,0300) | 2.2006E-02 (2002,328,0600) | 1.9760E-02 (2002,328,0700) | 1.7448E-02 (2002,056,0300) |
| 471 | -32.429 | -207.838 | 2.2126E-02 (2002,114,0300) | 2.1275E-02 (2002,328,0600) | 1.9350E-02 (2002,328,0700) | 1.7210E-02 (2002,056,0200) |
| 472 | -30.971 | -207.844 | 2.1639E-02 (2002,114,0300) | 2.0535E-02 (2002,328,0600) | 1.8914E-02 (2002,328,0700) | 1.7809E-02 (2002,056,0200) |
| 473 | -29.514 | -207.849 | 2.1139E-02 (2002,114,0300) | 1.9709E-02 (2002,328,0600) | 1.8408E-02 (2002,328,0700) | 1.8282E-02 (2002,056,0200) |
| 474 | -28.056 | -207.855 | 2.0640E-02 (2002,114,0300) | 1.8937E-02 (2002,328,0600) | 1.8625E-02 (2002,056,0200) | 1.7915E-02 (2002,328,0700) |
| 475 | -26.599 | -207.860 | 2.0120E-02 (2002,114,0300) | 1.8819E-02 (2002,056,0200) | 1.8137E-02 (2002,328,0600) | 1.7407E-02 (2002,328,0700) |
| 476 | -25.141 | -207.865 | 1.9613E-02 (2002,114,0300) | 1.8872E-02 (2002,056,0200) | 1.7351E-02 (2002,328,0600) | 1.6895E-02 (2002,328,0700) |
| 477 | -23.684 | -207.869 | 1.9096E-02 (2002,114,0300) | 1.8780E-02 (2002,056,0200) | 1.7347E-02 (2002,056,0400) | 1.6554E-02 (2002,328,0600) |
| 478 | -22.226 | -207.873 | 1.8569E-02 (2002,114,0300) | 1.8555E-02 (2002,056,0200) | 1.8048E-02 (2002,056,0400) | 1.5768E-02 (2002,328,0700) |
| 479 | -20.769 | -207.877 | 1.8669E-02 (2002,056,0400) | 1.8229E-02 (2002,056,0200) | 1.8051E-02 (2002,114,0300) | 1.5435E-02 (2002,056,0300) |
| 480 | -19.311 | -207.881 | 1.9221E-02 (2002,056,0400) | 1.7752E-02 (2002,056,0200) | 1.7490E-02 (2002,114,0300) | 1.5636E-02 (2002,056,0300) |
| 481 | -48.449 | -205.902 | 2.7931E-02 (2002,328,0600) | 2.4985E-02 (2002,114,0200) | 2.2891E-02 (2002,056,0300) | 2.2158E-02 (2002,114,0300) |
| 482 | -46.992 | -205.911 | 2.7451E-02 (2002,328,0600) | 2.4287E-02 (2002,114,0200) | 2.2635E-02 (2002,056,0300) | 2.2447E-02 (2002,114,0300) |
| 483 | -45.535 | -205.919 | 2.6961E-02 (2002,328,0600) | 2.3577E-02 (2002,114,0200) | 2.2642E-02 (2002,114,0300) | 2.2379E-02 (2002,056,0300) |
| 484 | -44.078 | -205.928 | 2.6445E-02 (2002,328,0600) | 2.2911E-02 (2002,114,0200) | 2.2755E-02 (2002,114,0300) | 2.2120E-02 (2002,056,0300) |
| 485 | -42.621 | -205.936 | 2.5907E-02 (2002,328,0600) | 2.2755E-02 (2002,114,0300) | 2.2251E-02 (2002,114,0200) | 2.1831E-02 (2002,056,0300) |
| 486 | -41.163 | -205.944 | 2.5307E-02 (2002,328,0600) | 2.2703E-02 (2002,114,0300) | 2.1602E-02 (2002,114,0200) | 2.1535E-02 (2002,056,0300) |
| 487 | -39.706 | -205.951 | 2.4641E-02 (2002,328,0600) | 2.2531E-02 (2002,114,0300) | 2.1207E-02 (2002,056,0300) | 2.0988E-02 (2002,114,0200) |
| 488 | -38.249 | -205.958 | 2.3800E-02 (2002,328,0600) | 2.2315E-02 (2002,114,0300) | 2.0844E-02 (2002,056,0300) | 2.0361E-02 (2002,114,0200) |
| 489 | -36.792 | -205.965 | 2.3300E-02 (2002,328,0600) | 2.2046E-02 (2002,114,0300) | 2.0449E-02 (2002,056,0300) | 1.9759E-02 (2002,114,0200) |
| 490 | -35.335 | -205.972 | 2.2389E-02 (2002,328,0600) | 2.1704E-02 (2002,114,0300) | 2.0000E-02 (2002,056,0300) | 1.9144E-02 (2002,114,0200) |
| 491 | -33.878 | -205.979 | 2.1655E-02 (2002,328,0600) | 2.1362E-02 (2002,114,0300) | 1.9558E-02 (2002,056,0300) | 1.8532E-02 (2002,114,0200) |
| 492 | -32.421 | -205.985 | 2.1115E-02 (2002,328,0600) | 2.0971E-02 (2002,114,0300) | 1.9101E-02 (2002,056,0300) | 1.8282E-02 (2002,056,0200) |
| 493 | -30.964 | -205.991 | 2.0578E-02 (2002,114,0300) | 2.0347E-02 (2002,328,0600) | 1.8890E-02 (2002,056,0200) | 1.8638E-02 (2002,056,0300) |
| 494 | -29.507 | -205.996 | 2.0153E-02 (2002,114,0300) | 1.9544E-02 (2002,328,0600) | 1.9376E-02 (2002,056,0200) | 1.8206E-02 (2002,056,0300) |
| 495 | -28.049 | -206.002 | 1.9717E-02 (2002,114,0300) | 1.9709E-02 (2002,056,0200) | 1.8754E-02 (2002,328,0600) | 1.7797E-02 (2002,056,0300) |
| 496 | -26.592 | -206.007 | 1.9871E-02 (2002,056,0200) | 1.9277E-02 (2002,114,0300) | 1.7945E-02 (2002,328,0600) | 1.7475E-02 (2002,056,0300) |
| 497 | -25.135 | -206.012 | 1.9903E-02 (2002,056,0200) | 1.8839E-02 (2002,114,0300) | 1.7215E-02 (2002,056,0300) | 1.7125E-02 (2002,328,0600) |
| 498 | -23.678 | -206.016 | 1.9760E-02 (2002,056,0200) | 1.8376E-02 (2002,114,0300) | 1.7023E-02 (2002,056,0300) | 1.6339E-02 (2002,328,0600) |
| 499 | -22.221 | -206.021 | 1.9484E-02 (2002,056,0200) | 1.7922E-02 (2002,114,0300) | 1.7003E-02 (2002,056,0400) | 1.6977E-02 (2002,056,0300) |
| 500 | -20.764 | -206.025 | 1.9079E-02 (2002,056,0200) | 1.7653E-02 (2002,056,0400) | 1.7455E-02 (2002,114,0300) | 1.7032E-02 (2002,056,0300) |
| 501 | -19.307 | -206.028 | 1.8549E-02 (2002,056,0200) | 1.8237E-02 (2002,056,0400) | 1.7162E-02 (2002,056,0300) | 1.6958E-02 (2002,114,0300) |
| 502 | -46.981 | -204.058 | 2.7377E-02 (2002,328,0600) | 2.5172E-02 (2002,114,0200) | 2.3970E-02 (2002,056,0300) | 2.1917E-02 (2002,328,0500) |
| 503 | -45.524 | -204.066 | 2.6831E-02 (2002,328,0600) | 2.4451E-02 (2002,114,0200) | 2.3888E-02 (2002,056,0300) | 2.1345E-02 (2002,328,0500) |
| 504 | -44.067 | -204.075 | 2.6290E-02 (2002,328,0600) | 2.3778E-02 (2002,114,0200) | 2.3777E-02 (2002,056,0300) | 2.0762E-02 (2002,328,0500) |
| 505 | -42.610 | -204.083 | 2.5682E-02 (2002,328,0600) | 2.3602E-02 (2002,056,0300) | 2.3104E-02 (2002,114,0200) | 2.0717E-02 (2002,114,0300) |
| 506 | -41.154 | -204.091 | 2.5108E-02 (2002,328,0600) | 2.3413E-02 (2002,056,0300) | 2.2455E-02 (2002,114,0200) | 2.0704E-02 (2002,114,0300) |
| 507 | -39.697 | -204.098 | 2.4433E-02 (2002,328,0600) | 2.3135E-02 (2002,056,0300) | 2.1834E-02 (2002,114,0200) | 2.0632E-02 (2002,114,0300) |
| 508 | -38.240 | -204.106 | 2.2416E-02 (2002,056,0300) | 2.1993E-02 (2002,328,0600) | 2.1201E-02 (2002,114,0200) | 2.0483E-02 (2002,114,0300) |
| 509 | -36.783 | -204.113 | 2.1879E-02 (2002,056,0300) | 2.0588E-02 (2002,114,0200) | 2.0288E-02 (2002,114,0300) | 1.8884E-02 (2002,328,0600) |
| 510 | -35.327 | -204.119 | 2.2214E-02 (2002,328,0600) | 2.1972E-02 (2002,056,0300) | 2.0046E-02 (2002,114,0300) | 1.9967E-02 (2002,114,0200) |
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| 512 | -32.413 | -204.132 | 2.1019E-02 (2002,056,0300) | 2.0812E-02 (2002,328,0600) | 1.9478E-02 (2002,114,0300) | 1.9340E-02 (2002,056,0200) |
| 513 | -30.956 | -204.138 | 2.0493E-02 (2002,056,0300) | 2.0024E-02 (2002,328,0600) | 1.9941E-02 (2002,056,0200) | 1.9151E-02 (2002,114,0300) |
| 514 | -29.500 | -204.144 | 2.0386E-02 (2002,056,0200) | 2.0022E-02 (2002,056,0300) | 1.9211E-02 (2002,328,0600) | 1.8819E-02 (2002,114,0300) |
| 515 | -28.043 | -204.149 | 2.0693E-02 (2002,056,0200) | 1.9546E-02 (2002,056,0300) | 1.8474E-02 (2002,114,0300) | 1.8416E-02 (2002,328,0600) |
| 516 | -26.586 | -204.154 | 2.0836E-02 (2002,056,0200) | 1.9176E-02 (2002,056,0300) | 1.8106E-02 (2002,114,0300) | 1.7594E-02 (2002,328,0600) |
| 517 | -25.129 | -204.159 | 2.0799E-02 (2002,056,0200) | 1.8895E-02 (2002,056,0300) | 1.7752E-02 (2002,114,0300) | 1.6800E-02 (2002,328,0600) |
| 518 | -23.673 | -204.164 | 2.0620E-02 (2002,056,0200) | 1.8659E-02 (2002,056,0300) | 1.7358E-02 (2002,114,0300) | 1.6005E-02 (2002,328,0600) |
| 519 | -22.216 | -204.168 | 2.0276E-02 (2002,056,0200) | 1.8553E-02 (2002,056,0300) | 1.6983E-02 (2002,114,0300) | 1.5749E-02 (2002,056,0400) |
| 520 | -20.759 | -204.172 | 1.9829E-02 (2002,056,0200) | 1.8570E-02 (2002,056,0300) | 1.6560E-02 (2002,114,0300) | 1.6400E-02 (2002,056,0400) |
| 521 | -19.302 | -204.176 | 1.9250E-02 (2002,056,0200) | 1.8702E-02 (2002,056,0300) | 1.6985E-02 (2002,056,0400) | 1.6153E-02 (2002,114,0300) |
| 522 | -46.969 | -202.205 | 2.6883E-02 (2002,328,0600) | 2.5458E-02 (2002,114,0200) | 2.5030E-02 (2002,056,0300) | 2.2654E-02 (2002,328,0500) |
| 523 | -45.513 | -202.214 | 2.6339E-02 (2002,328,0600) | 2.5137E-02 (2002,056,0300) | 2.4766E-02 (2002,114,0200) | 2.2031E-02 (2002,328,0500) |
| 524 | -44.057 | -202.222 | 2.5797E-02 (2002,328,0600) | 2.5152E-02 (2002,056,0300) | 2.4101E-02 (2002,114,0200) | 2.1387E-02 (2002,328,0500) |
| 525 | -42.600 | -202.230 | 2.5276E-02 (2002,328,0600) | 2.5112E-02 (2002,056,0300) | 2.3447E-02 (2002,114,0200) | 2.0736E-02 (2002,328,0500) |
| 526 | -41.144 | -202.238 | 2.4974E-02 (2002,056,0300) | 2.4642E-02 (2002,328,0600) | 2.2828E-02 (2002,114,0200) | 2.0032E-02 (2002,328,0500) |
| 527 | -39.687 | -202.246 | 2.4761E-02 (2002,056,0300) | 2.3988E-02 (2002,328,0600) | 2.2220E-02 (2002,114,0200) | 1.9284E-02 (2002,328,0500) |
| 528 | -38.231 | -202.253 | 2.4457E-02 (2002,056,0300) | 2.3294E-02 (2002,328,0600) | 2.1599E-02 (2002,114,0200) | 1.8526E-02 (2002,328,0500) |
| 529 | -36.775 | -202.260 | 2.4090E-02 (2002,056,0300) | 2.2586E-02 (2002,328,0600) | 2.1001E-02 (2002,114,0200) | 1.8240E-02 (2002,114,0300) |
| 530 | -35.318 | -202.267 | 2.2888E-02 (2002,056,0300) | 2.0396E-02 (2002,114,0200) | 1.8096E-02 (2002,114,0300) | 1.5995E-02 (2002,328,0600) |
| 531 | -33.862 | -202.273 | 2.3124E-02 (2002,056,0300) | 2.0360E-02 (2002,328,0600) | 1.9768E-02 (2002,114,0200) | 1.9598E-02 (2002,056,0200) |
| 532 | -32.405 | -202.279 | 2.2645E-02 (2002,056,0300) | 2.0349E-02 (2002,056,0200) | 2.0341E-02 (2002,328,0600) | 1.9137E-02 (2002,114,0200) |
| 533 | -30.949 | -202.285 | 2.2114E-02 (2002,056,0300) | 2.0914E-02 (2002,056,0200) | 1.9568E-02 (2002,328,0600) | 1.8465E-02 (2002,114,0200) |
| 534 | -29.493 | -202.291 | 2.1622E-02 (2002,056,0300) | 2.1337E-02 (2002,056,0200) | 1.8761E-02 (2002,328,0600) | 1.7788E-02 (2002,114,0200) |
| 535 | -28.036 | -202.296 | 2.1580E-02 (2002,056,0200) | 2.1114E-02 (2002,056,0300) | 1.7788E-02 (2002,328,0600) | 1.7066E-02 (2002,114,0200) |
| 536 | -26.580 | -202.301 | 2.1690E-02 (2002,056,0200) | 2.0721E-02 (2002,056,0300) | 1.7047E-02 (2002,328,0600) | 1.6673E-02 (2002,114,0300) |
| 537 | -25.123 | -202.306 | 2.1628E-02 (2002,056,0200) | 2.0420E-02 (2002,056,0300) | 1.6384E-02 (2002,114,0300) | 1.6362E-02 (2002,328,0600) |
| 538 | -23.667 | -202.311 | 2.1388E-02 (2002,056,0200) | 2.0168E-02 (2002,056,0300) | 1.6087E-02 (2002,114,0300) | 1.5456E-02 (2002,328,0600) |
| 539 | -22.210 | -202.315 | 2.1005E-02 (2002,056,0200) | 2.0036E-02 (2002,056,0300) | 1.5774E-02 (2002,114,0300) | 1.4671E-02 (2002,328,0600) |
| 540 | -46.958 | -200.352 | 2.6265E-02 (2002,328,0600) | 2.5774E-02 (2002,056,0300) | 2.5114E-02 (2002,114,0200) | 2.3375E-02 (2002,328,0500) |
| 541 | -45.502 | -200.361 | 2.6004E-02 (2002,056,0300) | 2.5549E-02 (2002,328,0600) | 2.4478E-02 (2002,114,0200) | 2.2291E-02 (2002,328,0500) |
| 542 | -44.046 | -200.369 | 2.6155E-02 (2002,056,0300) | 2.5128E-02 (2002,328,0600) | 2.3860E-02 (2002,114,0200) | 2.1921E-02 (2002,328,0500) |
| 543 | -42.590 | -200.377 | 2.6183E-02 (2002,056,0300) | 2.4560E-02 (2002,328,0600) | 2.3252E-02 (2002,114,0200) | 2.1193E-02 (2002,328,0500) |
| 544 | -41.134 | -200.385 | 2.6114E-02 (2002,056,0300) | 2.3948E-02 (2002,328,0600) | 2.2676E-02 (2002,114,0200) | 2.0435E-02 (2002,328,0500) |
| 545 | -39.678 | -200.393 | 2.5948E-02 (2002,056,0300) | 2.3237E-02 (2002,328,0600) | 2.2090E-02 (2002,114,0200) | 1.9403E-02 (2002,328,0500) |
| 546 | -38.222 | -200.400 | 2.5673E-02 (2002,056,0300) | 2.2517E-02 (2002,328,0600) | 2.1528E-02 (2002,114,0200) | 1.8401E-02 (2002,328,0500) |
| 547 | -36.766 | -200.407 | 2.5339E-02 (2002,056,0300) | 2.1874E-02 (2002,328,0600) | 2.0963E-02 (2002,114,0200) | 1.8898E-02 (2002,056,0200) |
| 548 | -35.310 | -200.414 | 2.4161E-02 (2002,056,0300) | 2.0383E-02 (2002,114,0200) | 1.8228E-02 (2002,328,0600) | 1.5944E-02 (2002,114,0300) |
| 549 | -33.854 | -200.420 | 2.4418E-02 (2002,056,0300) | 2.0617E-02 (2002,056,0200) | 2.0366E-02 (2002,328,0600) | 1.9793E-02 (2002,114,0200) |
| 550 | -32.398 | -200.427 | 2.3310E-02 (2002,056,0300) | 1.9180E-02 (2002,114,0200) | 1.8972E-02 (2002,328,0600) | 1.7352E-02 (2002,056,0200) |
| 551 | -30.942 | -200.432 | 2.3426E-02 (2002,056,0300) | 2.1842E-02 (2002,056,0200) | 1.8957E-02 (2002,328,0600) | 1.8539E-02 (2002,114,0200) |
| 552 | -29.486 | -200.438 | 2.2919E-02 (2002,056,0300) | 2.2212E-02 (2002,056,0200) | 1.8176E-02 (2002,328,0600) | 1.7874E-02 (2002,114,0200) |
| 553 | -28.030 | -200.444 | 2.1384E-02 (2002,056,0300) | 1.8417E-02 (2002,056,0200) | 1.7159E-02 (2002,114,0200) | 1.6604E-02 (2002,328,0600) |
| 554 | -26.573 | -200.449 | 2.2484E-02 (2002,056,0200) | 2.2032E-02 (2002,056,0300) | 1.6440E-02 (2002,114,0200) | 1.6430E-02 (2002,328,0600) |
| 555 | -25.117 | -200.453 | 2.2356E-02 (2002,056,0200) | 2.1678E-02 (2002,056,0300) | 1.5681E-02 (2002,114,0200) | 1.5268E-02 (2002,328,0600) |
| 556 | -23.661 | -200.458 | 2.2085E-02 (2002,056,0200) | 2.1515E-02 (2002,056,0300) | 1.4881E-02 (2002,114,0200) | 1.4878E-02 (2002,328,0600) |
| 557 | -46.947 | -198.500 | 2.6098E-02 (2002,056,0300) | 2.5395E-02 (2002,328,0600) | 2.4159E-02 (2002,114,0200) | 2.3941E-02 (2002,328,0500) |
| 558 | -45.491 | -198.508 | 2.6455E-02 (2002,056,0300) | 2.4757E-02 (2002,328,0600) | 2.3585E-02 (2002,114,0200) | 2.3103E-02 (2002,328,0500) |
| 559 | -44.036 | -198.517 | 2.6665E-02 (2002,056,0300) | 2.4140E-02 (2002,328,0600) | 2.3038E-02 (2002,114,0200) | 2.2120E-02 (2002,328,0500) |
| 560 | -42.580 | -198.525 | 2.6786E-02 (2002,056,0300) | 2.3598E-02 (2002,328,0600) | 2.2499E-02 (2002,114,0200) | 2.1338E-02 (2002,328,0500) |
| 561 | -41.124 | -198.533 | 2.6778E-02 (2002,056,0300) | 2.3049E-02 (2002,328,0600) | 2.1997E-02 (2002,114,0200) | 2.0704E-02 (2002,328,0500) |
| 562 | -39.669 | -198.540 | 2.6658E-02 (2002,056,0300) | 2.2435E-02 (2002,328,0600) | 2.1475E-02 (2002,114,0200) | 1.9885E-02 (2002,328,0500) |
| 563 | -38.213 | -198.547 | 2.6420E-02 (2002,056,0300) | 2.1690E-02 (2002,328,0600) | 2.0973E-02 (2002,114,0200) | 1.8981E-02 (2002,056,0200) |
| 564 | -36.757 | -198.554 | 2.5539E-02 (2002,056,0300) | 2.0465E-02 (2002,114,0200) | 1.9677E-02 (2002,328,0600) | 1.4881E-02 (2002,328,0500) |
| 565 | -35.301 | -198.561 | 2.5002E-02 (2002,056,0300) | 1.9928E-02 (2002,114,0200) | 1.8969E-02 (2002,328,0600) | 1.4119E-02 (2002,328,0500) |
| 566 | -33.846 | -198.568 | 2.5246E-02 (2002,056,0300) | 2.1585E-02 (2002,056,0200) | 1.9396E-02 (2002,114,0200) | 1.9253E-02 (2002,328,0600) |
| 567 | -32.390 | -198.574 | 2.4810E-02 (2002,056,0300) | 2.2264E-02 (2002,056,0200) | 1.8967E-02 (2002,328,0600) | 1.8819E-02 (2002,114,0200) |
| 568 | -30.934 | -198.580 | 2.2703E-02 (2002,056,0300) | 1.8224E-02 (2002,114,0200) | 1.3541E-02 (2002,114,0300) | 1.3189E-02 (2002,328,0600) |
| 569 | -29.479 | -198.585 | 2.1996E-02 (2002,056,0300) | 1.7597E-02 (2002,114,0200) | 1.3840E-02 (2002,328,0600) | 1.3459E-02 (2002,114,0300) |
| 570 | -28.023 | -198.591 | 2.1538E-02 (2002,056,0300) | 1.6919E-02 (2002,114,0200) | 1.5146E-02 (2002,328,0600) | 1.3357E-02 (2002,114,0300) |
| 571 | -26.567 | -198.596 | 2.3251E-02 (2002,056,0200) | 2.3067E-02 (2002,056,0300) | 1.6228E-02 (2002,114,0200) | 1.5774E-02 (2002,328,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 572 | -46.936 | -196.647 | 2.5954E-02 (2002,056,0300) | 2.4176E-02 (2002,328,0500) | 2.4076E-02 (2002,328,0600) | 2.2608E-02 (2002,114,0200) |
| 573 | -45.481 | -196.656 | 2.6390E-02 (2002,056,0300) | 2.3673E-02 (2002,328,0600) | 2.3460E-02 (2002,328,0500) | 2.2153E-02 (2002,114,0200) |
| 574 | -44.025 | -196.664 | 2.6679E-02 (2002,056,0300) | 2.3003E-02 (2002,328,0600) | 2.2283E-02 (2002,328,0500) | 2.1689E-02 (2002,114,0200) |
| 575 | -42.570 | -196.672 | 2.6821E-02 (2002,056,0300) | 2.2093E-02 (2002,328,0600) | 2.1244E-02 (2002,114,0200) | 2.0085E-02 (2002,328,0500) |
| 576 | -41.115 | -196.680 | 2.6874E-02 (2002,056,0300) | 2.1908E-02 (2002,328,0600) | 2.0815E-02 (2002,114,0200) | 2.0560E-02 (2002,328,0500) |
| 577 | -39.659 | -196.687 | 2.6788E-02 (2002,056,0300) | 2.1027E-02 (2002,328,0600) | 2.0369E-02 (2002,114,0200) | 1.9199E-02 (2002,056,0200) |
| 578 | -38.204 | -196.695 | 2.6615E-02 (2002,056,0300) | 2.0688E-02 (2002,328,0600) | 2.0172E-02 (2002,056,0200) | 1.9959E-02 (2002,114,0200) |
| 579 | -36.748 | -196.702 | 2.6322E-02 (2002,056,0300) | 2.1066E-02 (2002,056,0200) | 1.9749E-02 (2002,328,0600) | 1.9507E-02 (2002,114,0200) |
| 580 | -35.293 | -196.708 | 2.5183E-02 (2002,056,0300) | 1.9060E-02 (2002,114,0200) | 1.5541E-02 (2002,328,0600) | 1.3999E-02 (2002,013,0400) |
| 581 | -33.838 | -196.715 | 2.4573E-02 (2002,056,0300) | 1.8583E-02 (2002,114,0200) | 1.4983E-02 (2002,328,0600) | 1.3456E-02 (2002,013,0400) |
| 582 | -32.382 | -196.721 | 2.5206E-02 (2002,056,0300) | 2.3276E-02 (2002,056,0200) | 1.8072E-02 (2002,114,0200) | 1.7963E-02 (2002,328,0600) |
| 583 | -30.927 | -196.727 | 2.4749E-02 (2002,056,0300) | 2.3689E-02 (2002,056,0200) | 1.7541E-02 (2002,114,0200) | 1.6919E-02 (2002,328,0600) |
| 584 | -29.472 | -196.733 | 2.4352E-02 (2002,056,0300) | 2.3975E-02 (2002,056,0200) | 1.6951E-02 (2002,114,0200) | 1.6009E-02 (2002,328,0600) |
| 585 | -28.016 | -196.738 | 2.1729E-02 (2002,056,0300) | 1.6341E-02 (2002,114,0200) | 1.3109E-02 (2002,013,0500) | 1.2094E-02 (2002,328,0600) |
| 586 | -26.561 | -196.743 | 2.1172E-02 (2002,056,0300) | 1.5699E-02 (2002,114,0200) | 1.3244E-02 (2002,328,0600) | 1.3070E-02 (2002,013,0500) |
| 587 | -46.925 | -194.794 | 2.5260E-02 (2002,056,0300) | 2.4077E-02 (2002,328,0500) | 2.2565E-02 (2002,328,0600) | 2.2256E-02 (2002,056,0100) |
| 588 | -45.470 | -194.803 | 2.5776E-02 (2002,056,0300) | 2.3347E-02 (2002,328,0500) | 2.2162E-02 (2002,328,0600) | 2.1154E-02 (2002,056,0100) |
| 589 | -44.015 | -194.811 | 2.6118E-02 (2002,056,0300) | 2.2619E-02 (2002,328,0500) | 2.1742E-02 (2002,328,0600) | 1.9938E-02 (2002,056,0100) |
| 590 | -42.560 | -194.819 | 2.6308E-02 (2002,056,0300) | 2.0838E-02 (2002,328,0600) | 2.0208E-02 (2002,328,0500) | 1.9543E-02 (2002,114,0200) |
| 591 | -41.105 | -194.827 | 2.6428E-02 (2002,056,0300) | 2.0702E-02 (2002,328,0500) | 2.0690E-02 (2002,328,0600) | 1.9647E-02 (2002,056,0200) |
| 592 | -39.650 | -194.835 | 2.6419E-02 (2002,056,0300) | 2.0640E-02 (2002,056,0200) | 2.0206E-02 (2002,328,0600) | 1.9993E-02 (2002,328,0500) |
| 593 | -38.195 | -194.842 | 2.5951E-02 (2002,056,0300) | 1.9103E-02 (2002,328,0600) | 1.8539E-02 (2002,114,0200) | 1.7386E-02 (2002,328,0500) |
| 594 | -36.740 | -194.849 | 2.5373E-02 (2002,056,0300) | 1.8161E-02 (2002,114,0200) | 1.6125E-02 (2002,328,0600) | 1.4967E-02 (2002,013,0400) |
| 595 | -35.285 | -194.856 | 2.5061E-02 (2002,056,0300) | 1.7812E-02 (2002,114,0200) | 1.7183E-02 (2002,328,0600) | 1.4578E-02 (2002,013,0400) |
| 596 | -33.830 | -194.862 | 2.5094E-02 (2002,056,0300) | 2.1923E-02 (2002,056,0200) | 1.7383E-02 (2002,114,0200) | 1.7194E-02 (2002,328,0600) |
| 597 | -32.375 | -194.868 | 2.5169E-02 (2002,056,0300) | 2.4384E-02 (2002,056,0200) | 1.6980E-02 (2002,114,0200) | 1.6957E-02 (2002,328,0600) |
| 598 | -30.920 | -194.874 | 2.4842E-02 (2002,056,0300) | 2.4806E-02 (2002,056,0200) | 1.6516E-02 (2002,114,0200) | 1.6285E-02 (2002,328,0600) |
| 599 | -29.465 | -194.880 | 2.2476E-02 (2002,056,0300) | 1.6003E-02 (2002,114,0200) | 1.3242E-02 (2002,013,0500) | 1.2362E-02 (2002,013,0400) |
| 600 | -28.009 | -194.885 | 2.1878E-02 (2002,056,0300) | 1.5460E-02 (2002,114,0200) | 1.3220E-02 (2002,013,0500) | 1.1925E-02 (2002,013,0400) |
| 601 | -26.554 | -194.890 | 2.5025E-02 (2002,056,0200) | 2.4158E-02 (2002,056,0300) | 1.4867E-02 (2002,114,0200) | 1.3881E-02 (2002,328,0600) |
| 602 | -45.459 | -192.950 | 2.4640E-02 (2002,056,0300) | 2.3201E-02 (2002,328,0500) | 2.1733E-02 (2002,239,0300) | 2.0869E-02 (2002,056,0100) |
| 603 | -44.004 | -192.959 | 2.4992E-02 (2002,056,0300) | 2.1077E-02 (2002,328,0500) | 2.0352E-02 (2002,239,0300) | 1.9904E-02 (2002,328,0600) |
| 604 | -42.550 | -192.967 | 2.5105E-02 (2002,056,0300) | 2.0101E-02 (2002,328,0500) | 1.9407E-02 (2002,328,0600) | 1.8981E-02 (2002,239,0300) |
| 605 | -41.095 | -192.975 | 2.5195E-02 (2002,056,0300) | 1.9164E-02 (2002,328,0500) | 1.8915E-02 (2002,328,0600) | 1.7599E-02 (2002,239,0300) |
| 606 | -39.640 | -192.982 | 2.5412E-02 (2002,056,0300) | 2.2109E-02 (2002,056,0200) | 1.9541E-02 (2002,328,0500) | 1.8754E-02 (2002,328,0600) |
| 607 | -38.186 | -192.989 | 2.4818E-02 (2002,056,0300) | 1.6768E-02 (2002,114,0200) | 1.5871E-02 (2002,328,0600) | 1.5813E-02 (2002,013,0400) |
| 608 | -36.731 | -192.996 | 2.4511E-02 (2002,056,0300) | 1.6518E-02 (2002,114,0200) | 1.5284E-02 (2002,013,0400) | 1.4219E-02 (2002,328,0600) |
| 609 | -35.276 | -193.003 | 2.4139E-02 (2002,056,0300) | 1.6251E-02 (2002,114,0200) | 1.4805E-02 (2002,013,0400) | 1.3761E-02 (2002,328,0600) |
| 610 | -33.822 | -193.010 | 2.5171E-02 (2002,056,0200) | 2.4801E-02 (2002,056,0300) | 1.6108E-02 (2002,328,0600) | 1.5916E-02 (2002,114,0200) |
| 611 | -32.367 | -193.016 | 2.5796E-02 (2002,056,0200) | 2.4730E-02 (2002,056,0300) | 1.5923E-02 (2002,328,0600) | 1.5589E-02 (2002,114,0200) |
| 612 | -30.912 | -193.022 | 2.6117E-02 (2002,056,0200) | 2.4548E-02 (2002,056,0300) | 1.5276E-02 (2002,328,0600) | 1.5185E-02 (2002,114,0200) |
| 613 | -29.457 | -193.027 | 2.6231E-02 (2002,056,0200) | 2.4267E-02 (2002,056,0300) | 1.4779E-02 (2002,114,0200) | 1.4166E-02 (2002,328,0600) |
| 614 | -28.003 | -193.033 | 2.6235E-02 (2002,056,0200) | 2.4184E-02 (2002,056,0300) | 1.4312E-02 (2002,114,0200) | 1.3505E-02 (2002,328,0600) |
| 615 | -26.548 | -193.038 | 2.1245E-02 (2002,056,0300) | 1.3797E-02 (2002,114,0200) | 1.3279E-02 (2002,013,0500) | 1.1996E-02 (2002,013,0400) |
| 616 | -25.093 | -193.043 | 2.5753E-02 (2002,056,0200) | 2.4235E-02 (2002,056,0300) | 1.3333E-02 (2002,013,0500) | 1.3246E-02 (2002,114,0200) |
| 617 | -41.085 | -191.122 | 2.3896E-02 (2002,056,0300) | 2.3096E-02 (2002,056,0200) | 2.0730E-02 (2002,239,0300) | 2.0386E-02 (2002,328,0500) |
| 618 | -39.631 | -191.129 | 2.3563E-02 (2002,056,0300) | 1.9143E-02 (2002,239,0300) | 1.6747E-02 (2002,328,0500) | 1.6595E-02 (2002,013,0400) |
| 619 | -38.176 | -191.137 | 2.3613E-02 (2002,056,0300) | 1.8858E-02 (2002,056,0200) | 1.7576E-02 (2002,239,0300) | 1.7070E-02 (2002,328,0500) |
| 620 | -36.722 | -191.144 | 2.3494E-02 (2002,056,0300) | 1.9826E-02 (2002,056,0200) | 1.6131E-02 (2002,328,0500) | 1.6019E-02 (2002,239,0300) |
| 621 | -35.268 | -191.150 | 2.6319E-02 (2002,056,0200) | 2.3945E-02 (2002,056,0300) | 1.6638E-02 (2002,328,0500) | 1.6442E-02 (2002,109,0600) |
| 622 | -33.813 | -191.157 | 2.6901E-02 (2002,056,0200) | 2.3891E-02 (2002,056,0300) | 1.5733E-02 (2002,328,0500) | 1.5695E-02 (2002,109,0600) |
| 623 | -32.359 | -191.163 | 2.7424E-02 (2002,056,0200) | 2.3925E-02 (2002,056,0300) | 1.4966E-02 (2002,109,0600) | 1.4872E-02 (2002,013,0400) |
| 624 | -30.905 | -191.169 | 2.7668E-02 (2002,056,0200) | 2.3875E-02 (2002,056,0300) | 1.4394E-02 (2002,013,0400) | 1.4203E-02 (2002,109,0600) |
| 625 | -29.450 | -191.175 | 2.7680E-02 (2002,056,0200) | 2.3698E-02 (2002,056,0300) | 1.3750E-02 (2002,013,0400) | 1.3526E-02 (2002,013,0500) |
| 626 | -27.996 | -191.180 | 2.7591E-02 (2002,056,0200) | 2.3766E-02 (2002,056,0300) | 1.3518E-02 (2002,013,0500) | 1.3283E-02 (2002,013,0400) |
| 627 | -26.542 | -191.185 | 2.2153E-02 (2002,056,0300) | 2.0847E-02 (2002,056,0200) | 1.3431E-02 (2002,013,0500) | 1.2715E-02 (2002,013,0400) |
| 628 | -25.087 | -191.190 | 2.6970E-02 (2002,056,0200) | 2.4175E-02 (2002,056,0300) | 1.3409E-02 (2002,013,0500) | 1.2335E-02 (2002,013,0400) |
| 629 | -39.621 | -189.277 | 2.1759E-02 (2002,239,0300) | 2.1654E-02 (2002,056,0300) | 1.7047E-02 (2002,239,0400) | 1.6704E-02 (2002,013,0400) |
| 630 | -38.167 | -189.284 | 2.6756E-02 (2002,056,0200) | 2.2210E-02 (2002,056,0300) | 2.0858E-02 (2002,109,0600) | 2.0048E-02 (2002,239,0300) |
| 631 | -36.713 | -189.291 | 2.7520E-02 (2002,056,0200) | 2.2276E-02 (2002,056,0300) | 1.9954E-02 (2002,109,0600) | 1.8394E-02 (2002,239,0300) |
| 632 | -35.259 | -189.298 | 2.1722E-02 (2002,056,0300) | 2.1150E-02 (2002,056,0200) | 1.7263E-02 (2002,109,0600) | 1.6725E-02 (2002,239,0300) |
| 633 | -33.805 | -189.304 | 2.8930E-02 (2002,056,0200) | 2.2606E-02 (2002,056,0300) | 1.8160E-02 (2002,109,0600) | 1.5744E-02 (2002,013,0400) |
| 634 | -32.351 | -189.310 | 2.9391E-02 (2002,056,0200) | 2.2798E-02 (2002,056,0300) | 1.7267E-02 (2002,109,0600) | 1.5404E-02 (2002,013,0400) |
| 635 | -30.897 | -189.316 | 2.9357E-02 (2002,056,0200) | 2.2696E-02 (2002,056,0300) | 1.6389E-02 (2002,109,0600) | 1.4746E-02 (2002,013,0400) |
| 636 | -29.443 | -189.322 | 2.9369E-02 (2002,056,0200) | 2.2815E-02 (2002,056,0300) | 1.5527E-02 (2002,109,0600) | 1.4253E-02 (2002,013,0400) |
| 637 | -27.989 | -189.327 | 2.0857E-02 (2002,056,0300) | 1.7098E-02 (2002,056,0200) | 1.3570E-02 (2002,013,0400) | 1.3457E-02 (2002,013,0500) |
| 638 | -26.535 | -189.332 | 2.1912E-02 (2002,056,0200) | 2.1508E-02 (2002,056,0300) | 1.3459E-02 (2002,013,0500) | 1.3269E-02 (2002,109,0600) |
| 639 | -25.081 | -189.337 | 1.9940E-02 (2002,056,0300) | 1.3304E-02 (2002,013,0500) | 1.2919E-02 (2002,056,0200) | 1.2529E-02 (2002,013,0400) |
| 640 | -23.628 | -189.342 | 2.1902E-02 (2002,056,0300) | 2.1668E-02 (2002,056,0200) | 1.3303E-02 (2002,013,0500) | 1.2283E-02 (2002,013,0400) |
| 641 | -22.173 | -189.346 | 2.2161E-02 (2002,056,0300) | 2.1068E-02 (2002,056,0200) | 1.3172E-02 (2002,013,0500) | 1.1805E-02 (2002,013,0400) |
| 642 | -41.066 | -187.417 | 2.7347E-02 (2002,056,0200) | 2.5891E-02 (2002,109,0600) | 2.5649E-02 (2002,239,0300) | 2.0622E-02 (2002,239,0400) |
| 643 | -39.612 | -187.424 | 2.3902E-02 (2002,239,0300) | 1.9478E-02 (2002,056,0300) | 1.9431E-02 (2002,239,0400) | 1.8062E-02 (2002,239,0500) |
| 644 | -38.158 | -187.431 | 2.9023E-02 (2002,056,0200) | 2.3836E-02 (2002,109,0600) | 2.2101E-02 (2002,239,0300) | 2.0113E-02 (2002,056,0300) |
| 645 | -36.705 | -187.438 | 2.9869E-02 (2002,056,0200) | 2.2784E-02 (2002,109,0600) | 2.0402E-02 (2002,239,0300) | 2.0357E-02 (2002,056,0300) |
| 646 | -35.251 | -187.445 | 3.0403E-02 (2002,056,0200) | 2.1729E-02 (2002,109,0600) | 2.0514E-02 (2002,056,0300) | 1.8662E-02 (2002,239,0300) |
| 647 | -33.797 | -187.452 | 3.0955E-02 (2002,056,0200) | 2.0791E-02 (2002,056,0300) | 2.0676E-02 (2002,109,0600) | 1.7037E-02 (2002,239,0300) |
| 648 | -32.344 | -187.458 | 3.1399E-02 (2002,056,0200) | 2.1165E-02 (2002,056,0300) | 1.9638E-02 (2002,109,0600) | 1.5707E-02 (2002,013,0400) |
| 649 | -30.890 | -187.464 | 3.1690E-02 (2002,056,0200) | 2.1742E-02 (2002,056,0300) | 1.8621E-02 (2002,109,0600) | 1.5488E-02 (2002,355,0600) |
| 650 | -29.436 | -187.469 | 3.1324E-02 (2002,056,0200) | 2.1726E-02 (2002,056,0300) | 1.7624E-02 (2002,109,0600) | 1.4779E-02 (2002,013,0400) |
| 651 | -27.983 | -187.475 | 3.1049E-02 (2002,056,0200) | 2.2128E-02 (2002,056,0300) | 1.6642E-02 (2002,109,0600) | 1.4301E-02 (2002,013,0400) |
| 652 | -26.529 | -187.480 | 3.0595E-02 (2002,056,0200) | 2.2646E-02 (2002,056,0300) | 1.5711E-02 (2002,109,0600) | 1.3878E-02 (2002,013,0400) |
| 653 | -25.076 | -187.485 | 2.9956E-02 (2002,056,0200) | 2.3184E-02 (2002,056,0300) | 1.4802E-02 (2002,109,0600) | 1.3439E-02 (2002,013,0500) |
| 654 | -23.622 | -187.489 | 2.2865E-02 (2002,056,0200) | 2.1285E-02 (2002,056,0300) | 1.3568E-02 (2002,109,0600) | 1.3284E-02 (2002,013,0500) |
| 655 | -22.168 | -187.494 | 2.1486E-02 (2002,056,0300) | 2.1041E-02 (2002,056,0200) | 1.3159E-02 (2002,013,0500) | 1.2682E-02 (2002,109,0600) |
| 656 | -41.056 | -185.564 | 2.7190E-02 (2002,239,0300) | 2.2999E-02 (2002,239,0400) | 2.2572E-02 (2002,239,0500) | 1.8877E-02 (2002,239,0600) |
| 657 | -39.602 | -185.572 | 2.5505E-02 (2002,239,0300) | 2.1651E-02 (2002,239,0400) | 2.1327E-02 (2002,239,0500) | 2.0354E-02 (2002,056,0200) |
| 658 | -38.149 | -185.579 | 3.1464E-02 (2002,056,0200) | 2.6808E-02 (2002,109,0600) | 2.3657E-02 (2002,239,0300) | 2.0293E-02 (2002,239,0400) |
| 659 | -36.696 | -185.586 | 3.2120E-02 (2002,056,0200) | 2.5592E-02 (2002,109,0600) | 2.1978E-02 (2002,239,0300) | 1.8988E-02 (2002,239,0400) |
| 660 | -35.243 | -185.593 | 3.3093E-02 (2002,056,0200) | 2.4358E-02 (2002,109,0600) | 2.0223E-02 (2002,239,0300) | 1.8625E-02 (2002,056,0300) |
| 661 | -33.789 | -185.599 | 3.3355E-02 (2002,056,0200) | 2.3176E-02 (2002,109,0600) | 1.8926E-02 (2002,056,0300) | 1.8556E-02 (2002,239,0300) |
| 662 | -32.336 | -185.605 | 3.3809E-02 (2002,056,0200) | 2.1971E-02 (2002,109,0600) | 1.9535E-02 (2002,056,0300) | 1.7257E-02 (2002,109,0700) |
| 663 | -30.883 | -185.611 | 3.3953E-02 (2002,056,0200) | 2.0818E-02 (2002,109,0600) | 2.0198E-02 (2002,056,0300) | 1.6760E-02 (2002,109,0700) |
| 664 | -29.429 | -185.617 | 3.3436E-02 (2002,056,0200) | 2.0343E-02 (2002,056,0300) | 1.9705E-02 (2002,109,0600) | 1.6248E-02 (2002,109,0700) |
| 665 | -27.976 | -185.622 | 3.2962E-02 (2002,056,0200) | 2.0808E-02 (2002,056,0300) | 1.8596E-02 (2002,109,0600) | 1.5711E-02 (2002,109,0700) |
| 666 | -26.523 | -185.627 | 3.2394E-02 (2002,056,0200) | 2.1465E-02 (2002,056,0300) | 1.7529E-02 (2002,109,0600) | 1.5176E-02 (2002,109,0700) |
| 667 | -25.070 | -185.632 | 2.4932E-02 (2002,056,0200) | 1.9987E-02 (2002,056,0300) | 1.6152E-02 (2002,109,0600) | 1.4605E-02 (2002,109,0700) |
| 668 | -23.616 | -185.637 | 1.8183E-02 (2002,056,0300) | 1.4050E-02 (2002,056,0200) | 1.3145E-02 (2002,013,0500) | 1.3018E-02 (2002,013,0400) |
| 669 | -22.163 | -185.641 | 1.9442E-02 (2002,056,0300) | 1.7638E-02 (2002,056,0200) | 1.3271E-02 (2002,109,0700) | 1.3073E-02 (2002,013,0500) |
| 670 | -42.499 | -183.704 | 2.9825E-02 (2002,239,0300) | 2.7122E-02 (2002,239,0500) | 2.6565E-02 (2002,239,0400) | 2.4858E-02 (2002,109,0600) |
| 671 | -41.046 | -183.711 | 2.8086E-02 (2002,239,0300) | 2.5674E-02 (2002,239,0500) | 2.5082E-02 (2002,239,0400) | 2.1761E-02 (2002,239,0600) |
| 672 | -39.593 | -183.719 | 2.6470E-02 (2002,239,0300) | 2.4325E-02 (2002,239,0500) | 2.3616E-02 (2002,239,0400) | 2.1295E-02 (2002,056,0200) |
| 673 | -38.140 | -183.726 | 2.4685E-02 (2002,239,0300) | 2.3022E-02 (2002,239,0500) | 2.2165E-02 (2002,239,0400) | 1.9843E-02 (2002,056,0200) |
| 674 | -36.687 | -183.733 | 2.3058E-02 (2002,239,0300) | 2.2664E-02 (2002,056,0200) | 2.1595E-02 (2002,239,0500) | 2.0750E-02 (2002,239,0400) |
| 675 | -35.234 | -183.740 | 3.5451E-02 (2002,056,0200) | 2.6903E-02 (2002,109,0600) | 2.1336E-02 (2002,239,0300) | 2.0333E-02 (2002,109,0700) |
| 676 | -33.781 | -183.746 | 3.6159E-02 (2002,056,0200) | 2.5557E-02 (2002,109,0600) | 1.9844E-02 (2002,109,0700) | 1.9698E-02 (2002,239,0300) |
| 677 | -32.328 | -183.753 | 3.6435E-02 (2002,056,0200) | 2.4235E-02 (2002,109,0600) | 1.9314E-02 (2002,109,0700) | 1.8055E-02 (2002,239,0300) |
| 678 | -30.875 | -183.759 | 3.5948E-02 (2002,056,0200) | 2.2943E-02 (2002,109,0600) | 1.8735E-02 (2002,109,0700) | 1.8136E-02 (2002,056,0300) |
| 679 | -29.422 | -183.764 | 3.5514E-02 (2002,056,0200) | 2.1692E-02 (2002,109,0600) | 1.8640E-02 (2002,056,0300) | 1.8140E-02 (2002,109,0700) |
| 680 | -27.969 | -183.770 | 3.4982E-02 (2002,056,0200) | 2.0482E-02 (2002,109,0600) | 1.9339E-02 (2002,056,0300) | 1.7520E-02 (2002,109,0700) |
| 681 | -26.517 | -183.775 | 2.7083E-02 (2002,056,0200) | 1.8402E-02 (2002,109,0600) | 1.8185E-02 (2002,056,0300) | 1.6880E-02 (2002,109,0700) |
| 682 | -25.064 | -183.779 | 2.1052E-02 (2002,056,0200) | 1.7652E-02 (2002,056,0300) | 1.5911E-02 (2002,109,0700) | 1.4037E-02 (2002,013,0400) |
| 683 | -23.611 | -183.784 | 1.7038E-02 (2002,056,0300) | 1.4876E-02 (2002,056,0200) | 1.3437E-02 (2002,013,0400) | 1.3034E-02 (2002,013,0500) |
| 684 | -22.158 | -183.788 | 2.3356E-02 (2002,056,0200) | 1.9720E-02 (2002,056,0300) | 1.5545E-02 (2002,109,0600) | 1.4943E-02 (2002,109,0700) |
| 685 | -20.705 | -183.792 | 2.3054E-02 (2002,056,0200) | 2.0453E-02 (2002,056,0300) | 1.4749E-02 (2002,109,0600) | 1.4318E-02 (2002,109,0700) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 686 | -45.394 | -181.835 | 3.2859E-02 (2002,239,0300) | 3.2213E-02 (2002,239,0500) | 3.1451E-02 (2002,239,0400) | 2.8044E-02 (2002,239,0600) |
| 687 | -43.941 | -181.843 | 3.1412E-02 (2002,239,0300) | 3.0967E-02 (2002,239,0500) | 2.9883E-02 (2002,239,0400) | 2.6876E-02 (2002,239,0600) |
| 688 | -42.489 | -181.851 | 2.9981E-02 (2002,239,0300) | 2.9647E-02 (2002,239,0500) | 2.8337E-02 (2002,239,0400) | 2.5784E-02 (2002,239,0600) |
| 689 | -41.036 | -181.859 | 2.8362E-02 (2002,239,0300) | 2.8343E-02 (2002,239,0500) | 2.6920E-02 (2002,056,0200) | 2.6787E-02 (2002,239,0400) |
| 690 | -39.584 | -181.866 | 3.5949E-02 (2002,056,0200) | 3.3767E-02 (2002,109,0600) | 2.6926E-02 (2002,239,0500) | 2.6864E-02 (2002,239,0300) |
| 691 | -38.131 | -181.874 | 3.0672E-02 (2002,056,0200) | 3.0588E-02 (2002,109,0600) | 2.5532E-02 (2002,239,0500) | 2.5186E-02 (2002,239,0300) |
| 692 | -36.678 | -181.881 | 2.7426E-02 (2002,056,0200) | 2.4001E-02 (2002,239,0500) | 2.3653E-02 (2002,239,0300) | 2.2958E-02 (2002,109,0700) |
| 693 | -35.226 | -181.887 | 3.7614E-02 (2002,056,0200) | 2.9245E-02 (2002,109,0600) | 2.2604E-02 (2002,239,0500) | 2.2476E-02 (2002,109,0700) |
| 694 | -33.773 | -181.894 | 3.8241E-02 (2002,056,0200) | 2.7753E-02 (2002,109,0600) | 2.1901E-02 (2002,109,0700) | 2.1141E-02 (2002,239,0500) |
| 695 | -32.321 | -181.900 | 3.8857E-02 (2002,056,0200) | 2.6331E-02 (2002,109,0600) | 2.1285E-02 (2002,109,0700) | 1.9722E-02 (2002,239,0500) |
| 696 | -30.868 | -181.906 | 3.8444E-02 (2002,056,0200) | 2.4902E-02 (2002,109,0600) | 2.0621E-02 (2002,109,0700) | 1.8323E-02 (2002,239,0500) |
| 697 | -29.415 | -181.912 | 3.7583E-02 (2002,056,0200) | 2.3538E-02 (2002,109,0600) | 1.9942E-02 (2002,109,0700) | 1.6974E-02 (2002,239,0500) |
| 698 | -27.963 | -181.917 | 3.6740E-02 (2002,056,0200) | 2.2241E-02 (2002,109,0600) | 1.9238E-02 (2002,109,0700) | 1.7528E-02 (2002,056,0300) |
| 699 | -26.510 | -181.922 | 2.6440E-02 (2002,056,0200) | 1.9078E-02 (2002,109,0600) | 1.8519E-02 (2002,109,0700) | 1.6460E-02 (2002,056,0300) |
| 700 | -25.058 | -181.927 | 1.6903E-02 (2002,056,0200) | 1.5539E-02 (2002,056,0300) | 1.4352E-02 (2002,013,0400) | 1.4282E-02 (2002,109,0700) |
| 701 | -23.605 | -181.931 | 2.1222E-02 (2002,056,0200) | 1.6769E-02 (2002,109,0700) | 1.6690E-02 (2002,056,0300) | 1.3983E-02 (2002,013,0400) |
| 702 | -22.152 | -181.936 | 2.0310E-02 (2002,056,0200) | 1.7195E-02 (2002,056,0300) | 1.6102E-02 (2002,109,0700) | 1.3511E-02 (2002,013,0400) |
| 703 | -20.700 | -181.940 | 1.6513E-02 (2002,056,0300) | 1.4180E-02 (2002,056,0200) | 1.2962E-02 (2002,013,0400) | 1.2635E-02 (2002,013,0500) |
| 704 | -46.835 | -179.973 | 3.5565E-02 (2002,239,0500) | 3.4328E-02 (2002,239,0400) | 3.3374E-02 (2002,239,0300) | 3.1820E-02 (2002,239,0600) |
| 705 | -45.383 | -179.982 | 3.4315E-02 (2002,239,0500) | 3.2778E-02 (2002,239,0400) | 3.2095E-02 (2002,239,0300) | 3.0688E-02 (2002,239,0600) |
| 706 | -43.931 | -179.990 | 3.3040E-02 (2002,239,0500) | 3.1217E-02 (2002,239,0400) | 3.0831E-02 (2002,239,0300) | 2.9520E-02 (2002,239,0600) |
| 707 | -42.479 | -179.999 | 3.1706E-02 (2002,239,0500) | 2.9622E-02 (2002,239,0400) | 2.9553E-02 (2002,239,0300) | 2.8280E-02 (2002,239,0600) |
| 708 | -41.026 | -180.006 | 3.0265E-02 (2002,239,0500) | 2.8091E-02 (2002,239,0300) | 2.8056E-02 (2002,239,0400) | 2.7473E-02 (2002,056,0200) |
| 709 | -39.574 | -180.014 | 3.1268E-02 (2002,109,0600) | 3.0181E-02 (2002,056,0200) | 2.8913E-02 (2002,239,0500) | 2.6734E-02 (2002,239,0300) |
| 710 | -38.122 | -180.021 | 3.9261E-02 (2002,056,0200) | 3.4535E-02 (2002,109,0600) | 2.7483E-02 (2002,239,0500) | 2.5516E-02 (2002,109,0700) |
| 711 | -36.670 | -180.028 | 3.9977E-02 (2002,056,0200) | 3.2907E-02 (2002,109,0600) | 2.5905E-02 (2002,239,0500) | 2.5013E-02 (2002,109,0700) |
| 712 | -35.217 | -180.035 | 4.0385E-02 (2002,056,0200) | 3.1296E-02 (2002,109,0600) | 2.4478E-02 (2002,239,0500) | 2.4457E-02 (2002,109,0700) |
| 713 | -33.765 | -180.041 | 4.1094E-02 (2002,056,0200) | 2.9705E-02 (2002,109,0600) | 2.3805E-02 (2002,109,0700) | 2.2947E-02 (2002,239,0500) |
| 714 | -32.313 | -180.048 | 4.1012E-02 (2002,056,0200) | 2.8166E-02 (2002,109,0600) | 2.3109E-02 (2002,109,0700) | 2.1496E-02 (2002,239,0500) |
| 715 | -30.861 | -180.053 | 4.0040E-02 (2002,056,0200) | 2.6657E-02 (2002,109,0600) | 2.2392E-02 (2002,109,0700) | 2.0042E-02 (2002,239,0500) |
| 716 | -29.408 | -180.059 | 3.9353E-02 (2002,056,0200) | 2.5182E-02 (2002,109,0600) | 2.1613E-02 (2002,109,0700) | 1.8633E-02 (2002,239,0500) |
| 717 | -27.956 | -180.064 | 3.8488E-02 (2002,056,0200) | 2.3798E-02 (2002,109,0600) | 2.0835E-02 (2002,109,0700) | 1.7296E-02 (2002,239,0500) |
| 718 | -26.504 | -180.069 | 3.0301E-02 (2002,056,0200) | 2.1343E-02 (2002,109,0600) | 2.0043E-02 (2002,109,0700) | 1.5978E-02 (2002,239,0500) |
| 719 | -25.052 | -180.074 | 2.4095E-02 (2002,056,0200) | 1.8866E-02 (2002,109,0700) | 1.4814E-02 (2002,013,0400) | 1.4716E-02 (2002,239,0500) |
| 720 | -23.599 | -180.079 | 2.3165E-02 (2002,056,0200) | 1.8140E-02 (2002,109,0700) | 1.5258E-02 (2002,056,0300) | 1.4356E-02 (2002,013,0400) |
| 721 | -22.147 | -180.083 | 2.6374E-02 (2002,056,0200) | 1.8157E-02 (2002,109,0600) | 1.7681E-02 (2002,109,0700) | 1.7055E-02 (2002,056,0300) |
| 722 | -20.695 | -180.087 | 2.1049E-02 (2002,056,0200) | 1.6688E-02 (2002,109,0700) | 1.6371E-02 (2002,056,0300) | 1.3425E-02 (2002,013,0400) |
| 723 | -46.824 | -178.121 | 3.6851E-02 (2002,239,0500) | 3.5050E-02 (2002,239,0400) | 3.3971E-02 (2002,239,0600) | 3.1950E-02 (2002,239,0300) |
| 724 | -45.372 | -178.130 | 3.5640E-02 (2002,239,0500) | 3.3512E-02 (2002,239,0400) | 3.2756E-02 (2002,239,0600) | 3.0848E-02 (2002,239,0300) |
| 725 | -43.920 | -178.138 | 3.4391E-02 (2002,239,0500) | 3.2014E-02 (2002,239,0400) | 3.1656E-02 (2002,239,0600) | 2.9752E-02 (2002,239,0300) |
| 726 | -42.469 | -178.146 | 3.3038E-02 (2002,239,0500) | 3.0434E-02 (2002,239,0400) | 3.0380E-02 (2002,239,0600) | 2.9609E-02 (2002,056,0200) |
| 727 | -41.017 | -178.154 | 3.1634E-02 (2002,239,0500) | 2.9120E-02 (2002,239,0600) | 2.8885E-02 (2002,239,0400) | 2.7346E-02 (2002,239,0300) |
| 728 | -39.565 | -178.161 | 3.2901E-02 (2002,109,0600) | 3.2010E-02 (2002,056,0200) | 3.0285E-02 (2002,239,0500) | 2.8151E-02 (2002,239,0600) |
| 729 | -38.113 | -178.169 | 3.3554E-02 (2002,056,0200) | 3.2225E-02 (2002,109,0600) | 2.8829E-02 (2002,239,0500) | 2.7417E-02 (2002,109,0700) |
| 730 | -36.661 | -178.176 | 4.1886E-02 (2002,056,0200) | 3.4681E-02 (2002,109,0600) | 2.7290E-02 (2002,239,0500) | 2.6850E-02 (2002,109,0700) |
| 731 | -35.209 | -178.182 | 4.3054E-02 (2002,056,0200) | 3.2987E-02 (2002,109,0600) | 2.6204E-02 (2002,109,0700) | 2.5852E-02 (2002,239,0500) |
| 732 | -33.757 | -178.189 | 4.3066E-02 (2002,056,0200) | 3.1324E-02 (2002,109,0600) | 2.5486E-02 (2002,109,0700) | 2.4318E-02 (2002,239,0500) |
| 733 | -32.305 | -178.195 | 4.2742E-02 (2002,056,0200) | 2.9697E-02 (2002,109,0600) | 2.4726E-02 (2002,109,0700) | 2.2856E-02 (2002,239,0500) |
| 734 | -30.853 | -178.201 | 4.2168E-02 (2002,056,0200) | 2.8117E-02 (2002,109,0600) | 2.3944E-02 (2002,109,0700) | 2.1384E-02 (2002,239,0500) |
| 735 | -29.401 | -178.206 | 4.0834E-02 (2002,056,0200) | 2.6585E-02 (2002,109,0600) | 2.3100E-02 (2002,109,0700) | 1.9950E-02 (2002,239,0500) |
| 736 | -27.949 | -178.212 | 4.0025E-02 (2002,056,0200) | 2.5119E-02 (2002,109,0600) | 2.2261E-02 (2002,109,0700) | 1.8587E-02 (2002,239,0500) |
| 737 | -26.498 | -178.217 | 3.8615E-02 (2002,056,0200) | 2.3709E-02 (2002,109,0600) | 2.1425E-02 (2002,109,0700) | 1.7238E-02 (2002,239,0500) |
| 738 | -25.046 | -178.222 | 2.4469E-02 (2002,056,0200) | 2.0143E-02 (2002,109,0700) | 1.5943E-02 (2002,239,0500) | 1.5144E-02 (2002,013,0400) |
| 739 | -23.594 | -178.226 | 3.5533E-02 (2002,056,0200) | 2.1067E-02 (2002,109,0600) | 1.9733E-02 (2002,109,0700) | 1.6812E-02 (2002,056,0300) |
| 740 | -22.142 | -178.231 | 2.3035E-02 (2002,056,0200) | 1.8578E-02 (2002,109,0700) | 1.4241E-02 (2002,013,0400) | 1.4207E-02 (2002,056,0300) |
| 741 | -20.690 | -178.235 | 2.0063E-02 (2002,056,0200) | 1.6765E-02 (2002,109,0700) | 1.4501E-02 (2002,056,0300) | 1.3735E-02 (2002,013,0400) |
| 742 | -46.813 | -176.268 | 3.7584E-02 (2002,239,0500) | 3.6130E-02 (2002,239,0600) | 3.5176E-02 (2002,239,0400) | 3.0472E-02 (2002,109,0600) |
| 743 | -45.361 | -176.277 | 3.6236E-02 (2002,239,0500) | 3.4329E-02 (2002,239,0600) | 3.3695E-02 (2002,239,0400) | 2.9216E-02 (2002,239,0300) |
| 744 | -43.910 | -176.285 | 3.5006E-02 (2002,239,0500) | 3.3104E-02 (2002,239,0600) | 3.2253E-02 (2002,239,0400) | 2.8288E-02 (2002,239,0300) |
| 745 | -42.458 | -176.293 | 3.3764E-02 (2002,239,0500) | 3.2293E-02 (2002,239,0600) | 3.1505E-02 (2002,056,0200) | 3.0735E-02 (2002,239,0400) |
| 746 | -41.007 | -176.301 | 3.6206E-02 (2002,109,0600) | 3.3732E-02 (2002,056,0200) | 3.2399E-02 (2002,239,0500) | 3.1005E-02 (2002,239,0600) |
| 747 | -39.555 | -176.309 | 3.4078E-02 (2002,109,0600) | 3.3366E-02 (2002,056,0200) | 3.1046E-02 (2002,239,0500) | 2.9640E-02 (2002,239,0600) |
| 748 | -38.104 | -176.316 | 4.3500E-02 (2002,056,0200) | 3.7768E-02 (2002,109,0600) | 2.9557E-02 (2002,239,0500) | 2.8963E-02 (2002,109,0700) |
| 749 | -36.652 | -176.323 | 4.3410E-02 (2002,056,0200) | 3.5999E-02 (2002,109,0600) | 2.8349E-02 (2002,109,0700) | 2.8130E-02 (2002,239,0500) |
| 750 | -35.201 | -176.330 | 4.4406E-02 (2002,056,0200) | 3.4267E-02 (2002,109,0600) | 2.7657E-02 (2002,109,0700) | 2.6663E-02 (2002,239,0500) |
| 751 | -33.749 | -176.336 | 4.4227E-02 (2002,056,0200) | 3.2539E-02 (2002,109,0600) | 2.6886E-02 (2002,109,0700) | 2.5173E-02 (2002,239,0500) |
| 752 | -32.297 | -176.342 | 4.3322E-02 (2002,056,0200) | 3.0863E-02 (2002,109,0600) | 2.6078E-02 (2002,109,0700) | 2.3787E-02 (2002,239,0500) |
| 753 | -30.846 | -176.348 | 4.3134E-02 (2002,056,0200) | 2.9239E-02 (2002,109,0600) | 2.5247E-02 (2002,109,0700) | 2.2332E-02 (2002,239,0500) |
| 754 | -29.394 | -176.354 | 4.2135E-02 (2002,056,0200) | 2.7668E-02 (2002,109,0600) | 2.4354E-02 (2002,109,0700) | 2.0911E-02 (2002,239,0500) |
| 755 | -27.943 | -176.359 | 4.0658E-02 (2002,056,0200) | 2.6158E-02 (2002,109,0600) | 2.3466E-02 (2002,109,0700) | 1.9554E-02 (2002,239,0500) |
| 756 | -26.491 | -176.364 | 3.9234E-02 (2002,056,0200) | 2.4705E-02 (2002,109,0600) | 2.2586E-02 (2002,109,0700) | 1.8209E-02 (2002,239,0500) |
| 757 | -25.040 | -176.369 | 3.7628E-02 (2002,056,0200) | 2.3320E-02 (2002,109,0600) | 2.1691E-02 (2002,109,0700) | 1.6908E-02 (2002,239,0500) |
| 758 | -23.588 | -176.374 | 3.3365E-02 (2002,056,0200) | 2.1987E-02 (2002,109,0600) | 2.0806E-02 (2002,109,0700) | 1.5658E-02 (2002,239,0500) |
| 759 | -22.137 | -176.378 | 3.3924E-02 (2002,056,0200) | 2.0742E-02 (2002,109,0600) | 1.9910E-02 (2002,109,0700) | 1.5818E-02 (2002,056,0300) |
| 760 | -20.685 | -176.382 | 2.2208E-02 (2002,056,0200) | 1.8792E-02 (2002,109,0700) | 1.4056E-02 (2002,013,0400) | 1.3657E-02 (2002,106,0700) |
| 761 | -62.765 | -174.303 | 5.8118E-02 (2002,109,0500) | 5.1105E-02 (2002,109,0600) | 4.4671E-02 (2002,239,0400) | 4.4498E-02 (2002,239,0500) |
| 762 | -46.802 | -174.416 | 4.8835E-02 (2002,109,0600) | 3.7891E-02 (2002,056,0200) | 3.7389E-02 (2002,239,0500) | 3.6825E-02 (2002,239,0600) |
| 763 | -45.351 | -174.425 | 3.6138E-02 (2002,239,0500) | 3.5226E-02 (2002,239,0600) | 3.3335E-02 (2002,239,0400) | 2.7807E-02 (2002,109,0700) |
| 764 | -43.899 | -174.433 | 3.4953E-02 (2002,239,0500) | 3.4011E-02 (2002,239,0600) | 3.1924E-02 (2002,239,0400) | 2.6563E-02 (2002,239,0300) |
| 765 | -42.448 | -174.441 | 3.3743E-02 (2002,239,0500) | 3.3197E-02 (2002,239,0600) | 3.2158E-02 (2002,056,0200) | 3.1357E-02 (2002,109,0700) |
| 766 | -40.997 | -174.449 | 3.5822E-02 (2002,109,0600) | 3.3466E-02 (2002,056,0200) | 3.2519E-02 (2002,239,0500) | 3.1886E-02 (2002,239,0600) |
| 767 | -39.546 | -174.456 | 4.3548E-02 (2002,056,0200) | 4.0408E-02 (2002,109,0600) | 3.1203E-02 (2002,239,0500) | 3.0662E-02 (2002,109,0700) |
| 768 | -38.095 | -174.464 | 4.4523E-02 (2002,056,0200) | 3.8602E-02 (2002,109,0600) | 3.0124E-02 (2002,109,0700) | 2.9785E-02 (2002,239,0500) |
| 769 | -36.643 | -174.471 | 4.4818E-02 (2002,056,0200) | 3.6815E-02 (2002,109,0600) | 2.9481E-02 (2002,109,0700) | 2.8465E-02 (2002,239,0500) |
| 770 | -35.192 | -174.477 | 4.4243E-02 (2002,056,0200) | 3.5068E-02 (2002,109,0600) | 2.8758E-02 (2002,109,0700) | 2.7064E-02 (2002,239,0500) |
| 771 | -33.741 | -174.484 | 4.3986E-02 (2002,056,0200) | 3.3319E-02 (2002,109,0600) | 2.7958E-02 (2002,109,0700) | 2.5638E-02 (2002,239,0500) |
| 772 | -32.290 | -174.490 | 4.4025E-02 (2002,056,0200) | 3.1632E-02 (2002,109,0600) | 2.7119E-02 (2002,109,0700) | 2.4300E-02 (2002,239,0500) |
| 773 | -30.839 | -174.496 | 4.3186E-02 (2002,056,0200) | 2.9998E-02 (2002,109,0600) | 2.6258E-02 (2002,109,0700) | 2.2896E-02 (2002,239,0500) |
| 774 | -29.387 | -174.501 | 4.2128E-02 (2002,056,0200) | 2.8404E-02 (2002,109,0600) | 2.5334E-02 (2002,109,0700) | 2.1518E-02 (2002,239,0500) |
| 775 | -27.936 | -174.507 | 4.0786E-02 (2002,056,0200) | 2.6879E-02 (2002,109,0600) | 2.4417E-02 (2002,109,0700) | 2.0179E-02 (2002,239,0500) |
| 776 | -26.485 | -174.512 | 3.9028E-02 (2002,056,0200) | 2.5408E-02 (2002,109,0600) | 2.3506E-02 (2002,109,0700) | 1.8883E-02 (2002,239,0500) |
| 777 | -25.034 | -174.517 | 3.7147E-02 (2002,056,0200) | 2.4006E-02 (2002,109,0600) | 2.2585E-02 (2002,109,0700) | 1.7603E-02 (2002,239,0500) |
| 778 | -23.582 | -174.521 | 2.9734E-02 (2002,056,0200) | 2.1940E-02 (2002,109,0600) | 2.1673E-02 (2002,109,0700) | 1.6371E-02 (2002,239,0500) |
| 779 | -22.131 | -174.526 | 2.2706E-02 (2002,056,0200) | 2.0422E-02 (2002,109,0700) | 1.5419E-02 (2002,106,0700) | 1.5188E-02 (2002,239,0500) |
| 780 | -62.750 | -172.451 | 5.6042E-02 (2002,109,0500) | 5.0838E-02 (2002,109,0600) | 4.5683E-02 (2002,056,0100) | 4.2303E-02 (2002,239,0500) |
| 781 | -61.299 | -172.462 | 5.3994E-02 (2002,109,0500) | 5.2097E-02 (2002,109,0600) | 4.5478E-02 (2002,056,0100) | 4.2567E-02 (2002,239,0500) |
| 782 | -46.791 | -172.563 | 3.6471E-02 (2002,239,0600) | 3.6431E-02 (2002,239,0500) | 3.3642E-02 (2002,239,0400) | 2.6479E-02 (2002,239,0700) |
| 783 | -45.340 | -172.572 | 3.5419E-02 (2002,239,0500) | 3.5388E-02 (2002,239,0600) | 3.2472E-02 (2002,239,0400) | 2.5806E-02 (2002,239,0700) |
| 784 | -43.889 | -172.580 | 4.5789E-02 (2002,109,0600) | 3.9853E-02 (2002,056,0200) | 3.4695E-02 (2002,239,0600) | 3.4411E-02 (2002,239,0500) |
| 785 | -42.438 | -172.588 | 4.4094E-02 (2002,109,0600) | 4.1426E-02 (2002,056,0200) | 3.3531E-02 (2002,239,0600) | 3.3262E-02 (2002,239,0500) |
| 786 | -40.987 | -172.596 | 4.2394E-02 (2002,109,0600) | 4.2218E-02 (2002,056,0200) | 3.2268E-02 (2002,239,0600) | 3.2113E-02 (2002,239,0500) |
| 787 | -39.536 | -172.604 | 3.4940E-02 (2002,109,0600) | 3.4041E-02 (2002,056,0200) | 3.1401E-02 (2002,109,0700) | 3.0968E-02 (2002,239,0600) |
| 788 | -38.086 | -172.611 | 4.4140E-02 (2002,056,0200) | 3.8857E-02 (2002,109,0600) | 3.0828E-02 (2002,109,0700) | 2.9680E-02 (2002,239,0600) |
| 789 | -36.635 | -172.618 | 4.4341E-02 (2002,056,0200) | 3.7101E-02 (2002,109,0600) | 3.0206E-02 (2002,109,0700) | 2.8402E-02 (2002,239,0600) |
| 790 | -35.184 | -172.625 | 4.3666E-02 (2002,056,0200) | 3.5368E-02 (2002,109,0600) | 2.9472E-02 (2002,109,0700) | 2.7059E-02 (2002,239,0600) |
| 791 | -33.733 | -172.631 | 4.3846E-02 (2002,056,0200) | 3.3644E-02 (2002,109,0600) | 2.8666E-02 (2002,109,0700) | 2.5744E-02 (2002,239,0600) |
| 792 | -32.282 | -172.637 | 4.2819E-02 (2002,056,0200) | 3.1966E-02 (2002,109,0600) | 2.7816E-02 (2002,109,0700) | 2.4445E-02 (2002,239,0600) |
| 793 | -30.831 | -172.643 | 4.2406E-02 (2002,056,0200) | 3.0359E-02 (2002,109,0600) | 2.6943E-02 (2002,109,0700) | 2.3126E-02 (2002,239,0600) |
| 794 | -29.380 | -172.649 | 4.1141E-02 (2002,056,0200) | 2.8770E-02 (2002,109,0600) | 2.6008E-02 (2002,109,0700) | 2.1795E-02 (2002,239,0600) |
| 795 | -27.929 | -172.654 | 3.9800E-02 (2002,056,0200) | 2.7256E-02 (2002,109,0600) | 2.5080E-02 (2002,109,0700) | 2.0565E-02 (2002,239,0600) |
| 796 | -26.479 | -172.659 | 3.8134E-02 (2002,056,0200) | 2.5797E-02 (2002,109,0600) | 2.4162E-02 (2002,109,0700) | 1.9299E-02 (2002,239,0600) |
| 797 | -25.028 | -172.664 | 3.6167E-02 (2002,056,0200) | 2.4402E-02 (2002,109,0600) | 2.3226E-02 (2002,109,0700) | 1.8084E-02 (2002,239,0600) |
| 798 | -23.577 | -172.669 | 2.9079E-02 (2002,056,0200) | 2.2731E-02 (2002,109,0600) | 2.2305E-02 (2002,109,0700) | 1.6931E-02 (2002,239,0600) |
| 799 | -61.285 | -170.610 | 5.1058E-02 (2002,109,0500) | 5.0738E-02 (2002,109,0600) | 4.9712E-02 (2002,056,0100) | 3.9949E-02 (2002,239,0500) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 800 | -46.780 | -170.711 | 4.8119E-02 (2002,109,0600) | 3.6528E-02 (2002,239,0600) | 3.6276E-02 (2002,056,0200) | 3.5236E-02 (2002,239,0500) |
| 801 | -45.329 | -170.720 | 4.6719E-02 (2002,109,0600) | 3.8005E-02 (2002,056,0200) | 3.5463E-02 (2002,239,0600) | 3.4292E-02 (2002,239,0500) |
| 802 | -43.879 | -170.728 | 3.4078E-02 (2002,239,0600) | 3.3257E-02 (2002,239,0500) | 3.0022E-02 (2002,239,0400) | 2.4935E-02 (2002,239,0700) |
| 803 | -42.428 | -170.736 | 3.2986E-02 (2002,239,0600) | 3.2273E-02 (2002,239,0500) | 2.8903E-02 (2002,239,0400) | 2.7571E-02 (2002,056,0200) |
| 804 | -40.977 | -170.744 | 4.1929E-02 (2002,109,0600) | 4.1496E-02 (2002,056,0200) | 3.2116E-02 (2002,239,0600) | 3.2054E-02 (2002,109,0700) |
| 805 | -39.527 | -170.751 | 4.2117E-02 (2002,056,0200) | 4.0263E-02 (2002,109,0600) | 3.1667E-02 (2002,109,0700) | 3.0899E-02 (2002,239,0600) |
| 806 | -38.076 | -170.759 | 4.2680E-02 (2002,056,0200) | 3.8541E-02 (2002,109,0600) | 3.1108E-02 (2002,109,0700) | 2.9709E-02 (2002,239,0600) |
| 807 | -36.626 | -170.766 | 3.4346E-02 (2002,056,0200) | 3.2874E-02 (2002,109,0600) | 3.0476E-02 (2002,109,0700) | 2.8458E-02 (2002,239,0600) |
| 808 | -35.175 | -170.772 | 4.2462E-02 (2002,056,0200) | 3.5174E-02 (2002,109,0600) | 2.9778E-02 (2002,109,0700) | 2.7197E-02 (2002,239,0600) |
| 809 | -33.725 | -170.779 | 3.7637E-02 (2002,056,0200) | 3.3493E-02 (2002,109,0600) | 2.8985E-02 (2002,109,0700) | 2.5954E-02 (2002,239,0600) |
| 810 | -32.274 | -170.785 | 4.1475E-02 (2002,056,0200) | 3.1873E-02 (2002,109,0600) | 2.8147E-02 (2002,109,0700) | 2.4697E-02 (2002,239,0600) |
| 811 | -30.824 | -170.791 | 4.0231E-02 (2002,056,0200) | 3.0294E-02 (2002,109,0600) | 2.7283E-02 (2002,109,0700) | 2.3379E-02 (2002,239,0600) |
| 812 | -29.373 | -170.796 | 3.9346E-02 (2002,056,0200) | 2.8760E-02 (2002,109,0600) | 2.6359E-02 (2002,109,0700) | 2.2179E-02 (2002,239,0600) |
| 813 | -27.923 | -170.802 | 3.7957E-02 (2002,056,0200) | 2.7282E-02 (2002,109,0600) | 2.5438E-02 (2002,109,0700) | 2.0975E-02 (2002,239,0600) |
| 814 | -26.472 | -170.807 | 3.6151E-02 (2002,056,0200) | 2.5857E-02 (2002,109,0600) | 2.4531E-02 (2002,109,0700) | 1.9751E-02 (2002,239,0600) |
| 815 | -25.022 | -170.812 | 3.0358E-02 (2002,056,0200) | 2.4375E-02 (2002,109,0600) | 2.3601E-02 (2002,109,0700) | 1.8588E-02 (2002,239,0600) |
| 816 | -59.820 | -168.769 | 5.1538E-02 (2002,056,0100) | 4.9344E-02 (2002,109,0600) | 4.5602E-02 (2002,109,0500) | 3.8586E-02 (2002,239,0600) |
| 817 | -43.868 | -168.875 | 3.3331E-02 (2002,239,0600) | 3.1844E-02 (2002,239,0500) | 2.8513E-02 (2002,239,0400) | 2.4475E-02 (2002,239,0700) |
| 818 | -42.418 | -168.884 | 3.2367E-02 (2002,239,0600) | 3.0955E-02 (2002,239,0500) | 2.8578E-02 (2002,109,0700) | 2.7517E-02 (2002,239,0400) |
| 819 | -40.968 | -168.891 | 3.1329E-02 (2002,239,0600) | 3.0012E-02 (2002,239,0500) | 2.9763E-02 (2002,109,0700) | 2.7235E-02 (2002,056,0200) |
| 820 | -39.518 | -168.899 | 3.0260E-02 (2002,239,0600) | 2.9612E-02 (2002,109,0700) | 2.9013E-02 (2002,239,0500) | 2.8055E-02 (2002,056,0200) |
| 821 | -38.067 | -168.906 | 2.9293E-02 (2002,109,0700) | 2.9170E-02 (2002,239,0600) | 2.8354E-02 (2002,056,0200) | 2.8017E-02 (2002,239,0500) |
| 822 | -36.617 | -168.913 | 3.9221E-02 (2002,056,0200) | 3.6070E-02 (2002,109,0600) | 3.0337E-02 (2002,109,0700) | 2.8131E-02 (2002,239,0600) |
| 823 | -35.167 | -168.920 | 3.3548E-02 (2002,056,0200) | 3.2920E-02 (2002,109,0600) | 2.9672E-02 (2002,109,0700) | 2.6977E-02 (2002,239,0600) |
| 824 | -33.717 | -168.926 | 3.9629E-02 (2002,056,0200) | 3.2897E-02 (2002,109,0600) | 2.8914E-02 (2002,109,0700) | 2.5816E-02 (2002,239,0600) |
| 825 | -32.267 | -168.932 | 3.8690E-02 (2002,056,0200) | 3.1348E-02 (2002,109,0600) | 2.8106E-02 (2002,109,0700) | 2.4591E-02 (2002,239,0600) |
| 826 | -30.816 | -168.938 | 3.7908E-02 (2002,056,0200) | 2.9842E-02 (2002,109,0600) | 2.7274E-02 (2002,109,0700) | 2.3404E-02 (2002,239,0600) |
| 827 | -29.366 | -168.944 | 3.6694E-02 (2002,056,0200) | 2.8378E-02 (2002,109,0600) | 2.6378E-02 (2002,109,0700) | 2.2266E-02 (2002,239,0600) |
| 828 | -27.916 | -168.949 | 3.5327E-02 (2002,056,0200) | 2.6963E-02 (2002,109,0600) | 2.5487E-02 (2002,109,0700) | 2.1107E-02 (2002,239,0600) |
| 829 | -26.466 | -168.954 | 3.3743E-02 (2002,056,0200) | 2.5599E-02 (2002,109,0600) | 2.4603E-02 (2002,109,0700) | 1.9922E-02 (2002,239,0600) |
| 830 | -25.016 | -168.959 | 3.1867E-02 (2002,056,0200) | 2.4288E-02 (2002,109,0600) | 2.3701E-02 (2002,109,0700) | 1.8852E-02 (2002,239,0600) |
| 831 | -45.307 | -167.015 | 3.3126E-02 (2002,239,0600) | 3.0866E-02 (2002,239,0500) | 2.7536E-02 (2002,239,0400) | 2.4145E-02 (2002,239,0700) |
| 832 | -43.858 | -167.023 | 3.2248E-02 (2002,239,0600) | 3.0157E-02 (2002,239,0500) | 2.6764E-02 (2002,239,0400) | 2.3626E-02 (2002,239,0700) |
| 833 | -42.408 | -167.031 | 4.0642E-02 (2002,109,0600) | 3.5560E-02 (2002,056,0200) | 3.1560E-02 (2002,239,0600) | 3.1271E-02 (2002,109,0700) |
| 834 | -25.010 | -167.107 | 2.8707E-02 (2002,056,0200) | 2.3790E-02 (2002,109,0600) | 2.3521E-02 (2002,109,0700) | 1.8898E-02 (2002,239,0600) |

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CALPOST Version 5.6394 Level 070622
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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 329 | -19.357 | -226.410 | 5.0787E-05 | 582 | -32.382 | -196.721 | 8.1485E-05 |
| 330 | -23.734 | -224.545 | 5.6629E-05 | 583 | -30.927 | -196.727 | 7.7102E-05 |
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| 757 | -25.040 | -176.369 | 9.4691E-05 |
| 758 | -23.588 | -176.374 | 8.6777E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 506 | -41.154 | -204.091 | 9.8271E-05 | 759 | -22.137 | -176.378 | 8.4355E-05 |
| 507 | -39.697 | -204.098 | 9.3361E-05 | 760 | -20.685 | -176.382 | 7.4866E-05 |
| 508 | -38.240 | -204.106 | 7.9043E-05 | 761 | -62.765 | -174.303 | 2.4019E-04 |
| 509 | -36.783 | -204.113 | 7.4028E-05 | 762 | -46.802 | -174.416 | 1.6693E-04 |
| 510 | -35.327 | -204.119 | 8.2243E-05 | 763 | -45.351 | -174.425 | 1.3868E-04 |
| 511 | -33.870 | -204.126 | 7.8698E-05 | 764 | -43.899 | -174.433 | 1.3031E-04 |
| 512 | -32.413 | -204.132 | 7.7444E-05 | 765 | -42.448 | -174.441 | 1.3659E-04 |
| 513 | -30.956 | -204.138 | 7.4521E-05 | 766 | -40.997 | -174.449 | 1.3498E-04 |
| 514 | -29.500 | -204.144 | 7.1951E-05 | 767 | -39.546 | -174.456 | 1.4025E-04 |
| 515 | -28.043 | -204.149 | 6.9530E-05 | 768 | -38.095 | -174.464 | 1.3898E-04 |
| 516 | -26.586 | -204.154 | 6.7246E-05 | 769 | -36.643 | -174.471 | 1.3415E-04 |
| 517 | -25.129 | -204.159 | 6.5056E-05 | 770 | -35.192 | -174.477 | 1.2437E-04 |
| 518 | -23.673 | -204.164 | 6.2925E-05 | 771 | -33.741 | -174.484 | 1.1876E-04 |
| 519 | -22.216 | -204.168 | 6.0625E-05 | 772 | -32.290 | -174.490 | 1.2142E-04 |
| 520 | -20.759 | -204.172 | 5.9021E-05 | 773 | -30.839 | -174.496 | 1.1709E-04 |
| 521 | -19.302 | -204.176 | 5.7501E-05 | 774 | -29.387 | -174.501 | 1.1398E-04 |
| 522 | -46.969 | -202.205 | 1.1661E-04 | 775 | -27.936 | -174.507 | 1.0972E-04 |
| 523 | -45.513 | -202.214 | 1.1131E-04 | 776 | -26.485 | -174.512 | 1.0096E-04 |
| 524 | -44.057 | -202.222 | 1.0656E-04 | 777 | -25.034 | -174.517 | 9.2548E-05 |
| 525 | -42.600 | -202.230 | 1.0410E-04 | 778 | -23.582 | -174.521 | 8.7391E-05 |
| 526 | -41.144 | -202.238 | 9.9923E-05 | 779 | -22.131 | -174.526 | 7.9136E-05 |
| 527 | -39.687 | -202.246 | 9.5048E-05 | 780 | -62.750 | -172.451 | 2.3428E-04 |
| 528 | -38.231 | -202.253 | 9.1125E-05 | 781 | -61.299 | -172.462 | 2.3027E-04 |
| 529 | -36.775 | -202.260 | 8.7433E-05 | 782 | -46.791 | -172.563 | 1.3674E-04 |
| 530 | -35.318 | -202.267 | 7.1036E-05 | 783 | -45.340 | -172.572 | 1.3505E-04 |
| 531 | -33.862 | -202.273 | 7.7441E-05 | 784 | -43.889 | -172.580 | 1.5091E-04 |
| 532 | -32.405 | -202.279 | 7.8400E-05 | 785 | -42.438 | -172.588 | 1.4989E-04 |
| 533 | -30.949 | -202.285 | 7.5659E-05 | 786 | -40.987 | -172.596 | 1.4242E-04 |
| 534 | -29.493 | -202.291 | 7.3121E-05 | 787 | -39.536 | -172.604 | 1.3147E-04 |
| 535 | -28.036 | -202.296 | 6.9204E-05 | 788 | -38.086 | -172.611 | 1.3882E-04 |
| 536 | -26.580 | -202.301 | 6.7898E-05 | 789 | -36.635 | -172.618 | 1.3420E-04 |
| 537 | -25.123 | -202.306 | 6.6047E-05 | 790 | -35.184 | -172.625 | 1.2295E-04 |
| 538 | -23.667 | -202.311 | 6.3501E-05 | 791 | -33.733 | -172.631 | 1.2487E-04 |
| 539 | -22.210 | -202.315 | 6.1438E-05 | 792 | -32.282 | -172.637 | 1.1590E-04 |
| 540 | -46.958 | -200.352 | 1.2068E-04 | 793 | -30.831 | -172.643 | 1.1893E-04 |
| 541 | -45.502 | -200.361 | 1.1130E-04 | 794 | -29.380 | -172.649 | 1.1296E-04 |
| 542 | -44.046 | -200.369 | 1.0868E-04 | 795 | -27.929 | -172.654 | 1.1038E-04 |
| 543 | -42.590 | -200.377 | 1.0454E-04 | 796 | -26.479 | -172.659 | 1.0465E-04 |
| 544 | -41.134 | -200.385 | 1.0070E-04 | 797 | -25.028 | -172.664 | 9.6867E-05 |
| 545 | -39.678 | -200.393 | 9.5643E-05 | 798 | -23.577 | -172.669 | 8.8856E-05 |
| 546 | -38.222 | -200.400 | 9.0621E-05 | 799 | -61.285 | -170.610 | 2.2511E-04 |
| 547 | -36.766 | -200.407 | 8.8517E-05 | 800 | -46.780 | -170.711 | 1.6224E-04 |
| 548 | -35.310 | -200.414 | 7.4115E-05 | 801 | -45.329 | -170.720 | 1.6019E-04 |
| 549 | -33.854 | -200.420 | 8.1020E-05 | 802 | -43.879 | -170.728 | 1.2926E-04 |
| 550 | -32.398 | -200.427 | 7.4544E-05 | 803 | -42.428 | -170.736 | 1.2943E-04 |
| 551 | -30.942 | -200.432 | 7.7026E-05 | 804 | -40.977 | -170.744 | 1.4622E-04 |
| 552 | -29.486 | -200.438 | 7.4394E-05 | 805 | -39.527 | -170.751 | 1.4099E-04 |
| 553 | -28.030 | -200.444 | 6.7416E-05 | 806 | -38.076 | -170.759 | 1.3747E-04 |
| 554 | -26.573 | -200.449 | 6.8526E-05 | 807 | -36.626 | -170.766 | 1.2362E-04 |
| 555 | -25.117 | -200.453 | 6.4850E-05 | 808 | -35.175 | -170.772 | 1.2676E-04 |
| 556 | -23.661 | -200.458 | 6.4150E-05 | 809 | -33.725 | -170.779 | 1.1718E-04 |
| 557 | -46.947 | -198.500 | 1.2478E-04 | 810 | -32.274 | -170.785 | 1.2030E-04 |
| 558 | -45.491 | -198.508 | 1.1634E-04 | 811 | -30.824 | -170.791 | 1.1228E-04 |
| 559 | -44.036 | -198.517 | 1.1002E-04 | 812 | -29.373 | -170.796 | 1.1334E-04 |
| 560 | -42.580 | -198.525 | 1.0575E-04 | 813 | -27.923 | -170.802 | 1.1071E-04 |
| 561 | -41.124 | -198.533 | 1.0217E-04 | 814 | -26.472 | -170.807 | 1.0249E-04 |
| 562 | -39.669 | -198.540 | 9.8236E-05 | 815 | -25.022 | -170.812 | 9.3458E-05 |
| 563 | -38.213 | -198.547 | 9.2584E-05 | 816 | -59.820 | -168.769 | 2.1373E-04 |
| 564 | -36.757 | -198.554 | 7.9882E-05 | 817 | -43.868 | -168.875 | 1.2756E-04 |
| 565 | -35.301 | -198.561 | 7.7621E-05 | 818 | -42.418 | -168.884 | 1.2938E-04 |
| 566 | -33.846 | -198.568 | 8.1140E-05 | 819 | -40.968 | -168.891 | 1.2699E-04 |
| 567 | -32.390 | -198.574 | 8.1287E-05 | 820 | -39.518 | -168.899 | 1.2336E-04 |
| 568 | -30.934 | -198.580 | 6.5680E-05 | 821 | -38.067 | -168.906 | 1.1963E-04 |
| 569 | -29.479 | -198.585 | 6.4666E-05 | 822 | -36.617 | -168.913 | 1.2576E-04 |
| 570 | -28.023 | -198.591 | 6.5932E-05 | 823 | -35.167 | -168.920 | 1.2025E-04 |
| 571 | -26.567 | -198.596 | 6.9312E-05 | 824 | -33.717 | -168.926 | 1.2376E-04 |
| 572 | -46.936 | -196.647 | 1.2414E-04 | 825 | -32.267 | -168.932 | 1.1752E-04 |
| 573 | -45.481 | -196.656 | 1.2127E-04 | 826 | -30.816 | -168.938 | 1.1680E-04 |
| 574 | -44.025 | -196.664 | 1.1196E-04 | 827 | -29.366 | -168.944 | 1.1350E-04 |
| 575 | -42.570 | -196.672 | 1.0416E-04 | 828 | -27.916 | -168.949 | 1.1109E-04 |
| 576 | -41.115 | -196.680 | 1.0317E-04 | 829 | -26.466 | -168.954 | 1.0759E-04 |
| 577 | -39.659 | -196.687 | 9.6591E-05 | 830 | -25.016 | -168.959 | 9.9043E-05 |
| 578 | -38.204 | -196.695 | 9.4804E-05 | 831 | -45.307 | -167.015 | 1.3013E-04 |
| 579 | -36.748 | -196.702 | 8.9636E-05 | 832 | -43.858 | -167.023 | 1.2882E-04 |
| 580 | -35.293 | -196.708 | 7.6232E-05 | 833 | -42.408 | -167.031 | 1.4748E-04 |
| 581 | -33.838 | -196.715 | 7.3471E-05 | 834 | -25.010 | -167.107 | 9.6329E-05 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 761 | -62.765 | -174.303 | DISCRETE | 5.8118E-02 (2002,109,0500) | RANK 1 | 1 | HOUR |
| 781 | -61.299 | -172.462 | DISCRETE | 5.2097E-02 (2002,109,0600) | RANK 2 | 1 | HOUR |
| 799 | -61.285 | -170.610 | DISCRETE | 4.9712E-02 (2002,056,0100) | RANK 3 | 1 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 4.4498E-02 (2002,239,0500) | RANK 4 | 1 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 2.4019E-04 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Capitol Reef

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  834*0, 363*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 841 | -129.441 | -256.870 | 6.0374E-02 (2002,210,0300) | 5.9429E-02 (2002,018,2300) | 5.9086E-02 (2002,098,0000) | 5.7993E-02 (2002,013,0600) |
| 842 | -127.975 | -256.894 | 6.1175E-02 (2002,018,2300) | 5.7676E-02 (2002,364,0100) | 5.7488E-02 (2002,013,0600) | 5.6711E-02 (2002,210,0300) |
| 843 | -126.508 | -256.918 | 5.9391E-02 (2002,364,0100) | 5.6368E-02 (2002,013,0600) | 5.1895E-02 (2002,315,0600) | 4.9777E-02 (2002,309,0500) |
| 844 | -125.041 | -256.941 | 6.0097E-02 (2002,364,0100) | 5.4813E-02 (2002,013,0600) | 5.2451E-02 (2002,309,0500) | 3.8751E-02 (2002,315,0700) |
| 845 | -129.411 | -255.017 | 6.0765E-02 (2002,018,2300) | 6.0470E-02 (2002,098,0000) | 5.8568E-02 (2002,210,0300) | 5.7975E-02 (2002,013,0600) |
| 846 | -127.944 | -255.041 | 5.8354E-02 (2002,364,0100) | 5.7433E-02 (2002,013,0600) | 5.1789E-02 (2002,018,2300) | 5.0885E-02 (2002,315,0600) |
| 847 | -126.478 | -255.065 | 5.9184E-02 (2002,364,0100) | 5.6330E-02 (2002,013,0600) | 5.4200E-02 (2002,309,0500) | 4.6324E-02 (2002,315,0600) |
| 848 | -129.380 | -253.164 | 6.1593E-02 (2002,018,2300) | 5.9633E-02 (2002,098,0000) | 5.6876E-02 (2002,364,0100) | 5.6294E-02 (2002,210,0300) |
| 849 | -127.914 | -253.188 | 5.7778E-02 (2002,364,0100) | 5.5686E-02 (2002,315,0600) | 5.5402E-02 (2002,013,0600) | 5.4386E-02 (2002,309,0500) |
| 850 | -126.448 | -253.212 | 5.8100E-02 (2002,309,0500) | 5.7509E-02 (2002,364,0100) | 5.4321E-02 (2002,013,0600) | 4.2349E-02 (2002,315,0600) |
| 851 | -130.815 | -251.286 | 6.6460E-02 (2002,098,0000) | 6.0298E-02 (2002,210,0200) | 5.9132E-02 (2002,018,2300) | 5.6743E-02 (2002,210,0300) |
| 852 | -129.349 | -251.311 | 5.5238E-02 (2002,364,0100) | 5.2904E-02 (2002,309,0500) | 5.2011E-02 (2002,013,0600) | 5.1654E-02 (2002,315,0600) |
| 853 | -127.884 | -251.335 | 5.7437E-02 (2002,309,0500) | 5.5412E-02 (2002,364,0100) | 5.3464E-02 (2002,315,0600) | 5.1523E-02 (2002,013,0600) |
| 854 | -126.418 | -251.359 | 6.1273E-02 (2002,309,0500) | 5.4529E-02 (2002,364,0100) | 5.0525E-02 (2002,013,0600) | 4.5449E-02 (2002,315,0600) |
| 855 | -133.715 | -249.384 | 7.5634E-02 (2002,210,0200) | 7.0665E-02 (2002,098,0000) | 6.1473E-02 (2002,084,0300) | 6.0226E-02 (2002,018,2200) |
| 856 | -132.249 | -249.409 | 7.0632E-02 (2002,098,0000) | 6.8515E-02 (2002,210,0200) | 5.9117E-02 (2002,018,2200) | 5.7450E-02 (2002,084,0300) |
| 857 | -130.784 | -249.433 | 5.3378E-02 (2002,098,0000) | 5.3113E-02 (2002,364,0100) | 5.2296E-02 (2002,210,0200) | 5.0847E-02 (2002,018,2300) |
| 858 | -129.319 | -249.458 | 5.5751E-02 (2002,315,0600) | 5.5111E-02 (2002,309,0500) | 5.2882E-02 (2002,364,0100) | 4.6643E-02 (2002,018,2300) |
| 859 | -127.854 | -249.482 | 5.9727E-02 (2002,309,0500) | 5.1478E-02 (2002,364,0100) | 4.6092E-02 (2002,013,0600) | 4.3437E-02 (2002,315,0600) |
| 860 | -133.683 | -247.531 | 7.6244E-02 (2002,210,0200) | 7.3267E-02 (2002,098,0000) | 6.3279E-02 (2002,018,2200) | 6.2211E-02 (2002,084,0300) |
| 861 | -132.218 | -247.556 | 5.8517E-02 (2002,210,0200) | 5.6239E-02 (2002,098,0000) | 5.3070E-02 (2002,018,2200) | 5.2370E-02 (2002,015,2200) |
| 862 | -130.753 | -247.580 | 5.1244E-02 (2002,309,0500) | 4.9277E-02 (2002,364,0100) | 4.5408E-02 (2002,015,2200) | 4.2824E-02 (2002,315,0600) |
| 863 | -129.288 | -247.605 | 5.6456E-02 (2002,309,0500) | 4.8340E-02 (2002,364,0100) | 4.7300E-02 (2002,315,0600) | 3.9784E-02 (2002,013,0600) |
| 864 | -127.823 | -247.629 | 6.1054E-02 (2002,309,0500) | 5.1552E-02 (2002,315,0600) | 4.6938E-02 (2002,364,0100) | 4.2155E-02 (2002,364,0000) |
| 865 | -135.116 | -245.653 | 8.2856E-02 (2002,210,0200) | 7.4296E-02 (2002,098,0000) | 6.5965E-02 (2002,018,2200) | 6.5803E-02 (2002,084,0300) |
| 866 | -133.651 | -245.678 | 7.0795E-02 (2002,210,0200) | 6.6707E-02 (2002,098,0000) | 6.2027E-02 (2002,018,2200) | 5.7833E-02 (2002,015,2200) |
| 867 | -132.187 | -245.703 | 5.3039E-02 (2002,210,0200) | 5.2952E-02 (2002,015,2200) | 5.1313E-02 (2002,098,0000) | 5.0890E-02 (2002,018,2200) |
| 868 | -130.722 | -245.727 | 5.1742E-02 (2002,309,0500) | 4.7216E-02 (2002,015,2200) | 4.5284E-02 (2002,364,0100) | 4.5058E-02 (2002,315,0600) |
| 869 | -129.258 | -245.752 | 5.6872E-02 (2002,309,0500) | 4.8579E-02 (2002,315,0600) | 4.3368E-02 (2002,364,0100) | 4.2494E-02 (2002,364,0000) |
| 870 | -136.548 | -243.775 | 8.7756E-02 (2002,210,0200) | 7.3256E-02 (2002,098,0000) | 7.0862E-02 (2002,222,0500) | 6.7887E-02 (2002,084,0300) |
| 871 | -135.084 | -243.800 | 8.1932E-02 (2002,210,0200) | 7.6727E-02 (2002,098,0000) | 6.8827E-02 (2002,018,2200) | 6.6195E-02 (2002,222,0500) |
| 872 | -133.620 | -243.825 | 6.4496E-02 (2002,210,0200) | 6.1648E-02 (2002,098,0000) | 5.9728E-02 (2002,018,2200) | 5.7268E-02 (2002,015,2200) |
| 873 | -132.155 | -243.850 | 5.5191E-02 (2002,098,0000) | 5.4099E-02 (2002,018,2200) | 5.4039E-02 (2002,015,2200) | 5.3458E-02 (2002,210,0200) |
| 874 | -130.691 | -243.874 | 5.5124E-02 (2002,315,0600) | 5.3172E-02 (2002,098,0000) | 5.1451E-02 (2002,015,2200) | 5.1433E-02 (2002,309,0500) |
| 875 | -129.227 | -243.899 | 5.6371E-02 (2002,309,0500) | 4.8779E-02 (2002,315,0600) | 4.7057E-02 (2002,364,0000) | 4.3194E-02 (2002,055,0700) |
| 876 | -137.980 | -241.896 | 9.0282E-02 (2002,210,0200) | 7.6829E-02 (2002,222,0500) | 7.0169E-02 (2002,098,0000) | 6.8278E-02 (2002,084,0300) |
| 877 | -136.516 | -241.922 | 8.6242E-02 (2002,210,0200) | 7.5853E-02 (2002,098,0000) | 7.2650E-02 (2002,222,0500) | 7.0057E-02 (2002,018,2200) |
| 878 | -135.052 | -241.947 | 7.8592E-02 (2002,210,0200) | 7.4916E-02 (2002,098,0000) | 7.0536E-02 (2002,018,2200) | 6.7697E-02 (2002,222,0500) |
| 879 | -133.588 | -241.972 | 7.6124E-02 (2002,098,0000) | 7.1129E-02 (2002,210,0200) | 6.9645E-02 (2002,018,2200) | 6.2663E-02 (2002,222,0500) |
| 880 | -132.124 | -241.997 | 6.1835E-02 (2002,098,0000) | 5.8942E-02 (2002,018,2200) | 5.5206E-02 (2002,210,0200) | 5.4429E-02 (2002,015,2200) |
| 881 | -130.660 | -242.022 | 5.4072E-02 (2002,315,0600) | 5.0273E-02 (2002,309,0500) | 4.9454E-02 (2002,309,0400) | 4.9161E-02 (2002,015,2200) |
| 882 | -129.197 | -242.046 | 5.4934E-02 (2002,309,0500) | 5.1176E-02 (2002,364,0000) | 5.0079E-02 (2002,309,0400) | 4.9012E-02 (2002,315,0600) |
| 883 | -137.947 | -240.043 | 8.8294E-02 (2002,210,0200) | 7.8043E-02 (2002,222,0500) | 7.2785E-02 (2002,098,0000) | 7.0500E-02 (2002,222,0400) |
| 884 | -136.483 | -240.069 | 8.3602E-02 (2002,210,0200) | 7.7816E-02 (2002,098,0000) | 7.3836E-02 (2002,222,0500) | 7.2513E-02 (2002,018,2200) |
| 885 | -135.020 | -240.094 | 7.0259E-02 (2002,210,0200) | 6.8548E-02 (2002,098,0000) | 6.6934E-02 (2002,018,2200) | 6.4018E-02 (2002,222,0500) |
| 886 | -133.556 | -240.119 | 5.9053E-02 (2002,098,0000) | 5.8693E-02 (2002,018,2200) | 5.6910E-02 (2002,058,0800) | 5.6538E-02 (2002,210,0200) |
| 887 | -132.093 | -240.144 | 5.8097E-02 (2002,098,0000) | 5.6229E-02 (2002,018,2200) | 5.5935E-02 (2002,309,0400) | 5.4064E-02 (2002,058,0800) |
| 888 | -130.629 | -240.169 | 5.7411E-02 (2002,309,0400) | 5.1018E-02 (2002,364,0000) | 4.9763E-02 (2002,058,0800) | 4.8376E-02 (2002,309,0500) |
| 889 | -129.166 | -240.193 | 5.7870E-02 (2002,309,0400) | 5.5442E-02 (2002,364,0000) | 5.4119E-02 (2002,315,0600) | 5.2676E-02 (2002,309,0500) |
| 890 | -137.914 | -238.190 | 8.5250E-02 (2002,210,0200) | 7.8617E-02 (2002,222,0500) | 7.5050E-02 (2002,098,0000) | 7.2366E-02 (2002,222,0400) |
| 891 | -136.451 | -238.216 | 7.9106E-02 (2002,210,0200) | 7.5846E-02 (2002,098,0000) | 7.4327E-02 (2002,222,0500) | 7.3677E-02 (2002,018,2200) |
| 892 | -134.988 | -238.241 | 6.9005E-02 (2002,098,0000) | 6.7325E-02 (2002,018,2200) | 6.6660E-02 (2002,210,0200) | 6.4614E-02 (2002,222,0500) |
| 893 | -133.525 | -238.266 | 6.2148E-02 (2002,098,0000) | 6.1219E-02 (2002,309,0400) | 6.0503E-02 (2002,018,2200) | 5.8810E-02 (2002,058,0800) |
| 894 | -132.062 | -238.291 | 6.3867E-02 (2002,309,0400) | 5.5246E-02 (2002,058,0800) | 5.0510E-02 (2002,364,0000) | 4.8379E-02 (2002,055,0700) |
| 895 | -130.599 | -238.316 | 6.5364E-02 (2002,309,0400) | 5.4191E-02 (2002,364,0000) | 5.0327E-02 (2002,058,0800) | 4.9180E-02 (2002,055,0700) |
| 896 | -137.882 | -236.337 | 8.1468E-02 (2002,210,0200) | 7.8637E-02 (2002,222,0500) | 7.6941E-02 (2002,098,0000) | 7.3796E-02 (2002,018,2200) |
| 897 | -136.419 | -236.363 | 7.8682E-02 (2002,098,0000) | 7.5743E-02 (2002,210,0200) | 7.4584E-02 (2002,018,2200) | 7.4461E-02 (2002,222,0500) |
| 898 | -134.956 | -236.388 | 6.8896E-02 (2002,098,0000) | 6.6633E-02 (2002,018,2200) | 6.4846E-02 (2002,309,0400) | 6.4689E-02 (2002,222,0500) |
| 899 | -133.493 | -236.413 | 6.8829E-02 (2002,309,0400) | 5.9441E-02 (2002,058,0800) | 4.9915E-02 (2002,364,0000) | 4.9120E-02 (2002,055,0700) |
| 900 | -132.030 | -236.438 | 7.1607E-02 (2002,309,0400) | 5.5020E-02 (2002,058,0800) | 5.3746E-02 (2002,364,0000) | 5.2461E-02 (2002,055,0700) |
| 901 | -137.849 | -234.485 | 7.8377E-02 (2002,098,0000) | 7.7991E-02 (2002,222,0500) | 7.7260E-02 (2002,210,0200) | 7.4354E-02 (2002,222,0400) |
| 902 | -136.386 | -234.510 | 7.6943E-02 (2002,098,0000) | 7.3843E-02 (2002,222,0500) | 7.3380E-02 (2002,018,2200) | 7.0503E-02 (2002,210,0200) |
| 903 | -134.924 | -234.536 | 7.1744E-02 (2002,309,0400) | 6.1579E-02 (2002,058,0800) | 5.6222E-02 (2002,055,0700) | 5.6095E-02 (2002,306,2200) |
| 904 | -133.462 | -234.561 | 7.5906E-02 (2002,309,0400) | 5.8022E-02 (2002,058,0800) | 5.3250E-02 (2002,055,0700) | 5.3031E-02 (2002,364,0000) |
| 905 | -137.816 | -232.632 | 7.9400E-02 (2002,098,0000) | 7.6949E-02 (2002,222,0500) | 7.4368E-02 (2002,222,0400) | 7.3682E-02 (2002,018,2200) |
| 906 | -136.354 | -232.657 | 7.6866E-02 (2002,098,0000) | 7.2867E-02 (2002,222,0500) | 7.2204E-02 (2002,309,0400) | 7.1654E-02 (2002,018,2200) |
| 907 | -134.892 | -232.683 | 7.7728E-02 (2002,309,0400) | 5.8712E-02 (2002,058,0800) | 5.3340E-02 (2002,055,0700) | 5.2242E-02 (2002,364,0000) |
| 908 | -139.245 | -230.753 | 8.1615E-02 (2002,222,0400) | 7.8264E-02 (2002,222,0500) | 7.6464E-02 (2002,098,0000) | 7.4189E-02 (2002,084,0200) |
| 909 | -137.784 | -230.779 | 7.9909E-02 (2002,098,0000) | 7.5353E-02 (2002,222,0500) | 7.3948E-02 (2002,222,0400) | 7.2208E-02 (2002,018,2200) |
| 910 | -136.322 | -230.805 | 7.6944E-02 (2002,309,0400) | 5.8476E-02 (2002,306,2200) | 5.6966E-02 (2002,058,0800) | 5.6745E-02 (2002,055,0700) |
| 911 | -134.860 | -230.830 | 8.2608E-02 (2002,309,0400) | 5.7813E-02 (2002,055,0700) | 5.6163E-02 (2002,306,2200) | 5.3989E-02 (2002,364,0000) |
| 912 | -139.212 | -228.900 | 8.0854E-02 (2002,222,0400) | 7.7781E-02 (2002,098,0000) | 7.6245E-02 (2002,222,0500) | 7.4802E-02 (2002,084,0200) |
| 913 | -137.751 | -228.926 | 7.9826E-02 (2002,098,0000) | 7.4728E-02 (2002,306,2200) | 7.3545E-02 (2002,309,0400) | 7.3398E-02 (2002,222,0500) |
| 914 | -136.290 | -228.952 | 8.0407E-02 (2002,309,0400) | 5.9306E-02 (2002,306,2200) | 5.8021E-02 (2002,055,0700) | 5.3087E-02 (2002,364,0000) |
| 915 | -134.828 | -228.977 | 8.5952E-02 (2002,309,0400) | 6.1728E-02 (2002,055,0700) | 6.0658E-02 (2002,306,2200) | 5.7442E-02 (2002,306,2300) |
| 916 | -140.640 | -227.021 | 8.7260E-02 (2002,222,0400) | 8.0550E-02 (2002,084,0200) | 7.7676E-02 (2002,210,0100) | 7.5424E-02 (2002,222,0500) |
| 917 | -139.179 | -227.048 | 7.9630E-02 (2002,222,0400) | 7.8480E-02 (2002,098,0000) | 7.6980E-02 (2002,306,2200) | 7.4888E-02 (2002,084,0200) |
| 918 | -137.718 | -227.073 | 7.5568E-02 (2002,309,0400) | 7.1710E-02 (2002,306,2200) | 6.7057E-02 (2002,098,0000) | 6.6585E-02 (2002,222,0500) |
| 919 | -136.257 | -227.099 | 8.2286E-02 (2002,309,0400) | 6.4029E-02 (2002,306,2200) | 6.2068E-02 (2002,055,0700) | 5.7915E-02 (2002,306,2300) |
| 920 | -140.607 | -225.169 | 8.5677E-02 (2002,222,0400) | 8.0136E-02 (2002,084,0200) | 7.8070E-02 (2002,306,2200) | 7.6020E-02 (2002,098,0000) |
| 921 | -139.146 | -225.195 | 7.9799E-02 (2002,306,2200) | 7.8544E-02 (2002,098,0000) | 7.7897E-02 (2002,222,0400) | 7.4247E-02 (2002,084,0200) |
| 922 | -137.686 | -225.221 | 7.6012E-02 (2002,309,0400) | 7.0353E-02 (2002,306,2200) | 6.4684E-02 (2002,055,0700) | 6.4261E-02 (2002,306,2300) |
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| 924 | -140.574 | -223.316 | 8.3456E-02 (2002,222,0400) | 8.1424E-02 (2002,306,2200) | 7.9072E-02 (2002,084,0200) | 7.6928E-02 (2002,098,0000) |
| 925 | -139.113 | -223.342 | 7.4231E-02 (2002,306,2200) | 6.9213E-02 (2002,222,0400) | 6.7578E-02 (2002,309,0400) | 6.7138E-02 (2002,306,2300) |
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| 927 | -136.193 | -223.394 | 8.0659E-02 (2002,309,0400) | 6.5825E-02 (2002,306,2300) | 6.2096E-02 (2002,306,2200) | 5.8409E-02 (2002,055,0700) |
| 928 | -143.460 | -221.410 | 9.4875E-02 (2002,222,0400) | 8.8784E-02 (2002,210,0100) | 8.4683E-02 (2002,084,0200) | 8.3346E-02 (2002,015,2100) |
| 929 | -142.000 | -221.437 | 8.8298E-02 (2002,222,0400) | 8.2300E-02 (2002,306,2200) | 8.2050E-02 (2002,084,0200) | 8.0192E-02 (2002,015,2100) |
| 930 | -140.540 | -221.463 | 8.2877E-02 (2002,306,2200) | 8.0709E-02 (2002,222,0400) | 7.7528E-02 (2002,306,2300) | 7.6712E-02 (2002,098,0000) |
| 931 | -139.080 | -221.489 | 6.6441E-02 (2002,306,2200) | 6.5334E-02 (2002,309,0400) | 6.2013E-02 (2002,015,2100) | 6.1297E-02 (2002,306,2300) |
| 932 | -137.620 | -221.515 | 7.1896E-02 (2002,309,0400) | 5.9384E-02 (2002,306,2200) | 5.8955E-02 (2002,306,2300) | 5.8246E-02 (2002,020,0100) |
| 933 | -146.346 | -219.503 | 1.0804E-01 (2002,210,0100) | 1.0180E-01 (2002,222,0400) | 8.6312E-02 (2002,015,2100) | 8.4913E-02 (2002,097,2300) |
| 934 | -144.886 | -219.531 | 9.7621E-02 (2002,222,0400) | 9.5714E-02 (2002,210,0100) | 8.4305E-02 (2002,015,2100) | 8.3792E-02 (2002,084,0200) |
| 935 | -143.426 | -219.558 | 9.1928E-02 (2002,222,0400) | 8.3128E-02 (2002,084,0200) | 8.2820E-02 (2002,306,2200) | 8.1525E-02 (2002,015,2100) |
| 936 | -141.967 | -219.584 | 8.5012E-02 (2002,222,0400) | 8.4401E-02 (2002,306,2200) | 7.9900E-02 (2002,084,0200) | 7.7591E-02 (2002,015,2100) |
| 937 | -140.507 | -219.611 | 7.3936E-02 (2002,306,2200) | 7.0948E-02 (2002,306,2300) | 7.0890E-02 (2002,222,0400) | 6.6250E-02 (2002,015,2100) |
| 938 | -139.047 | -219.637 | 6.6288E-02 (2002,309,0300) | 6.3593E-02 (2002,020,0100) | 6.2492E-02 (2002,306,2300) | 6.2033E-02 (2002,306,2200) |
| 939 | -137.588 | -219.663 | 6.7670E-02 (2002,309,0400) | 6.5234E-02 (2002,309,0300) | 6.1654E-02 (2002,020,0100) | 5.5207E-02 (2002,306,0300) |
| 940 | -146.311 | -217.651 | 1.0125E-01 (2002,210,0100) | 9.9067E-02 (2002,222,0400) | 8.3084E-02 (2002,015,2100) | 8.2444E-02 (2002,097,2300) |
| 941 | -144.851 | -217.678 | 9.4426E-02 (2002,222,0400) | 8.7501E-02 (2002,210,0100) | 8.3483E-02 (2002,306,2200) | 8.2373E-02 (2002,084,0200) |
| 942 | -143.392 | -217.705 | 8.8341E-02 (2002,222,0400) | 8.5634E-02 (2002,306,2200) | 8.0999E-02 (2002,084,0200) | 7.6989E-02 (2002,015,2100) |
| 943 | -141.933 | -217.732 | 8.3725E-02 (2002,306,2200) | 8.3322E-02 (2002,306,2300) | 8.1072E-02 (2002,222,0400) | 7.7143E-02 (2002,084,0200) |
| 944 | -140.474 | -217.758 | 7.6926E-02 (2002,309,0300) | 6.8551E-02 (2002,306,0300) | 6.7656E-02 (2002,020,0100) | 6.6470E-02 (2002,306,2300) |
| 945 | -139.014 | -217.784 | 7.7496E-02 (2002,309,0300) | 7.5382E-02 (2002,306,0300) | 7.1137E-02 (2002,306,2300) | 6.6701E-02 (2002,020,0100) |
| 946 | -137.555 | -217.810 | 7.4889E-02 (2002,309,0300) | 7.2296E-02 (2002,306,0300) | 6.3627E-02 (2002,020,0100) | 6.2425E-02 (2002,309,0400) |
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| 950 | -141.899 | -215.879 | 8.6676E-02 (2002,309,0300) | 8.4825E-02 (2002,306,0300) | 7.1118E-02 (2002,306,2300) | 7.0232E-02 (2002,020,0100) |
| 951 | -146.241 | -213.946 | 9.1456E-02 (2002,222,0400) | 9.1172E-02 (2002,306,0300) | 8.8509E-02 (2002,306,2200) | 8.6508E-02 (2002,309,0300) |
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| 954 | -146.207 | -212.093 | 1.1360E-01 (2002,306,0300) | 9.7909E-02 (2002,309,0300) | 8.8926E-02 (2002,306,2200) | 8.6718E-02 (2002,222,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 955 | -144.748 | -212.120 | 1.2157E-01 (2002,306,0300) | 1.0283E-01 (2002,309,0300) | 8.8190E-02 (2002,306,2300) | 8.3169E-02 (2002,306,2200) |
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| 957 | -141.832 | -212.174 | 1.3176E-01 (2002,306,0300) | 1.0641E-01 (2002,309,0300) | 8.9475E-02 (2002,306,2300) | 7.0471E-02 (2002,345,2200) |
| 958 | -146.172 | -210.241 | 1.3212E-01 (2002,306,0300) | 1.0751E-01 (2002,309,0300) | 8.6880E-02 (2002,306,2300) | 8.4951E-02 (2002,306,2200) |
| 959 | -144.714 | -210.268 | 1.3811E-01 (2002,306,0300) | 1.1109E-01 (2002,309,0300) | 9.3741E-02 (2002,306,2300) | 7.5504E-02 (2002,306,2200) |
| 960 | -143.256 | -210.295 | 1.4254E-01 (2002,306,0300) | 1.1252E-01 (2002,309,0300) | 9.5979E-02 (2002,306,2300) | 7.6132E-02 (2002,345,2200) |
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| 962 | -146.137 | -208.388 | 1.4306E-01 (2002,306,0300) | 1.1436E-01 (2002,309,0300) | 9.3292E-02 (2002,306,2300) | 8.3076E-02 (2002,306,0200) |
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| 965 | -141.764 | -208.469 | 1.4780E-01 (2002,306,0300) | 1.1365E-01 (2002,309,0300) | 9.0866E-02 (2002,306,2300) | 8.4774E-02 (2002,306,0200) |
| 966 | -140.307 | -208.495 | 1.3732E-01 (2002,306,0300) | 1.0782E-01 (2002,309,0300) | 7.6375E-02 (2002,306,0200) | 7.1776E-02 (2002,306,0400) |
| 967 | -146.102 | -206.535 | 1.4381E-01 (2002,306,0300) | 1.1768E-01 (2002,309,0300) | 1.0384E-01 (2002,306,0200) | 9.7907E-02 (2002,306,2300) |
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| 971 | -146.068 | -204.683 | 1.3361E-01 (2002,306,0300) | 1.2322E-01 (2002,306,0200) | 1.1685E-01 (2002,309,0300) | 1.0035E-01 (2002,306,2300) |
| 972 | -144.611 | -204.710 | 1.3043E-01 (2002,306,0300) | 1.2136E-01 (2002,306,0200) | 1.1545E-01 (2002,309,0300) | 9.8314E-02 (2002,306,2300) |
| 973 | -143.154 | -204.737 | 1.2652E-01 (2002,306,0300) | 1.1807E-01 (2002,306,0200) | 1.1198E-01 (2002,309,0300) | 9.1729E-02 (2002,306,2300) |
| 974 | -141.697 | -204.764 | 1.2209E-01 (2002,306,0300) | 1.1345E-01 (2002,306,0200) | 1.0682E-01 (2002,309,0300) | 8.0887E-02 (2002,306,2300) |
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| 981 | -148.910 | -200.923 | 1.5710E-01 (2002,306,0200) | 1.0468E-01 (2002,309,0300) | 1.0161E-01 (2002,306,0300) | 9.9860E-02 (2002,306,2300) |
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| 991 | -151.751 | -197.162 | 1.7503E-01 (2002,306,0200) | 1.3276E-01 (2002,309,0200) | 1.0304E-01 (2002,345,2100) | 9.4118E-02 (2002,306,2300) |
| 992 | -150.295 | -197.190 | 1.6854E-01 (2002,306,0200) | 1.1614E-01 (2002,309,0200) | 1.0086E-01 (2002,306,2300) | 9.9481E-02 (2002,345,2100) |
| 993 | -148.840 | -197.218 | 1.4372E-01 (2002,306,0200) | 9.5738E-02 (2002,309,0200) | 8.4489E-02 (2002,306,2300) | 8.0596E-02 (2002,309,0300) |
| 994 | -147.384 | -197.246 | 1.3177E-01 (2002,306,0200) | 8.0149E-02 (2002,309,0200) | 7.7584E-02 (2002,309,0300) | 7.6843E-02 (2002,306,2300) |
| 995 | -145.929 | -197.273 | 1.3564E-01 (2002,306,0200) | 8.2105E-02 (2002,306,2300) | 7.6965E-02 (2002,309,0300) | 7.3433E-02 (2002,345,0000) |
| 996 | -144.473 | -197.300 | 9.2400E-02 (2002,306,0200) | 6.4938E-02 (2002,309,0300) | 6.2243E-02 (2002,328,0800) | 6.1462E-02 (2002,353,0200) |
| 997 | -151.714 | -195.310 | 1.6785E-01 (2002,306,0200) | 1.4051E-01 (2002,309,0200) | 1.0619E-01 (2002,345,2100) | 9.8672E-02 (2002,306,2300) |
| 998 | -150.259 | -195.338 | 1.4866E-01 (2002,306,0200) | 1.2049E-01 (2002,309,0200) | 9.1450E-02 (2002,306,2300) | 8.6845E-02 (2002,345,2100) |
| 999 | -148.804 | -195.366 | 1.5023E-01 (2002,306,0200) | 1.0548E-01 (2002,309,0200) | 1.0083E-01 (2002,306,2300) | 8.5720E-02 (2002,345,2100) |
| 1000 | -147.349 | -195.393 | 1.4065E-01 (2002,306,0200) | 9.4808E-02 (2002,306,2300) | 8.9686E-02 (2002,309,0200) | 8.6143E-02 (2002,345,0000) |
| 1001 | -145.894 | -195.421 | 1.2667E-01 (2002,306,0200) | 8.4319E-02 (2002,345,0000) | 7.9908E-02 (2002,306,2300) | 7.5340E-02 (2002,309,0200) |
| 1002 | -144.439 | -195.448 | 9.6036E-02 (2002,306,0200) | 7.2978E-02 (2002,328,0800) | 6.6961E-02 (2002,306,0600) | 6.4671E-02 (2002,353,0200) |
| 1003 | -153.133 | -193.429 | 1.6100E-01 (2002,306,0200) | 1.5864E-01 (2002,309,0200) | 1.1227E-01 (2002,345,2100) | 9.7811E-02 (2002,067,2200) |
| 1004 | -151.678 | -193.457 | 1.3241E-01 (2002,309,0200) | 1.3064E-01 (2002,306,0200) | 8.5472E-02 (2002,306,0500) | 8.4664E-02 (2002,353,0100) |
| 1005 | -150.224 | -193.485 | 1.4078E-01 (2002,306,0200) | 1.2297E-01 (2002,309,0200) | 1.0014E-01 (2002,306,2300) | 8.7367E-02 (2002,353,0100) |
| 1006 | -148.769 | -193.513 | 1.3313E-01 (2002,306,0200) | 1.0586E-01 (2002,309,0200) | 9.7905E-02 (2002,306,2300) | 8.8043E-02 (2002,345,0000) |
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| 1008 | -145.859 | -193.568 | 1.0168E-01 (2002,306,0200) | 8.1633E-02 (2002,306,0600) | 7.9990E-02 (2002,345,0000) | 7.7845E-02 (2002,328,0800) |
| 1009 | -144.404 | -193.596 | 7.4548E-02 (2002,328,0800) | 7.1911E-02 (2002,306,0200) | 6.7952E-02 (2002,306,0600) | 6.1805E-02 (2002,352,2300) |
| 1010 | -156.005 | -191.519 | 1.8473E-01 (2002,309,0200) | 1.5733E-01 (2002,306,0200) | 1.2473E-01 (2002,345,2100) | 1.0583E-01 (2002,306,0100) |
| 1011 | -154.551 | -191.548 | 1.6826E-01 (2002,309,0200) | 1.4820E-01 (2002,306,0200) | 1.1687E-01 (2002,345,2100) | 1.0662E-01 (2002,306,0100) |
| 1012 | -153.097 | -191.576 | 1.5096E-01 (2002,309,0200) | 1.3325E-01 (2002,306,0200) | 1.0237E-01 (2002,306,0100) | 9.7480E-02 (2002,345,2100) |
| 1013 | -151.642 | -191.605 | 1.2856E-01 (2002,309,0200) | 1.1526E-01 (2002,306,0200) | 9.4656E-02 (2002,306,0100) | 8.7982E-02 (2002,306,0500) |
| 1014 | -150.188 | -191.633 | 1.1080E-01 (2002,309,0200) | 1.0412E-01 (2002,306,0200) | 9.0497E-02 (2002,306,0100) | 8.2797E-02 (2002,306,0600) |
| 1015 | -148.733 | -191.661 | 1.1201E-01 (2002,306,0200) | 1.0117E-01 (2002,309,0200) | 9.9650E-02 (2002,306,0100) | 9.5855E-02 (2002,344,2300) |
| 1016 | -147.279 | -191.689 | 9.9602E-02 (2002,306,0200) | 9.3565E-02 (2002,306,0100) | 9.3515E-02 (2002,345,0000) | 9.1611E-02 (2002,306,0600) |
| 1017 | -145.824 | -191.716 | 8.7457E-02 (2002,306,0600) | 8.3776E-02 (2002,345,0000) | 8.3497E-02 (2002,306,0200) | 8.3423E-02 (2002,306,0100) |
| 1018 | -144.370 | -191.743 | 7.6015E-02 (2002,328,0800) | 7.1308E-02 (2002,306,0600) | 7.0468E-02 (2002,328,0700) | 6.4495E-02 (2002,306,0100) |
| 1019 | -155.968 | -189.666 | 1.6851E-01 (2002,309,0200) | 1.3195E-01 (2002,306,0100) | 1.2978E-01 (2002,306,0200) | 1.1942E-01 (2002,345,2100) |
| 1020 | -154.514 | -189.695 | 1.5202E-01 (2002,309,0200) | 1.2277E-01 (2002,306,0100) | 1.1464E-01 (2002,306,0200) | 9.9813E-02 (2002,306,0500) |
| 1021 | -153.060 | -189.724 | 1.1886E-01 (2002,309,0200) | 9.4196E-02 (2002,306,0100) | 8.2132E-02 (2002,306,0500) | 8.2119E-02 (2002,306,0200) |
| 1022 | -151.606 | -189.753 | 1.2094E-01 (2002,309,0200) | 1.1485E-01 (2002,306,0100) | 9.9154E-02 (2002,306,0200) | 9.8651E-02 (2002,344,2300) |
| 1023 | -150.152 | -189.781 | 9.4877E-02 (2002,309,0200) | 9.0244E-02 (2002,306,0100) | 8.1546E-02 (2002,306,0600) | 7.5416E-02 (2002,328,0700) |
| 1024 | -148.698 | -189.809 | 9.7272E-02 (2002,306,0100) | 9.1536E-02 (2002,306,0600) | 8.8374E-02 (2002,309,0200) | 8.1925E-02 (2002,345,0000) |
| 1025 | -147.244 | -189.836 | 7.4770E-02 (2002,328,0700) | 6.7081E-02 (2002,306,0600) | 6.7064E-02 (2002,328,0800) | 6.5797E-02 (2002,306,0100) |
| 1026 | -145.790 | -189.864 | 7.9487E-02 (2002,328,0700) | 6.9717E-02 (2002,328,0800) | 6.5925E-02 (2002,306,0600) | 6.4751E-02 (2002,069,2200) |
| 1027 | -144.336 | -189.891 | 8.6244E-02 (2002,328,0700) | 7.3675E-02 (2002,328,0800) | 6.9109E-02 (2002,306,0600) | 6.8727E-02 (2002,308,2100) |
| 1028 | -157.385 | -187.785 | 1.6042E-01 (2002,306,0100) | 1.5930E-01 (2002,309,0200) | 1.1839E-01 (2002,345,2100) | 1.0970E-01 (2002,344,2300) |
| 1029 | -155.931 | -187.814 | 1.4992E-01 (2002,306,0100) | 1.4640E-01 (2002,309,0200) | 1.0792E-01 (2002,344,2300) | 1.0210E-01 (2002,328,0700) |
| 1030 | -154.477 | -187.843 | 1.1527E-01 (2002,309,0200) | 1.0940E-01 (2002,306,0100) | 8.8562E-02 (2002,328,0700) | 8.2080E-02 (2002,353,0100) |
| 1031 | -153.024 | -187.872 | 1.3881E-01 (2002,306,0100) | 1.2323E-01 (2002,344,2300) | 1.1944E-01 (2002,309,0200) | 1.0426E-01 (2002,306,2300) |
| 1032 | -151.570 | -187.900 | 1.2551E-01 (2002,306,0100) | 1.1048E-01 (2002,344,2300) | 1.0565E-01 (2002,309,0200) | 9.6320E-02 (2002,306,0600) |
| 1033 | -150.116 | -187.928 | 1.1775E-01 (2002,306,0100) | 1.0811E-01 (2002,344,2300) | 9.6890E-02 (2002,306,0600) | 9.6018E-02 (2002,345,0000) |
| 1034 | -148.663 | -187.956 | 1.0039E-01 (2002,306,0100) | 9.4179E-02 (2002,328,0700) | 9.1103E-02 (2002,306,0600) | 8.6516E-02 (2002,345,0000) |
| 1035 | -147.209 | -187.984 | 1.0686E-01 (2002,345,0000) | 1.0298E-01 (2002,306,0100) | 9.8908E-02 (2002,344,2300) | 9.8432E-02 (2002,328,0700) |
| 1036 | -145.755 | -188.011 | 9.8548E-02 (2002,328,0700) | 7.8080E-02 (2002,306,0100) | 7.7275E-02 (2002,306,0600) | 7.4353E-02 (2002,345,0000) |
| 1037 | -144.301 | -188.039 | 9.8827E-02 (2002,328,0700) | 7.2246E-02 (2002,308,2100) | 6.5668E-02 (2002,328,0800) | 6.4602E-02 (2002,069,2200) |
| 1038 | -142.848 | -188.065 | 1.0731E-01 (2002,328,0700) | 7.1203E-02 (2002,308,2100) | 6.9073E-02 (2002,328,0800) | 6.1574E-02 (2002,069,2200) |
| 1039 | -141.394 | -188.092 | 1.1125E-01 (2002,328,0700) | 6.6112E-02 (2002,328,0800) | 6.2400E-02 (2002,308,2100) | 5.7889E-02 (2002,318,2200) |
| 1040 | -161.707 | -185.843 | 2.0488E-01 (2002,306,0100) | 1.5804E-01 (2002,309,0200) | 1.3784E-01 (2002,345,2100) | 1.2404E-01 (2002,306,0500) |
| 1041 | -160.254 | -185.873 | 1.9745E-01 (2002,306,0100) | 1.5037E-01 (2002,309,0200) | 1.2707E-01 (2002,345,2100) | 1.2348E-01 (2002,328,0700) |
| 1042 | -158.801 | -185.903 | 1.8843E-01 (2002,306,0100) | 1.4167E-01 (2002,309,0200) | 1.2164E-01 (2002,328,0700) | 1.1748E-01 (2002,344,2300) |
| 1043 | -157.347 | -185.932 | 1.7076E-01 (2002,306,0100) | 1.3180E-01 (2002,309,0200) | 1.1822E-01 (2002,328,0700) | 1.1386E-01 (2002,344,2300) |
| 1044 | -155.894 | -185.962 | 1.6725E-01 (2002,306,0100) | 1.3301E-01 (2002,344,2300) | 1.2141E-01 (2002,309,0200) | 1.1395E-01 (2002,328,0700) |
| 1045 | -154.441 | -185.991 | 1.5588E-01 (2002,306,0100) | 1.3587E-01 (2002,344,2300) | 1.1055E-01 (2002,309,0200) | 1.1025E-01 (2002,328,0700) |
| 1046 | -152.987 | -186.019 | 1.3842E-01 (2002,306,0100) | 1.2069E-01 (2002,344,2300) | 1.0728E-01 (2002,328,0700) | 9.9352E-02 (2002,309,0200) |
| 1047 | -151.534 | -186.048 | 1.0010E-01 (2002,306,0100) | 9.7301E-02 (2002,328,0700) | 7.9976E-02 (2002,306,0600) | 7.7713E-02 (2002,309,0200) |
| 1048 | -150.080 | -186.076 | 1.2345E-01 (2002,344,2300) | 1.2143E-01 (2002,306,0100) | 1.1013E-01 (2002,345,0000) | 1.0571E-01 (2002,328,0700) |
| 1049 | -148.627 | -186.104 | 1.1788E-01 (2002,344,2300) | 1.1686E-01 (2002,345,0000) | 1.1062E-01 (2002,306,0100) | 1.0734E-01 (2002,328,0700) |
| 1050 | -147.174 | -186.132 | 1.0960E-01 (2002,328,0700) | 9.5577E-02 (2002,345,0000) | 9.2816E-02 (2002,306,0100) | 8.7033E-02 (2002,344,2300) |
| 1051 | -145.720 | -186.159 | 1.0722E-01 (2002,328,0700) | 7.6371E-02 (2002,308,2100) | 6.6794E-02 (2002,069,2200) | 6.3663E-02 (2002,352,2200) |
| 1052 | -144.267 | -186.186 | 1.0974E-01 (2002,328,0700) | 7.0378E-02 (2002,308,2100) | 5.9481E-02 (2002,069,2200) | 5.9211E-02 (2002,109,0200) |
| 1053 | -142.813 | -186.213 | 1.1585E-01 (2002,328,0700) | 6.5045E-02 (2002,318,2200) | 6.3246E-02 (2002,109,0200) | 6.2589E-02 (2002,308,2100) |
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| 1055 | -161.669 | -183.991 | 2.2522E-01 (2002,306,0100) | 1.4071E-01 (2002,328,0700) | 1.2213E-01 (2002,309,0200) | 1.1881E-01 (2002,305,2300) |
| 1056 | -160.216 | -184.021 | 2.1176E-01 (2002,306,0100) | 1.3784E-01 (2002,328,0700) | 1.2658E-01 (2002,344,2300) | 1.1671E-01 (2002,309,0200) |
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| 1058 | -157.310 | -184.080 | 1.8275E-01 (2002,306,0100) | 1.4349E-01 (2002,344,2300) | 1.2748E-01 (2002,328,0700) | 1.1060E-01 (2002,020,0800) |
| 1059 | -155.857 | -184.109 | 1.6779E-01 (2002,306,0100) | 1.4656E-01 (2002,344,2300) | 1.2180E-01 (2002,328,0700) | 1.0562E-01 (2002,306,2300) |
| 1060 | -154.404 | -184.138 | 1.5350E-01 (2002,306,0100) | 1.4585E-01 (2002,344,2300) | 1.1705E-01 (2002,328,0700) | 1.0395E-01 (2002,306,0000) |
| 1061 | -152.951 | -184.167 | 1.4276E-01 (2002,344,2300) | 1.3945E-01 (2002,306,0100) | 1.1388E-01 (2002,328,0700) | 1.1000E-01 (2002,345,0000) |
| 1062 | -151.498 | -184.196 | 1.3628E-01 (2002,344,2300) | 1.2601E-01 (2002,306,0100) | 1.1629E-01 (2002,345,0000) | 1.1235E-01 (2002,328,0700) |
| 1063 | -150.045 | -184.224 | 1.2004E-01 (2002,344,2300) | 1.1264E-01 (2002,328,0700) | 1.1252E-01 (2002,306,0100) | 1.0907E-01 (2002,345,0000) |
| 1064 | -148.592 | -184.252 | 1.1380E-01 (2002,328,0700) | 9.5353E-02 (2002,345,0000) | 9.4181E-02 (2002,344,2300) | 9.3549E-02 (2002,306,0100) |
| 1065 | -147.139 | -184.279 | 1.1050E-01 (2002,328,0700) | 7.9117E-02 (2002,308,2100) | 6.7138E-02 (2002,109,0200) | 6.5531E-02 (2002,306,0100) |
| 1066 | -145.686 | -184.307 | 1.1091E-01 (2002,328,0700) | 7.0907E-02 (2002,308,2100) | 6.6489E-02 (2002,109,0200) | 6.2891E-02 (2002,318,2200) |
| 1067 | -144.233 | -184.334 | 1.1621E-01 (2002,328,0700) | 7.2526E-02 (2002,318,2200) | 7.0583E-02 (2002,109,0200) | 6.4480E-02 (2002,106,0600) |
| 1068 | -161.630 | -182.138 | 2.2450E-01 (2002,306,0100) | 1.5320E-01 (2002,328,0700) | 1.3545E-01 (2002,344,2300) | 1.2751E-01 (2002,305,2300) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069 | -160.178 | -182.169 | 2.0674E-01 (2002,306,0100) | 1.4680E-01 (2002,328,0700) | 1.4674E-01 (2002,344,2300) | 1.2172E-01 (2002,305,2300) |
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| 1071 | -157.272 | -182.228 | 1.7185E-01 (2002,306,0100) | 1.5761E-01 (2002,344,2300) | 1.3122E-01 (2002,328,0700) | 1.1055E-01 (2002,306,0000) |
| 1072 | -155.820 | -182.257 | 1.5708E-01 (2002,344,2300) | 1.5514E-01 (2002,306,0100) | 1.2415E-01 (2002,328,0700) | 1.0762E-01 (2002,306,0000) |
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| 1078 | -147.104 | -182.427 | 1.0996E-01 (2002,328,0700) | 7.8115E-02 (2002,106,0600) | 7.6381E-02 (2002,109,0200) | 7.2649E-02 (2002,308,2100) |
| 1079 | -145.651 | -182.454 | 1.1462E-01 (2002,328,0700) | 8.1689E-02 (2002,318,2200) | 8.1362E-02 (2002,106,0600) | 8.0998E-02 (2002,109,0200) |
| 1080 | -161.592 | -180.286 | 2.0287E-01 (2002,306,0100) | 1.5796E-01 (2002,328,0700) | 1.5795E-01 (2002,344,2300) | 1.3296E-01 (2002,109,0100) |
| 1081 | -160.139 | -180.316 | 1.8358E-01 (2002,306,0100) | 1.6588E-01 (2002,344,2300) | 1.4831E-01 (2002,328,0700) | 1.2299E-01 (2002,344,2200) |
| 1082 | -158.687 | -180.346 | 1.6922E-01 (2002,344,2300) | 1.6497E-01 (2002,306,0100) | 1.3804E-01 (2002,328,0700) | 1.1580E-01 (2002,344,2200) |
| 1083 | -157.235 | -180.376 | 1.6799E-01 (2002,344,2300) | 1.4797E-01 (2002,306,0100) | 1.2859E-01 (2002,328,0700) | 1.1043E-01 (2002,306,0000) |
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| 1085 | -154.330 | -180.434 | 1.5458E-01 (2002,344,2300) | 1.1712E-01 (2002,306,0100) | 1.1483E-01 (2002,328,0700) | 1.1232E-01 (2002,345,0000) |
| 1086 | -152.878 | -180.463 | 1.4368E-01 (2002,344,2300) | 1.1658E-01 (2002,345,0000) | 1.1111E-01 (2002,328,0700) | 1.0353E-01 (2002,306,0100) |
| 1087 | -151.426 | -180.491 | 1.0818E-01 (2002,328,0700) | 1.0150E-01 (2002,344,2300) | 9.1795E-02 (2002,308,2100) | 9.1263E-02 (2002,106,0600) |
| 1088 | -149.973 | -180.519 | 1.0739E-01 (2002,328,0700) | 9.5374E-02 (2002,106,0600) | 9.0212E-02 (2002,109,0200) | 8.7025E-02 (2002,308,2100) |
| 1089 | -148.521 | -180.547 | 1.0497E-01 (2002,328,0700) | 9.4004E-02 (2002,106,0600) | 8.7565E-02 (2002,109,0200) | 8.3337E-02 (2002,318,2200) |
| 1090 | -147.068 | -180.575 | 1.0543E-01 (2002,328,0700) | 9.2259E-02 (2002,106,0600) | 8.8430E-02 (2002,318,2200) | 8.7226E-02 (2002,109,0200) |
| 1091 | -145.616 | -180.602 | 1.0876E-01 (2002,328,0700) | 9.1413E-02 (2002,106,0600) | 9.1107E-02 (2002,109,0200) | 8.8766E-02 (2002,318,2200) |
| 1092 | -161.553 | -178.434 | 1.7845E-01 (2002,344,2300) | 1.6637E-01 (2002,306,0100) | 1.5387E-01 (2002,328,0700) | 1.4637E-01 (2002,344,2200) |
| 1093 | -160.101 | -178.464 | 1.8170E-01 (2002,344,2300) | 1.4791E-01 (2002,306,0100) | 1.4166E-01 (2002,328,0700) | 1.3798E-01 (2002,344,2200) |
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| 1095 | -157.197 | -178.523 | 1.7344E-01 (2002,344,2300) | 1.1939E-01 (2002,328,0700) | 1.1620E-01 (2002,306,0100) | 1.1450E-01 (2002,344,2200) |
| 1096 | -155.745 | -178.553 | 1.6333E-01 (2002,344,2300) | 1.1118E-01 (2002,328,0700) | 1.0738E-01 (2002,308,2000) | 1.0734E-01 (2002,345,0000) |
| 1097 | -154.293 | -178.582 | 1.5076E-01 (2002,344,2300) | 1.1198E-01 (2002,345,0000) | 1.0953E-01 (2002,106,0600) | 1.0510E-01 (2002,328,0700) |
| 1098 | -152.841 | -178.610 | 1.3570E-01 (2002,344,2300) | 1.1346E-01 (2002,106,0600) | 1.0866E-01 (2002,345,0000) | 1.0483E-01 (2002,109,0200) |
| 1099 | -151.389 | -178.639 | 1.1100E-01 (2002,106,0600) | 1.0535E-01 (2002,344,2300) | 1.0418E-01 (2002,109,0200) | 9.9062E-02 (2002,328,0700) |
| 1100 | -149.937 | -178.667 | 1.0201E-01 (2002,106,0600) | 9.4972E-02 (2002,109,0200) | 9.3287E-02 (2002,328,0700) | 9.2638E-02 (2002,318,2200) |
| 1101 | -148.485 | -178.695 | 9.8417E-02 (2002,106,0600) | 9.6248E-02 (2002,109,0200) | 9.5690E-02 (2002,318,2200) | 9.3746E-02 (2002,328,0700) |
| 1102 | -147.033 | -178.723 | 1.1254E-01 (2002,109,0200) | 1.0288E-01 (2002,106,0600) | 1.0002E-01 (2002,328,0700) | 9.8448E-02 (2002,318,2200) |
| 1103 | -145.581 | -178.750 | 1.0546E-01 (2002,109,0200) | 9.8998E-02 (2002,328,0700) | 9.1525E-02 (2002,106,0600) | 8.3590E-02 (2002,318,2200) |
| 1104 | -164.418 | -176.521 | 1.8260E-01 (2002,344,2300) | 1.7444E-01 (2002,344,2200) | 1.7398E-01 (2002,109,0100) | 1.6803E-01 (2002,328,0700) |
| 1105 | -162.966 | -176.552 | 1.9164E-01 (2002,344,2300) | 1.6980E-01 (2002,344,2200) | 1.5689E-01 (2002,109,0100) | 1.5524E-01 (2002,328,0700) |
| 1106 | -161.515 | -176.582 | 1.9492E-01 (2002,344,2300) | 1.6039E-01 (2002,344,2200) | 1.4133E-01 (2002,328,0700) | 1.3995E-01 (2002,109,0100) |
| 1107 | -160.063 | -176.612 | 1.9199E-01 (2002,344,2300) | 1.4767E-01 (2002,344,2200) | 1.2742E-01 (2002,328,0700) | 1.2407E-01 (2002,109,0100) |
| 1108 | -158.611 | -176.642 | 1.8427E-01 (2002,344,2300) | 1.3231E-01 (2002,344,2200) | 1.1506E-01 (2002,328,0700) | 1.1480E-01 (2002,106,0600) |
| 1109 | -157.160 | -176.671 | 1.7025E-01 (2002,344,2300) | 1.2152E-01 (2002,106,0600) | 1.1592E-01 (2002,344,2200) | 1.1377E-01 (2002,308,2000) |
| 1110 | -155.708 | -176.701 | 1.5793E-01 (2002,344,2300) | 1.2545E-01 (2002,106,0600) | 1.1178E-01 (2002,109,0200) | 1.0524E-01 (2002,345,0000) |
| 1111 | -154.257 | -176.730 | 1.4033E-01 (2002,344,2300) | 1.2421E-01 (2002,106,0600) | 1.1580E-01 (2002,109,0200) | 1.0271E-01 (2002,308,2100) |
| 1112 | -152.805 | -176.758 | 1.1617E-01 (2002,106,0600) | 1.1420E-01 (2002,109,0200) | 1.0975E-01 (2002,344,2300) | 9.9198E-02 (2002,318,2200) |
| 1113 | -151.353 | -176.787 | 1.0701E-01 (2002,109,0200) | 1.0479E-01 (2002,106,0600) | 1.0340E-01 (2002,318,2200) | 8.4786E-02 (2002,328,0600) |
| 1114 | -149.902 | -176.815 | 1.0235E-01 (2002,109,0200) | 9.9680E-02 (2002,318,2200) | 9.4583E-02 (2002,106,0600) | 8.7142E-02 (2002,328,0600) |
| 1115 | -148.450 | -176.843 | 1.1062E-01 (2002,109,0200) | 9.4257E-02 (2002,318,2200) | 9.1188E-02 (2002,328,0600) | 9.1064E-02 (2002,106,0600) |
| 1116 | -146.998 | -176.870 | 1.0947E-01 (2002,109,0200) | 9.1981E-02 (2002,328,0600) | 8.2172E-02 (2002,106,0600) | 8.1820E-02 (2002,260,2300) |
| 1117 | -164.379 | -174.669 | 2.0454E-01 (2002,344,2300) | 1.9175E-01 (2002,344,2200) | 1.6926E-01 (2002,109,0100) | 1.5066E-01 (2002,328,0700) |
| 1118 | -162.927 | -174.699 | 2.0764E-01 (2002,344,2300) | 1.8138E-01 (2002,344,2200) | 1.4962E-01 (2002,109,0100) | 1.3572E-01 (2002,328,0700) |
| 1119 | -161.476 | -174.730 | 2.0402E-01 (2002,344,2300) | 1.6703E-01 (2002,344,2200) | 1.3072E-01 (2002,109,0100) | 1.2766E-01 (2002,106,0600) |
| 1120 | -160.025 | -174.760 | 1.9503E-01 (2002,344,2300) | 1.4992E-01 (2002,344,2200) | 1.3455E-01 (2002,106,0600) | 1.1928E-01 (2002,308,2000) |
| 1121 | -158.574 | -174.790 | 1.8132E-01 (2002,344,2300) | 1.3578E-01 (2002,106,0600) | 1.3158E-01 (2002,344,2200) | 1.1984E-01 (2002,308,2000) |
| 1122 | -157.122 | -174.819 | 1.6450E-01 (2002,344,2300) | 1.3228E-01 (2002,106,0600) | 1.2383E-01 (2002,109,0200) | 1.1297E-01 (2002,344,2200) |
| 1123 | -155.671 | -174.848 | 1.4636E-01 (2002,344,2300) | 1.2671E-01 (2002,109,0200) | 1.2499E-01 (2002,106,0600) | 1.0559E-01 (2002,308,2100) |
| 1124 | -154.220 | -174.877 | 1.2800E-01 (2002,109,0200) | 1.2616E-01 (2002,344,2300) | 1.1487E-01 (2002,106,0600) | 1.1330E-01 (2002,318,2200) |
| 1125 | -152.768 | -174.906 | 1.1425E-01 (2002,109,0200) | 1.0975E-01 (2002,318,2200) | 1.0175E-01 (2002,328,0600) | 9.5587E-02 (2002,106,0600) |
| 1126 | -151.317 | -174.934 | 1.1401E-01 (2002,109,0200) | 1.0567E-01 (2002,328,0600) | 1.0316E-01 (2002,318,2200) | 9.4355E-02 (2002,260,2300) |
| 1127 | -149.866 | -174.963 | 1.1157E-01 (2002,109,0200) | 1.0749E-01 (2002,328,0600) | 9.3009E-02 (2002,260,2300) | 8.8611E-02 (2002,318,2200) |
| 1128 | -148.415 | -174.991 | 1.1897E-01 (2002,109,0200) | 1.0946E-01 (2002,328,0600) | 1.0289E-01 (2002,260,2300) | 8.8997E-02 (2002,018,2300) |
| 1129 | -167.241 | -172.755 | 2.1828E-01 (2002,344,2200) | 2.0534E-01 (2002,344,2300) | 1.9757E-01 (2002,109,0100) | 1.5550E-01 (2002,328,0700) |
| 1130 | -165.790 | -172.786 | 2.1576E-01 (2002,344,2300) | 2.1204E-01 (2002,344,2200) | 1.7706E-01 (2002,109,0100) | 1.4147E-01 (2002,328,0700) |
| 1131 | -164.339 | -172.817 | 2.1880E-01 (2002,344,2300) | 1.9972E-01 (2002,344,2200) | 1.5524E-01 (2002,109,0100) | 1.3881E-01 (2002,106,0600) |
| 1132 | -162.888 | -172.847 | 2.1460E-01 (2002,344,2300) | 1.8336E-01 (2002,344,2200) | 1.4597E-01 (2002,106,0600) | 1.3402E-01 (2002,109,0100) |
| 1133 | -161.438 | -172.878 | 2.0400E-01 (2002,344,2300) | 1.6388E-01 (2002,344,2200) | 1.4517E-01 (2002,106,0600) | 1.2848E-01 (2002,308,2000) |
| 1134 | -159.987 | -172.908 | 1.8863E-01 (2002,344,2300) | 1.4350E-01 (2002,344,2200) | 1.3801E-01 (2002,106,0600) | 1.3242E-01 (2002,109,0200) |
| 1135 | -158.536 | -172.937 | 1.7020E-01 (2002,344,2300) | 1.3539E-01 (2002,109,0200) | 1.2681E-01 (2002,106,0600) | 1.2255E-01 (2002,344,2200) |
| 1136 | -157.085 | -172.967 | 1.4496E-01 (2002,344,2300) | 1.3641E-01 (2002,109,0200) | 1.1956E-01 (2002,260,2300) | 1.1669E-01 (2002,318,2200) |
| 1137 | -155.634 | -172.996 | 1.2947E-01 (2002,109,0200) | 1.2034E-01 (2002,318,2200) | 1.1572E-01 (2002,328,0600) | 1.1493E-01 (2002,260,2300) |
| 1138 | -154.183 | -173.025 | 1.2181E-01 (2002,109,0200) | 1.1943E-01 (2002,328,0600) | 1.1310E-01 (2002,318,2200) | 1.0887E-01 (2002,260,2300) |
| 1139 | -152.732 | -173.054 | 1.2950E-01 (2002,109,0200) | 1.2396E-01 (2002,328,0600) | 1.1533E-01 (2002,260,2300) | 1.0431E-01 (2002,318,2200) |
| 1140 | -151.281 | -173.082 | 1.2534E-01 (2002,328,0600) | 1.2498E-01 (2002,109,0200) | 1.1285E-01 (2002,260,2300) | 9.5655E-02 (2002,018,2300) |
| 1141 | -149.830 | -173.110 | 1.2472E-01 (2002,328,0600) | 1.1974E-01 (2002,109,0200) | 1.1048E-01 (2002,260,2300) | 8.9513E-02 (2002,018,2300) |
| 1142 | -148.379 | -173.138 | 1.2186E-01 (2002,328,0600) | 1.0823E-01 (2002,109,0200) | 1.0033E-01 (2002,260,2300) | 7.9326E-02 (2002,239,0500) |
| 1143 | -146.928 | -173.166 | 1.1688E-01 (2002,328,0600) | 9.9654E-02 (2002,109,0200) | 9.3141E-02 (2002,260,2300) | 7.9346E-02 (2002,239,0500) |
| 1144 | -165.751 | -170.934 | 2.2709E-01 (2002,344,2300) | 2.1507E-01 (2002,344,2200) | 1.5663E-01 (2002,109,0100) | 1.5302E-01 (2002,106,0600) |
| 1145 | -164.300 | -170.965 | 2.2187E-01 (2002,344,2300) | 1.9590E-01 (2002,344,2200) | 1.5206E-01 (2002,106,0600) | 1.4041E-01 (2002,109,0200) |
| 1146 | -162.850 | -170.995 | 2.0990E-01 (2002,344,2300) | 1.7388E-01 (2002,344,2200) | 1.4331E-01 (2002,109,0200) | 1.4242E-01 (2002,106,0600) |
| 1147 | -161.399 | -171.025 | 1.9320E-01 (2002,344,2300) | 1.5119E-01 (2002,344,2200) | 1.4456E-01 (2002,109,0200) | 1.3300E-01 (2002,308,2000) |
| 1148 | -159.948 | -171.056 | 1.7294E-01 (2002,344,2300) | 1.4425E-01 (2002,109,0200) | 1.2843E-01 (2002,344,2200) | 1.2731E-01 (2002,260,2300) |
| 1149 | -158.498 | -171.085 | 1.4088E-01 (2002,109,0200) | 1.4057E-01 (2002,344,2300) | 1.3094E-01 (2002,318,2200) | 1.2902E-01 (2002,328,0600) |
| 1150 | -157.047 | -171.115 | 1.3808E-01 (2002,109,0200) | 1.3352E-01 (2002,328,0600) | 1.2896E-01 (2002,318,2200) | 1.2220E-01 (2002,344,2300) |
| 1151 | -155.597 | -171.144 | 1.3668E-01 (2002,328,0600) | 1.3375E-01 (2002,109,0200) | 1.1656E-01 (2002,260,2300) | 1.1532E-01 (2002,318,2200) |
| 1152 | -154.146 | -171.173 | 1.3875E-01 (2002,328,0600) | 1.2790E-01 (2002,109,0200) | 1.1218E-01 (2002,260,2300) | 9.8679E-02 (2002,018,2300) |
| 1153 | -152.696 | -171.202 | 1.3898E-01 (2002,328,0600) | 1.2141E-01 (2002,109,0200) | 1.0806E-01 (2002,260,2300) | 9.7589E-02 (2002,018,2300) |
| 1154 | -151.245 | -171.230 | 1.3708E-01 (2002,328,0600) | 1.1118E-01 (2002,109,0200) | 1.0021E-01 (2002,260,2300) | 9.1495E-02 (2002,239,0000) |
| 1155 | -149.794 | -171.258 | 1.3354E-01 (2002,328,0600) | 1.0725E-01 (2002,109,0200) | 1.0200E-01 (2002,018,0600) | 1.0021E-01 (2002,260,2300) |
| 1156 | -148.344 | -171.286 | 1.2368E-01 (2002,328,0600) | 8.4884E-02 (2002,109,0200) | 8.4657E-02 (2002,239,0000) | 7.9541E-02 (2002,322,0700) |
| 1157 | -146.893 | -171.314 | 1.1620E-01 (2002,328,0600) | 8.3351E-02 (2002,239,0000) | 7.6774E-02 (2002,109,0200) | 7.4351E-02 (2002,322,0700) |
| 1158 | -162.811 | -169.143 | 1.9335E-01 (2002,344,2300) | 1.5385E-01 (2002,344,2200) | 1.5223E-01 (2002,109,0200) | 1.3962E-01 (2002,308,2000) |
| 1159 | -161.360 | -169.173 | 1.7177E-01 (2002,344,2300) | 1.4690E-01 (2002,109,0200) | 1.4349E-01 (2002,328,0600) | 1.3810E-01 (2002,318,2200) |
| 1160 | -159.910 | -169.203 | 1.4895E-01 (2002,344,2300) | 1.4721E-01 (2002,328,0600) | 1.4134E-01 (2002,318,2200) | 1.4082E-01 (2002,109,0200) |
| 1161 | -158.460 | -169.233 | 1.4995E-01 (2002,328,0600) | 1.3413E-01 (2002,109,0200) | 1.2877E-01 (2002,318,2200) | 1.2614E-01 (2002,344,2300) |
| 1162 | -157.010 | -169.263 | 1.5165E-01 (2002,328,0600) | 1.2689E-01 (2002,109,0200) | 1.0595E-01 (2002,239,0000) | 1.0574E-01 (2002,318,2200) |
| 1163 | -155.560 | -169.292 | 1.5189E-01 (2002,328,0600) | 1.1926E-01 (2002,109,0200) | 1.0143E-01 (2002,018,2300) | 1.0099E-01 (2002,239,0000) |
| 1164 | -154.109 | -169.321 | 1.5014E-01 (2002,328,0600) | 1.1131E-01 (2002,109,0200) | 1.0084E-01 (2002,109,0300) | 9.9512E-02 (2002,018,2300) |
| 1165 | -152.659 | -169.350 | 1.4671E-01 (2002,328,0600) | 1.0337E-01 (2002,109,0200) | 1.0146E-01 (2002,018,0600) | 1.0045E-01 (2002,109,0300) |
| 1166 | -151.209 | -169.378 | 1.4139E-01 (2002,328,0600) | 9.6774E-02 (2002,018,0600) | 9.5151E-02 (2002,109,0300) | 9.1751E-02 (2002,109,0200) |
| 1167 | -149.759 | -169.406 | 1.3456E-01 (2002,328,0600) | 1.0880E-01 (2002,018,0600) | 9.5305E-02 (2002,260,2200) | 9.5183E-02 (2002,109,0300) |
| 1168 | -148.308 | -169.434 | 1.2664E-01 (2002,328,0600) | 1.1435E-01 (2002,018,0600) | 9.5587E-02 (2002,260,2200) | 9.4654E-02 (2002,144,0600) |
| 1169 | -164.222 | -167.260 | 1.8833E-01 (2002,344,2300) | 1.5615E-01 (2002,328,0600) | 1.5254E-01 (2002,344,2200) | 1.5140E-01 (2002,109,0200) |
| 1170 | -162.772 | -167.291 | 1.6596E-01 (2002,344,2300) | 1.5958E-01 (2002,328,0600) | 1.5045E-01 (2002,318,2200) | 1.4033E-01 (2002,109,0200) |
| 1171 | -161.322 | -167.321 | 1.6241E-01 (2002,328,0600) | 1.4253E-01 (2002,344,2300) | 1.4094E-01 (2002,318,2200) | 1.3007E-01 (2002,109,0200) |
| 1172 | -159.872 | -167.351 | 1.6408E-01 (2002,328,0600) | 1.2058E-01 (2002,109,0200) | 1.1975E-01 (2002,344,2300) | 1.1893E-01 (2002,260,2200) |
| 1173 | -158.422 | -167.381 | 1.6398E-01 (2002,328,0600) | 1.2304E-01 (2002,260,2200) | 1.1338E-01 (2002,109,0300) | 1.1145E-01 (2002,109,0200) |
| 1174 | -156.972 | -167.411 | 1.6248E-01 (2002,328,0600) | 1.2745E-01 (2002,260,2200) | 1.1467E-01 (2002,109,0300) | 1.0921E-01 (2002,078,0200) |
| 1175 | -155.522 | -167.440 | 1.5883E-01 (2002,328,0600) | 1.3151E-01 (2002,260,2200) | 1.1421E-01 (2002,109,0300) | 1.0450E-01 (2002,078,0200) |
| 1176 | -154.072 | -167.469 | 1.5334E-01 (2002,328,0600) | 1.3468E-01 (2002,260,2200) | 1.1204E-01 (2002,109,0300) | 1.1164E-01 (2002,018,0600) |
| 1177 | -152.623 | -167.497 | 1.4613E-01 (2002,328,0600) | 1.3641E-01 (2002,260,2200) | 1.2392E-01 (2002,018,0600) | 1.0821E-01 (2002,109,0300) |
| 1178 | -164.182 | -165.408 | 1.7181E-01 (2002,328,0600) | 1.5491E-01 (2002,344,2300) | 1.5491E-01 (2002,318,2200) | 1.5021E-01 (2002,260,2200) |
| 1179 | -162.733 | -165.439 | 1.7408E-01 (2002,328,0600) | 1.5166E-01 (2002,260,2200) | 1.3169E-01 (2002,344,2300) | 1.3082E-01 (2002,318,2200) |
| 1180 | -161.283 | -165.469 | 1.7452E-01 (2002,328,0600) | 1.5384E-01 (2002,260,2200) | 1.2433E-01 (2002,109,0300) | 1.2193E-01 (2002,239,0400) |
| 1181 | -159.834 | -165.499 | 1.7314E-01 (2002,328,0600) | 1.5719E-01 (2002,260,2200) | 1.2612E-01 (2002,109,0300) | 1.2480E-01 (2002,239,0400) |
| 1182 | -158.384 | -165.529 | 1.6979E-01 (2002,328,0600) | 1.6130E-01 (2002,260,2200) | 1.2599E-01 (2002,109,0300) | 1.2440E-01 (2002,239,0400) |

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|---|---|---|---|---|---|---|
| 1183 | -156.935 | -165.558 | 1.6418E-01 (2002,328,0600) | 1.4168E-01 (2002,260,2200) | 1.1762E-01 (2002,109,0300) | 1.1423E-01 (2002,239,0400) |
| 1184 | -155.485 | -165.588 | 1.5682E-01 (2002,328,0600) | 1.4595E-01 (2002,260,2200) | 1.1522E-01 (2002,109,0300) | 1.1292E-01 (2002,239,0400) |
| 1185 | -154.036 | -165.617 | 1.4383E-01 (2002,328,0600) | 1.1731E-01 (2002,260,2200) | 1.0228E-01 (2002,238,2300) | 1.0200E-01 (2002,239,0400) |
| 1186 | -152.586 | -165.645 | 1.3402E-01 (2002,328,0600) | 1.1431E-01 (2002,260,2200) | 1.0811E-01 (2002,018,0600) | 1.0034E-01 (2002,238,2300) |
| 1187 | -164.143 | -163.556 | 1.8098E-01 (2002,328,0600) | 1.7338E-01 (2002,260,2200) | 1.4485E-01 (2002,239,0400) | 1.3901E-01 (2002,144,0500) |
| 1188 | -162.694 | -163.587 | 1.8037E-01 (2002,328,0600) | 1.7570E-01 (2002,260,2200) | 1.4962E-01 (2002,239,0400) | 1.3339E-01 (2002,144,0500) |
| 1189 | -161.245 | -163.617 | 1.7927E-01 (2002,260,2200) | 1.7784E-01 (2002,328,0600) | 1.4984E-01 (2002,239,0400) | 1.3369E-01 (2002,086,2200) |
| 1190 | -159.796 | -163.647 | 1.7661E-01 (2002,260,2200) | 1.7294E-01 (2002,328,0600) | 1.4638E-01 (2002,239,0400) | 1.3186E-01 (2002,109,0300) |
| 1191 | -158.346 | -163.677 | 1.7748E-01 (2002,260,2200) | 1.6593E-01 (2002,328,0600) | 1.4072E-01 (2002,239,0400) | 1.2806E-01 (2002,109,0300) |
| 1192 | -156.897 | -163.706 | 1.6547E-01 (2002,260,2200) | 1.5656E-01 (2002,328,0600) | 1.2828E-01 (2002,239,0400) | 1.2038E-01 (2002,130,0000) |
| 1193 | -155.448 | -163.736 | 1.7123E-01 (2002,260,2200) | 1.4588E-01 (2002,328,0600) | 1.3502E-01 (2002,086,2300) | 1.2980E-01 (2002,130,0000) |
| 1194 | -153.999 | -163.765 | 1.4038E-01 (2002,260,2200) | 1.3671E-01 (2002,086,2300) | 1.3372E-01 (2002,328,0600) | 1.2988E-01 (2002,018,0600) |
| 1195 | -152.550 | -163.793 | 1.3181E-01 (2002,018,0600) | 1.2824E-01 (2002,086,2300) | 1.1876E-01 (2002,328,0600) | 1.1490E-01 (2002,260,2200) |
| 1196 | -159.757 | -161.795 | 2.0455E-01 (2002,086,2200) | 1.8841E-01 (2002,260,2200) | 1.6270E-01 (2002,328,0600) | 1.5554E-01 (2002,130,0000) |
| 1197 | -158.309 | -161.825 | 1.8492E-01 (2002,260,2200) | 1.7869E-01 (2002,086,2200) | 1.5657E-01 (2002,130,0000) | 1.5242E-01 (2002,328,0600) |

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CALPOST Version 5.6394 Level 070622

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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 835 | -122.223 | -264.400 | 5.0615E-04 | 1016 | -147.279 | -191.689 | 1.1732E-03 |
| 836 | -120.755 | -264.423 | 4.3611E-04 | 1017 | -145.824 | -191.716 | 1.0577E-03 |
| 837 | -123.662 | -262.524 | 5.6797E-04 | 1018 | -144.370 | -191.743 | 8.6403E-04 |
| 838 | -122.195 | -262.547 | 4.7420E-04 | 1019 | -155.968 | -189.666 | 1.5638E-03 |
| 839 | -123.633 | -260.671 | 4.8172E-04 | 1020 | -154.514 | -189.695 | 1.3625E-03 |
| 840 | -125.071 | -258.794 | 5.5346E-04 | 1021 | -153.060 | -189.724 | 1.0667E-03 |
| 841 | -129.441 | -256.870 | 8.0629E-04 | 1022 | -151.606 | -189.753 | 1.2618E-03 |
| 842 | -127.975 | -256.894 | 7.8891E-04 | 1023 | -150.152 | -189.781 | 1.0268E-03 |
| 843 | -126.508 | -256.918 | 6.8964E-04 | 1024 | -148.698 | -189.809 | 1.1098E-03 |
| 844 | -125.041 | -256.941 | 5.4220E-04 | 1025 | -147.244 | -189.836 | 8.3751E-04 |
| 845 | -129.411 | -255.017 | 8.1731E-04 | 1026 | -145.790 | -189.864 | 8.2350E-04 |
| 846 | -127.944 | -255.041 | 7.2832E-04 | 1027 | -144.336 | -189.891 | 8.5637E-04 |
| 847 | -126.478 | -255.065 | 6.3004E-04 | 1028 | -157.385 | -187.785 | 1.5759E-03 |
| 848 | -129.380 | -253.164 | 8.1192E-04 | 1029 | -155.931 | -187.814 | 1.4227E-03 |
| 849 | -127.914 | -253.188 | 7.4225E-04 | 1030 | -154.477 | -187.843 | 1.0875E-03 |
| 850 | -126.448 | -253.212 | 5.8166E-04 | 1031 | -153.024 | -187.872 | 1.3613E-03 |
| 851 | -130.815 | -251.286 | 8.4573E-04 | 1032 | -151.570 | -187.900 | 1.2572E-03 |
| 852 | -129.349 | -251.311 | 7.0414E-04 | 1033 | -150.116 | -187.928 | 1.2261E-03 |
| 853 | -127.884 | -251.335 | 6.8033E-04 | 1034 | -148.663 | -187.956 | 1.1028E-03 |
| 854 | -126.418 | -251.359 | 5.8391E-04 | 1035 | -147.209 | -187.984 | 1.1828E-03 |
| 855 | -133.715 | -249.384 | 8.9415E-04 | 1036 | -145.755 | -188.011 | 9.7016E-04 |
| 856 | -132.249 | -249.409 | 8.7832E-04 | 1037 | -144.301 | -188.039 | 7.9309E-04 |
| 857 | -130.784 | -249.433 | 7.8709E-04 | 1038 | -142.848 | -188.065 | 8.6352E-04 |
| 858 | -129.319 | -249.458 | 7.3491E-04 | 1039 | -141.394 | -188.092 | 7.8707E-04 |
| 859 | -127.854 | -249.482 | 5.9443E-04 | 1040 | -161.707 | -185.843 | 1.8046E-03 |
| 860 | -133.683 | -247.531 | 9.0352E-04 | 1041 | -160.254 | -185.873 | 1.7057E-03 |
| 861 | -132.218 | -247.556 | 8.0685E-04 | 1042 | -158.801 | -185.903 | 1.5909E-03 |
| 862 | -130.753 | -247.580 | 6.6814E-04 | 1043 | -157.347 | -185.932 | 1.4330E-03 |
| 863 | -129.288 | -247.605 | 6.3985E-04 | 1044 | -155.894 | -185.962 | 1.4780E-03 |
| 864 | -127.823 | -247.629 | 6.2862E-04 | 1045 | -154.441 | -185.991 | 1.4313E-03 |
| 865 | -135.116 | -245.653 | 9.3285E-04 | 1046 | -152.987 | -186.019 | 1.2785E-03 |
| 866 | -133.651 | -245.678 | 8.6613E-04 | 1047 | -151.534 | -186.048 | 1.0183E-03 |
| 867 | -132.187 | -245.703 | 7.8649E-04 | 1048 | -150.080 | -186.076 | 1.2655E-03 |
| 868 | -130.722 | -245.727 | 6.8656E-04 | 1049 | -148.627 | -186.104 | 1.2560E-03 |
| 869 | -129.258 | -245.752 | 6.4228E-04 | 1050 | -147.174 | -186.132 | 1.1121E-03 |
| 870 | -136.548 | -243.775 | 9.6167E-04 | 1051 | -145.720 | -186.159 | 8.8110E-04 |
| 871 | -135.084 | -243.800 | 9.3546E-04 | 1052 | -144.267 | -186.186 | 7.8635E-04 |
| 872 | -133.620 | -243.825 | 8.4398E-04 | 1053 | -142.813 | -186.213 | 7.9479E-04 |
| 873 | -132.155 | -243.850 | 8.0686E-04 | 1054 | -141.360 | -186.240 | 7.4184E-04 |
| 874 | -130.691 | -243.874 | 7.9548E-04 | 1055 | -161.669 | -183.991 | 1.7603E-03 |
| 875 | -129.227 | -243.899 | 6.4455E-04 | 1056 | -160.216 | -184.021 | 1.6617E-03 |
| 876 | -137.980 | -241.896 | 9.9178E-04 | 1057 | -158.763 | -184.051 | 1.6117E-03 |
| 877 | -136.516 | -241.922 | 9.7260E-04 | 1058 | -157.310 | -184.080 | 1.5383E-03 |
| 878 | -135.052 | -241.947 | 9.2610E-04 | 1059 | -155.857 | -184.109 | 1.4750E-03 |
| 879 | -133.588 | -241.972 | 9.1197E-04 | 1060 | -154.404 | -184.138 | 1.3785E-03 |
| 880 | -132.124 | -241.997 | 8.4100E-04 | 1061 | -152.951 | -184.167 | 1.3834E-03 |
| 881 | -130.660 | -242.022 | 7.6537E-04 | 1062 | -151.498 | -184.196 | 1.3397E-03 |
| 882 | -129.197 | -242.046 | 6.8042E-04 | 1063 | -150.045 | -184.224 | 1.2404E-03 |
| 883 | -137.947 | -240.043 | 1.0029E-03 | 1064 | -148.592 | -184.252 | 1.1347E-03 |
| 884 | -136.483 | -240.069 | 9.7043E-04 | 1065 | -147.139 | -184.279 | 9.2425E-04 |
| 885 | -135.020 | -240.094 | 8.9904E-04 | 1066 | -145.686 | -184.307 | 8.0522E-04 |
| 886 | -133.556 | -240.119 | 8.4228E-04 | 1067 | -144.233 | -184.334 | 8.0478E-04 |
| 887 | -132.093 | -240.144 | 8.3231E-04 | 1068 | -161.630 | -182.138 | 1.7337E-03 |
| 888 | -130.629 | -240.169 | 6.9737E-04 | 1069 | -160.178 | -182.169 | 1.6467E-03 |
| 889 | -129.166 | -240.193 | 7.1710E-04 | 1070 | -158.725 | -182.198 | 1.5739E-03 |
| 890 | -137.914 | -238.190 | 1.0103E-03 | 1071 | -157.272 | -182.228 | 1.5068E-03 |
| 891 | -136.451 | -238.216 | 9.6457E-04 | 1072 | -155.820 | -182.257 | 1.4557E-03 |
| 892 | -134.988 | -238.241 | 9.0685E-04 | 1073 | -154.367 | -182.286 | 1.4252E-03 |
| 893 | -133.525 | -238.266 | 8.6393E-04 | 1074 | -152.914 | -182.315 | 1.3872E-03 |
| 894 | -132.062 | -238.291 | 7.1033E-04 | 1075 | -151.462 | -182.343 | 1.3346E-03 |
| 895 | -130.599 | -238.316 | 7.0104E-04 | 1076 | -150.009 | -182.372 | 1.1097E-03 |
| 896 | -137.882 | -236.337 | 1.0214E-03 | 1077 | -148.556 | -182.399 | 1.0200E-03 |
| 897 | -136.419 | -236.363 | 9.8189E-04 | 1078 | -147.104 | -182.427 | 8.8276E-04 |
| 898 | -134.956 | -236.388 | 9.1406E-04 | 1079 | -145.651 | -182.454 | 8.9153E-04 |
| 899 | -133.493 | -236.413 | 7.3363E-04 | 1080 | -161.592 | -180.286 | 1.6844E-03 |
| 900 | -132.030 | -236.438 | 7.5665E-04 | 1081 | -160.139 | -180.316 | 1.6078E-03 |
| 901 | -137.849 | -234.485 | 1.0238E-03 | 1082 | -158.687 | -180.346 | 1.5466E-03 |
| 902 | -136.386 | -234.510 | 9.8051E-04 | 1083 | -157.235 | -180.376 | 1.4962E-03 |
| 903 | -134.924 | -234.536 | 8.6158E-04 | 1084 | -155.783 | -180.405 | 1.4592E-03 |
| 904 | -133.462 | -234.561 | 7.7545E-04 | 1085 | -154.330 | -180.434 | 1.4147E-03 |
| 905 | -137.816 | -232.632 | 1.0328E-03 | 1086 | -152.878 | -180.463 | 1.3511E-03 |
| 906 | -136.354 | -232.657 | 9.8794E-04 | 1087 | -151.426 | -180.491 | 1.1648E-03 |
| 907 | -134.892 | -232.683 | 7.9277E-04 | 1088 | -149.973 | -180.519 | 1.1131E-03 |
| 908 | -139.245 | -230.753 | 1.0736E-03 | 1089 | -148.521 | -180.547 | 9.7996E-04 |
| 909 | -137.784 | -230.779 | 1.0450E-03 | 1090 | -147.068 | -180.575 | 9.0661E-04 |
| 910 | -136.322 | -230.805 | 8.5811E-04 | 1091 | -145.616 | -180.602 | 9.1533E-04 |
| 911 | -134.860 | -230.830 | 8.4004E-04 | 1092 | -161.553 | -178.434 | 1.6454E-03 |
| 912 | -139.212 | -228.900 | 1.0817E-03 | 1093 | -160.101 | -178.464 | 1.5816E-03 |
| 913 | -137.751 | -228.926 | 1.0509E-03 | 1094 | -158.649 | -178.494 | 1.5284E-03 |
| 914 | -136.290 | -228.952 | 8.6244E-04 | 1095 | -157.197 | -178.523 | 1.4856E-03 |
| 915 | -134.828 | -228.977 | 8.9170E-04 | 1096 | -155.745 | -178.553 | 1.4392E-03 |
| 916 | -140.640 | -227.021 | 1.1108E-03 | 1097 | -154.293 | -178.582 | 1.3928E-03 |
| 917 | -139.179 | -227.048 | 1.0901E-03 | 1098 | -152.841 | -178.610 | 1.3348E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 918 | -137.718 | -227.073 | 9.8164E-04 | 1099 | -151.389 | -178.639 | 1.2254E-03 |
| 919 | -136.257 | -227.099 | 9.1372E-04 | 1100 | -149.937 | -178.667 | 1.0067E-03 |
| 920 | -140.607 | -225.169 | 1.1206E-03 | 1101 | -148.485 | -178.695 | 9.7408E-04 |
| 921 | -139.146 | -225.195 | 1.0843E-03 | 1102 | -147.033 | -178.723 | 1.1996E-03 |
| 922 | -137.686 | -225.221 | 9.6868E-04 | 1103 | -145.581 | -178.750 | 1.0503E-03 |
| 923 | -136.225 | -225.246 | 9.6170E-04 | 1104 | -164.418 | -176.521 | 1.7787E-03 |
| 924 | -140.574 | -223.316 | 1.1239E-03 | 1105 | -162.966 | -176.552 | 1.6933E-03 |
| 925 | -139.113 | -223.342 | 1.0068E-03 | 1106 | -161.515 | -176.582 | 1.6260E-03 |
| 926 | -137.653 | -223.368 | 9.3419E-04 | 1107 | -160.063 | -176.612 | 1.5672E-03 |
| 927 | -136.193 | -223.394 | 9.4611E-04 | 1108 | -158.611 | -176.642 | 1.5054E-03 |
| 928 | -143.460 | -221.410 | 1.1709E-03 | 1109 | -157.160 | -176.671 | 1.4266E-03 |
| 929 | -142.000 | -221.437 | 1.1540E-03 | 1110 | -155.708 | -176.701 | 1.4315E-03 |
| 930 | -140.540 | -221.463 | 1.1008E-03 | 1111 | -154.257 | -176.730 | 1.3691E-03 |
| 931 | -139.080 | -221.489 | 9.5416E-04 | 1112 | -152.805 | -176.758 | 1.2617E-03 |
| 932 | -137.620 | -221.515 | 9.2209E-04 | 1113 | -151.353 | -176.787 | 1.1068E-03 |
| 933 | -146.346 | -219.503 | 1.2244E-03 | 1114 | -149.902 | -176.815 | 1.0065E-03 |
| 934 | -144.886 | -219.531 | 1.2055E-03 | 1115 | -148.450 | -176.843 | 1.1024E-03 |
| 935 | -143.426 | -219.558 | 1.1834E-03 | 1116 | -146.998 | -176.870 | 1.0767E-03 |
| 936 | -141.967 | -219.584 | 1.1527E-03 | 1117 | -164.379 | -174.669 | 1.7518E-03 |
| 937 | -140.507 | -219.611 | 1.0265E-03 | 1118 | -162.927 | -174.699 | 1.6827E-03 |
| 938 | -139.047 | -219.637 | 9.4997E-04 | 1119 | -161.476 | -174.730 | 1.6270E-03 |
| 939 | -137.588 | -219.663 | 8.9547E-04 | 1120 | -160.025 | -174.760 | 1.5800E-03 |
| 940 | -146.311 | -217.651 | 1.2343E-03 | 1121 | -158.574 | -174.790 | 1.5336E-03 |
| 941 | -144.851 | -217.678 | 1.2099E-03 | 1122 | -157.122 | -174.819 | 1.4831E-03 |
| 942 | -143.392 | -217.705 | 1.1873E-03 | 1123 | -155.671 | -174.848 | 1.4438E-03 |
| 943 | -141.933 | -217.732 | 1.1390E-03 | 1124 | -154.220 | -174.877 | 1.3731E-03 |
| 944 | -140.474 | -217.758 | 9.8299E-04 | 1125 | -152.768 | -174.906 | 1.1472E-03 |
| 945 | -139.014 | -217.784 | 9.8924E-04 | 1126 | -151.317 | -174.934 | 1.1268E-03 |
| 946 | -137.555 | -217.810 | 8.8817E-04 | 1127 | -149.866 | -174.963 | 1.0920E-03 |
| 947 | -146.276 | -215.798 | 1.2364E-03 | 1128 | -148.415 | -174.991 | 1.2131E-03 |
| 948 | -144.817 | -215.825 | 1.2181E-03 | 1129 | -167.241 | -172.755 | 1.9124E-03 |
| 949 | -143.358 | -215.852 | 1.1332E-03 | 1130 | -165.790 | -172.786 | 1.8221E-03 |
| 950 | -141.899 | -215.879 | 1.0249E-03 | 1131 | -164.339 | -172.817 | 1.7453E-03 |
| 951 | -146.241 | -213.946 | 1.2562E-03 | 1132 | -162.888 | -172.847 | 1.6895E-03 |
| 952 | -144.783 | -213.973 | 1.2264E-03 | 1133 | -161.438 | -172.878 | 1.6426E-03 |
| 953 | -143.324 | -214.000 | 1.1736E-03 | 1134 | -159.987 | -172.908 | 1.5876E-03 |
| 954 | -146.207 | -212.093 | 1.2264E-03 | 1135 | -158.536 | -172.937 | 1.5229E-03 |
| 955 | -144.748 | -212.120 | 1.2202E-03 | 1136 | -157.085 | -172.967 | 1.4309E-03 |
| 956 | -143.290 | -212.147 | 1.1716E-03 | 1137 | -155.634 | -172.996 | 1.3193E-03 |
| 957 | -141.832 | -212.174 | 1.1031E-03 | 1138 | -154.183 | -173.025 | 1.2170E-03 |
| 958 | -146.172 | -210.241 | 1.2664E-03 | 1139 | -152.732 | -173.054 | 1.3346E-03 |
| 959 | -144.714 | -210.268 | 1.2289E-03 | 1140 | -151.281 | -173.082 | 1.2845E-03 |
| 960 | -143.256 | -210.295 | 1.1662E-03 | 1141 | -149.830 | -173.110 | 1.2675E-03 |
| 961 | -141.798 | -210.321 | 1.1324E-03 | 1142 | -148.379 | -173.138 | 1.1492E-03 |
| 962 | -146.137 | -208.388 | 1.2629E-03 | 1143 | -146.928 | -173.166 | 1.0797E-03 |
| 963 | -144.680 | -208.415 | 1.2298E-03 | 1144 | -165.751 | -170.934 | 1.8276E-03 |
| 964 | -143.222 | -208.442 | 1.1876E-03 | 1145 | -164.300 | -170.965 | 1.7642E-03 |
| 965 | -141.764 | -208.469 | 1.1174E-03 | 1146 | -162.850 | -170.995 | 1.7021E-03 |
| 966 | -140.307 | -208.495 | 1.0026E-03 | 1147 | -161.399 | -171.025 | 1.6357E-03 |
| 967 | -146.102 | -206.535 | 1.2594E-03 | 1148 | -159.948 | -171.056 | 1.5656E-03 |
| 968 | -144.645 | -206.563 | 1.2221E-03 | 1149 | -158.498 | -171.085 | 1.4467E-03 |
| 969 | -143.188 | -206.590 | 1.1829E-03 | 1150 | -157.047 | -171.115 | 1.4125E-03 |
| 970 | -141.731 | -206.616 | 1.0853E-03 | 1151 | -155.597 | -171.144 | 1.4340E-03 |
| 971 | -146.068 | -204.683 | 1.2373E-03 | 1152 | -154.146 | -171.173 | 1.3634E-03 |
| 972 | -144.611 | -204.710 | 1.2123E-03 | 1153 | -152.696 | -171.202 | 1.3311E-03 |
| 973 | -143.154 | -204.737 | 1.1657E-03 | 1154 | -151.245 | -171.230 | 1.2397E-03 |
| 974 | -141.697 | -204.764 | 1.1012E-03 | 1155 | -149.794 | -171.258 | 1.3151E-03 |
| 975 | -148.946 | -202.775 | 1.3507E-03 | 1156 | -148.344 | -171.286 | 9.9092E-04 |
| 976 | -147.489 | -202.803 | 1.2917E-03 | 1157 | -146.893 | -171.314 | 9.3366E-04 |
| 977 | -146.033 | -202.831 | 1.2510E-03 | 1158 | -162.811 | -169.143 | 1.7094E-03 |
| 978 | -144.576 | -202.858 | 1.1863E-03 | 1159 | -161.360 | -169.173 | 1.6180E-03 |
| 979 | -143.120 | -202.885 | 1.1659E-03 | 1160 | -159.910 | -169.203 | 1.5617E-03 |
| 980 | -141.663 | -202.911 | 1.0254E-03 | 1161 | -158.460 | -169.233 | 1.5182E-03 |
| 981 | -148.910 | -200.923 | 1.3303E-03 | 1162 | -157.010 | -169.263 | 1.4728E-03 |
| 982 | -147.454 | -200.951 | 1.2206E-03 | 1163 | -155.560 | -169.292 | 1.3879E-03 |
| 983 | -145.998 | -200.978 | 1.2479E-03 | 1164 | -154.109 | -169.321 | 1.3625E-03 |
| 984 | -144.542 | -201.005 | 1.1320E-03 | 1165 | -152.659 | -169.350 | 1.3401E-03 |
| 985 | -143.086 | -201.032 | 1.0757E-03 | 1166 | -151.209 | -169.378 | 1.2343E-03 |
| 986 | -141.630 | -201.059 | 9.1870E-04 | 1167 | -149.759 | -169.406 | 1.2635E-03 |
| 987 | -148.875 | -199.071 | 1.1902E-03 | 1168 | -148.308 | -169.434 | 1.2472E-03 |
| 988 | -147.419 | -199.098 | 1.2898E-03 | 1169 | -164.222 | -167.260 | 1.7943E-03 |
| 989 | -145.963 | -199.126 | 1.1272E-03 | 1170 | -162.772 | -167.291 | 1.7059E-03 |
| 990 | -144.508 | -199.153 | 1.1749E-03 | 1171 | -161.322 | -167.321 | 1.6408E-03 |
| 991 | -151.751 | -197.162 | 1.4516E-03 | 1172 | -159.872 | -167.351 | 1.5845E-03 |
| 992 | -150.295 | -197.190 | 1.3474E-03 | 1173 | -158.422 | -167.381 | 1.5168E-03 |
| 993 | -148.840 | -197.218 | 1.1576E-03 | 1174 | -156.972 | -167.411 | 1.4727E-03 |
| 994 | -147.384 | -197.246 | 1.0875E-03 | 1175 | -155.522 | -167.440 | 1.4387E-03 |
| 995 | -145.929 | -197.273 | 1.1332E-03 | 1176 | -154.072 | -167.469 | 1.4114E-03 |
| 996 | -144.473 | -197.300 | 8.6867E-04 | 1177 | -152.623 | -167.497 | 1.4083E-03 |
| 997 | -151.714 | -195.310 | 1.4176E-03 | 1178 | -164.182 | -165.408 | 1.7989E-03 |
| 998 | -150.259 | -195.338 | 1.2404E-03 | 1179 | -162.733 | -165.439 | 1.6939E-03 |
| 999 | -148.804 | -195.366 | 1.3272E-03 | 1180 | -161.283 | -165.469 | 1.6012E-03 |
| 1000 | -147.349 | -195.393 | 1.2768E-03 | 1181 | -159.834 | -165.499 | 1.5588E-03 |
| 1001 | -145.894 | -195.421 | 1.1505E-03 | 1182 | -158.384 | -165.529 | 1.5172E-03 |
| 1002 | -144.439 | -195.448 | 9.5169E-04 | 1183 | -156.935 | -165.558 | 1.3468E-03 |
| 1003 | -153.133 | -193.429 | 1.4679E-03 | 1184 | -155.485 | -165.588 | 1.3488E-03 |
| 1004 | -151.678 | -193.457 | 1.1921E-03 | 1185 | -154.036 | -165.617 | 1.1838E-03 |
| 1005 | -150.224 | -193.485 | 1.2893E-03 | 1186 | -152.586 | -165.645 | 1.1729E-03 |
| 1006 | -148.769 | -193.513 | 1.3151E-03 | 1187 | -164.143 | -163.556 | 1.7976E-03 |
| 1007 | -147.314 | -193.541 | 1.1797E-03 | 1188 | -162.694 | -163.587 | 1.7088E-03 |
| 1008 | -145.859 | -193.568 | 1.0703E-03 | 1189 | -161.245 | -163.617 | 1.6135E-03 |
| 1009 | -144.404 | -193.596 | 8.6465E-04 | 1190 | -159.796 | -163.647 | 1.5252E-03 |
| 1010 | -156.005 | -191.519 | 1.6033E-03 | 1191 | -158.346 | -163.677 | 1.4970E-03 |
| 1011 | -154.551 | -191.548 | 1.5262E-03 | 1192 | -156.897 | -163.706 | 1.4233E-03 |
| 1012 | -153.097 | -191.576 | 1.3433E-03 | 1193 | -155.448 | -163.736 | 1.4590E-03 |
| 1013 | -151.642 | -191.605 | 1.2097E-03 | 1194 | -153.999 | -163.765 | 1.3275E-03 |
| 1014 | -150.188 | -191.633 | 1.1387E-03 | 1195 | -152.550 | -163.793 | 1.2153E-03 |
| 1015 | -148.733 | -191.661 | 1.2515E-03 | 1196 | -159.757 | -161.795 | 1.6080E-03 |
| | | | | 1197 | -158.309 | -161.825 | 1.5838E-03 |

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CALPOST Version 5.6394 Level 070622

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SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1144 | -165.751 | -170.934 | DISCRETE | 2.2709E-01 (2002,344,2300) | RANK 1 | 1 | HOUR |
| 1144 | -165.751 | -170.934 | DISCRETE | 2.1507E-01 (2002,344,2200) | RANK 2 | 1 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 1.9757E-01 (2002,109,0100) | RANK 3 | 1 | HOUR |
| 1104 | -164.418 | -176.521 | DISCRETE | 1.6803E-01 (2002,328,0700) | RANK 4 | 1 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 1.9124E-03 | RANK 1 | 8759 | HOUR |

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*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Grand Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1197*0, 791*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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```

```
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2002\2002_GRAND_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_GC.DAT

*****************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************


                                                         NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
   1198     -355.887  -464.319  2.2415E-03 (2002,024,1100)  2.1164E-03 (2002,329,1200)  1.9093E-03 (2002,024,1200)  1.5294E-03 (2002,324,0200)
   1199     -353.629  -464.418  2.3478E-03 (2002,024,1100)  2.1682E-03 (2002,329,1200)  1.8811E-03 (2002,024,1200)  1.6398E-03 (2002,024,1000)
   1200     -351.371  -464.517  2.4306E-03 (2002,024,1100)  2.2091E-03 (2002,329,1200)  1.8347E-03 (2002,024,1200)  1.8288E-03 (2002,024,1000)
   1201     -362.536  -461.234  1.9991E-03 (2002,329,1200)  1.9863E-03 (2002,324,0200)  1.9601E-03 (2002,324,0400)  1.9497E-03 (2002,024,1100)
   1202     -360.279  -461.336  2.0996E-03 (2002,024,1100)  2.0698E-03 (2002,329,1200)  1.9753E-03 (2002,024,1200)  1.8730E-03 (2002,324,0200)
   1203     -358.021  -461.436  2.2456E-03 (2002,024,1100)  2.1310E-03 (2002,329,1200)  1.9923E-03 (2002,024,1200)  1.7472E-03 (2002,324,0200)
   1204     -355.764  -461.536  2.3742E-03 (2002,024,1100)  2.1832E-03 (2002,329,1200)  1.9902E-03 (2002,024,1200)  1.6819E-03 (2002,040,0500)
   1205     -353.507  -461.636  2.4866E-03 (2002,024,1100)  2.2239E-03 (2002,329,1200)  1.9679E-03 (2002,024,1200)  1.9299E-03 (2002,040,0500)
   1206     -351.249  -461.735  2.5785E-03 (2002,024,1100)  2.2512E-03 (2002,329,1200)  1.9867E-03 (2002,024,1000)  1.9256E-03 (2002,024,1200)
   1207     -348.992  -461.833  2.6531E-03 (2002,024,1100)  2.2700E-03 (2002,329,1200)  2.1935E-03 (2002,024,1000)  1.8636E-03 (2002,024,1200)
   1208     -366.923  -458.247  2.2253E-03 (2002,324,0200)  2.0041E-03 (2002,324,0400)  1.9191E-03 (2002,329,1200)  1.8499E-03 (2002,024,1200)
   1209     -364.667  -458.350  2.6154E-03 (2002,324,0400)  2.1761E-03 (2002,324,0200)  2.1602E-03 (2002,324,0500)  2.0279E-03 (2002,324,0300)
   1210     -362.410  -458.452  2.3345E-03 (2002,324,0400)  2.0764E-03 (2002,329,1200)  2.0702E-03 (2002,324,0200)  2.0342E-03 (2002,024,1100)
   1211     -360.154  -458.553  2.2009E-03 (2002,024,1100)  2.1503E-03 (2002,324,0400)  2.1405E-03 (2002,329,1200)  2.0312E-03 (2002,024,1200)
   1212     -357.897  -458.654  2.3539E-03 (2002,024,1100)  2.1898E-03 (2002,329,1200)  2.0561E-03 (2002,024,1200)  1.8937E-03 (2002,324,0400)
   1213     -355.641  -458.754  2.4956E-03 (2002,024,1100)  2.2288E-03 (2002,329,1200)  2.0610E-03 (2002,024,1200)  1.7973E-03 (2002,040,0500)
   1214     -353.384  -458.853  2.6232E-03 (2002,024,1100)  2.2551E-03 (2002,329,1200)  2.0449E-03 (2002,024,1200)  1.9319E-03 (2002,024,1000)
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| 1318 | -399.658 | -434.382 | 8.8624E-03 (2002,324,0600) | 7.9204E-03 (2002,324,0500) | 5.3673E-03 (2002,324,0700) | 4.3996E-03 (2002,324,0400) |
| 1319 | -397.408 | -434.493 | 8.7585E-03 (2002,324,0600) | 8.3706E-03 (2002,324,0500) | 4.9269E-03 (2002,324,0700) | 4.8723E-03 (2002,324,0400) |
| 1320 | -383.909 | -435.151 | 9.6123E-03 (2002,324,0500) | 7.6569E-03 (2002,324,0400) | 6.4274E-03 (2002,324,0600) | 4.0312E-03 (2002,324,0300) |
| 1321 | -381.659 | -435.258 | 9.5255E-03 (2002,324,0500) | 8.0563E-03 (2002,324,0400) | 5.8645E-03 (2002,324,0600) | 4.3681E-03 (2002,324,0300) |
| 1322 | -379.409 | -435.365 | 9.3148E-03 (2002,324,0500) | 8.3918E-03 (2002,324,0400) | 5.2739E-03 (2002,324,0600) | 4.6942E-03 (2002,324,0300) |
| 1323 | -377.159 | -435.471 | 8.7615E-03 (2002,324,0500) | 8.3898E-03 (2002,324,0400) | 4.8228E-03 (2002,324,0300) | 4.5683E-03 (2002,324,0600) |
| 1324 | -374.909 | -435.577 | 8.5781E-03 (2002,324,0400) | 8.3643E-03 (2002,324,0500) | 5.1114E-03 (2002,324,0300) | 4.0017E-03 (2002,324,0600) |
| 1325 | -372.659 | -435.682 | 8.8358E-03 (2002,324,0400) | 8.0031E-03 (2002,324,0500) | 5.4915E-03 (2002,324,0300) | 3.5034E-03 (2002,324,0600) |
| 1326 | -368.158 | -435.889 | 8.5340E-03 (2002,324,0400) | 6.6542E-03 (2002,324,0500) | 5.7417E-03 (2002,324,0300) | 3.2674E-03 (2002,324,0200) |
| 1327 | -365.908 | -435.992 | 8.1533E-03 (2002,324,0400) | 5.8764E-03 (2002,324,0500) | 5.7209E-03 (2002,324,0300) | 3.2899E-03 (2002,324,0200) |
| 1328 | -361.408 | -436.196 | 7.4569E-03 (2002,324,0400) | 5.8069E-03 (2002,324,0300) | 4.5365E-03 (2002,324,0500) | 3.3455E-03 (2002,324,0200) |
| 1329 | -359.157 | -436.297 | 6.9803E-03 (2002,324,0400) | 5.7540E-03 (2002,324,0300) | 3.8874E-03 (2002,324,0500) | 3.3312E-03 (2002,324,0200) |
| 1330 | -352.407 | -436.597 | 5.1273E-03 (2002,324,0400) | 5.1178E-03 (2002,324,0300) | 3.1023E-03 (2002,024,1100) | 3.0630E-03 (2002,324,0200) |
| 1331 | -350.156 | -436.695 | 4.6471E-03 (2002,324,0300) | 4.3523E-03 (2002,324,0400) | 3.3200E-03 (2002,024,1100) | 3.3049E-03 (2002,024,1000) |
| 1332 | -347.906 | -436.793 | 4.3564E-03 (2002,324,0300) | 3.7762E-03 (2002,324,0400) | 3.7282E-03 (2002,024,1000) | 3.5182E-03 (2002,024,1100) |
| 1333 | -235.355 | -440.884 | 2.7744E-02 (2002,010,0800) | 2.5842E-02 (2002,010,0900) | 1.9238E-02 (2002,010,0700) | 1.5873E-02 (2002,010,1000) |
| 1334 | -233.103 | -440.950 | 2.8930E-02 (2002,010,0800) | 2.6110E-02 (2002,010,0900) | 2.0499E-02 (2002,010,0700) | 1.5515E-02 (2002,010,1000) |
| 1335 | -230.852 | -441.015 | 2.9928E-02 (2002,010,0800) | 2.6154E-02 (2002,010,0900) | 2.1661E-02 (2002,010,0700) | 1.4840E-02 (2002,010,1000) |
| 1336 | -228.600 | -441.079 | 3.0691E-02 (2002,010,0800) | 2.5971E-02 (2002,010,0900) | 2.2696E-02 (2002,010,0700) | 1.4239E-02 (2002,010,1000) |
| 1337 | -226.349 | -441.143 | 3.1209E-02 (2002,010,0800) | 2.5567E-02 (2002,010,0900) | 2.3585E-02 (2002,010,0700) | 1.3536E-02 (2002,010,1000) |
| 1338 | -224.097 | -441.206 | 3.1466E-02 (2002,010,0800) | 2.4949E-02 (2002,010,0900) | 2.4310E-02 (2002,010,0700) | 1.2682E-02 (2002,010,1000) |
| 1339 | -221.845 | -441.269 | 3.1181E-02 (2002,010,0800) | 2.4465E-02 (2002,010,0700) | 2.4038E-02 (2002,010,0900) | 1.1837E-02 (2002,010,0600) |
| 1340 | -219.594 | -441.331 | 3.1133E-02 (2002,010,0800) | 2.5165E-02 (2002,010,0700) | 2.3118E-02 (2002,010,0900) | 1.2537E-02 (2002,010,0600) |
| 1341 | -217.342 | -441.392 | 3.0646E-02 (2002,010,0800) | 2.5355E-02 (2002,010,0700) | 2.2023E-02 (2002,010,0900) | 1.2784E-02 (2002,010,0600) |
| 1342 | -215.090 | -441.453 | 2.9870E-02 (2002,010,0800) | 2.5314E-02 (2002,010,0700) | 2.0779E-02 (2002,010,0900) | 1.2933E-02 (2002,010,0600) |
| 1343 | -212.838 | -441.513 | 2.8873E-02 (2002,010,0800) | 2.5079E-02 (2002,010,0700) | 1.9454E-02 (2002,010,0900) | 1.2992E-02 (2002,010,0600) |
| 1344 | -401.768 | -431.488 | 8.8393E-03 (2002,324,0600) | 7.4453E-03 (2002,324,0500) | 5.7929E-03 (2002,324,0700) | 3.9731E-03 (2002,324,0400) |
| 1345 | -399.519 | -431.601 | 8.8302E-03 (2002,324,0600) | 7.9377E-03 (2002,324,0500) | 5.3934E-03 (2002,324,0700) | 4.4381E-03 (2002,324,0400) |
| 1346 | -397.270 | -431.713 | 8.7835E-03 (2002,324,0600) | 8.4453E-03 (2002,324,0500) | 4.9810E-03 (2002,324,0700) | 4.9590E-03 (2002,324,0400) |
| 1347 | -386.025 | -432.262 | 5.4809E-03 (2002,324,0500) | 4.9675E-03 (2002,324,0400) | 4.0129E-03 (2002,324,0600) | 2.9390E-03 (2002,324,0300) |
| 1348 | -383.776 | -432.370 | 1.0017E-02 (2002,324,0500) | 8.1192E-03 (2002,324,0400) | 6.6485E-03 (2002,324,0600) | 4.2934E-03 (2002,324,0300) |
| 1349 | -381.526 | -432.477 | 9.9251E-03 (2002,324,0500) | 8.5499E-03 (2002,324,0400) | 6.0714E-03 (2002,324,0600) | 4.6663E-03 (2002,324,0300) |
| 1350 | -379.277 | -432.584 | 9.7208E-03 (2002,324,0500) | 8.9197E-03 (2002,324,0400) | 5.4719E-03 (2002,324,0600) | 5.0370E-03 (2002,324,0300) |
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| 1353 | -372.529 | -432.900 | 9.5144E-03 (2002,324,0400) | 8.4326E-03 (2002,324,0500) | 6.0123E-03 (2002,324,0300) | 3.6814E-03 (2002,324,0600) |
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| 1359 | -354.534 | -433.716 | 6.6029E-03 (2002,324,0400) | 6.4094E-03 (2002,324,0300) | 3.6743E-03 (2002,324,0200) | 3.0008E-03 (2002,324,0500) |
| 1360 | -352.284 | -433.815 | 5.8663E-03 (2002,324,0300) | 5.6693E-03 (2002,324,0400) | 3.4545E-03 (2002,324,0200) | 3.0499E-03 (2002,024,1100) |
| 1361 | -350.035 | -433.914 | 5.5413E-03 (2002,324,0300) | 4.9770E-03 (2002,324,0400) | 3.3644E-03 (2002,024,1000) | 3.3340E-03 (2002,324,0200) |
| 1362 | -347.785 | -434.012 | 5.0337E-03 (2002,324,0300) | 4.1963E-03 (2002,324,0400) | 3.7792E-03 (2002,024,1000) | 3.4899E-03 (2002,024,1100) |
| 1363 | -246.527 | -437.763 | 2.0975E-02 (2002,010,0900) | 2.0304E-02 (2002,010,0800) | 1.4837E-02 (2002,010,1000) | 1.3285E-02 (2002,010,0700) |
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| 1366 | -239.775 | -437.967 | 2.5477E-02 (2002,010,0800) | 2.4074E-02 (2002,010,0900) | 1.7866E-02 (2002,010,0700) | 1.5572E-02 (2002,010,1000) |
| 1367 | -237.524 | -438.034 | 2.7036E-02 (2002,010,0800) | 2.4788E-02 (2002,010,0900) | 1.9383E-02 (2002,010,0700) | 1.5580E-02 (2002,010,1000) |
| 1368 | -235.273 | -438.101 | 2.8449E-02 (2002,010,0800) | 2.5306E-02 (2002,010,0900) | 2.0850E-02 (2002,010,0700) | 1.5320E-02 (2002,010,1000) |
| 1369 | -233.022 | -438.166 | 2.9689E-02 (2002,010,0800) | 2.5608E-02 (2002,010,0900) | 2.2229E-02 (2002,010,0700) | 1.4925E-02 (2002,010,1000) |
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| 1372 | -226.270 | -438.360 | 3.1711E-02 (2002,010,0800) | 2.5150E-02 (2002,010,0700) | 2.5036E-02 (2002,010,0900) | 1.2611E-02 (2002,010,0600) |
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| 1374 | -221.768 | -438.485 | 3.0501E-02 (2002,010,0800) | 2.5252E-02 (2002,010,0700) | 2.3505E-02 (2002,010,0900) | 1.3214E-02 (2002,010,0600) |
| 1375 | -219.517 | -438.547 | 3.0277E-02 (2002,010,0800) | 2.5647E-02 (2002,010,0700) | 2.2486E-02 (2002,010,0900) | 1.3568E-02 (2002,010,0600) |
| 1376 | -217.267 | -438.609 | 3.1007E-02 (2002,010,0800) | 2.6964E-02 (2002,010,0700) | 2.1408E-02 (2002,010,0900) | 1.4189E-02 (2002,010,0600) |
| 1377 | -215.016 | -438.669 | 3.0298E-02 (2002,010,0800) | 2.7139E-02 (2002,010,0700) | 2.0290E-02 (2002,010,0900) | 1.4642E-02 (2002,010,0600) |
| 1378 | -212.765 | -438.729 | 2.9222E-02 (2002,010,0800) | 2.6837E-02 (2002,010,0700) | 1.8882E-02 (2002,010,0900) | 1.4681E-02 (2002,010,0600) |
| 1379 | -210.514 | -438.789 | 2.8102E-02 (2002,010,0800) | 2.6520E-02 (2002,010,0700) | 1.7758E-02 (2002,010,0900) | 1.4756E-02 (2002,010,0600) |
| 1380 | -208.263 | -438.847 | 2.6666E-02 (2002,010,0800) | 2.5834E-02 (2002,010,0700) | 1.6253E-02 (2002,010,0900) | 1.4599E-02 (2002,010,0600) |
| 1381 | -206.012 | -438.905 | 2.5106E-02 (2002,010,0800) | 2.4992E-02 (2002,010,0700) | 1.4781E-02 (2002,010,0900) | 1.4354E-02 (2002,010,0600) |
| 1382 | -203.761 | -438.963 | 2.4015E-02 (2002,010,0700) | 2.3465E-02 (2002,010,0800) | 1.4040E-02 (2002,010,0600) | 1.3305E-02 (2002,010,0900) |
| 1383 | -401.629 | -428.708 | 8.5950E-03 (2002,324,0600) | 7.2445E-03 (2002,324,0500) | 5.7395E-03 (2002,324,0700) | 3.8822E-03 (2002,324,0400) |
| 1384 | -399.380 | -428.820 | 8.7915E-03 (2002,324,0600) | 7.9317E-03 (2002,324,0500) | 5.4277E-03 (2002,324,0700) | 4.4685E-03 (2002,324,0400) |
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| 1387 | -390.387 | -429.263 | 7.6979E-03 (2002,324,0500) | 6.6735E-03 (2002,324,0600) | 5.4692E-03 (2002,324,0400) | 3.3479E-03 (2002,324,0700) |
| 1388 | -388.139 | -429.372 | 9.6437E-03 (2002,324,0500) | 7.5059E-03 (2002,324,0600) | 7.0356E-03 (2002,324,0400) | 3.4830E-03 (2002,324,0300) |
| 1389 | -385.891 | -429.481 | 1.0204E-02 (2002,324,0500) | 7.9156E-03 (2002,324,0400) | 7.3120E-03 (2002,324,0600) | 4.0831E-03 (2002,324,0300) |
| 1390 | -383.642 | -429.589 | 1.0267E-02 (2002,324,0500) | 8.4489E-03 (2002,324,0400) | 6.7974E-03 (2002,324,0600) | 4.5080E-03 (2002,324,0300) |
| 1391 | -381.394 | -429.696 | 1.0182E-02 (2002,324,0500) | 8.9110E-03 (2002,324,0400) | 6.2215E-03 (2002,324,0600) | 4.9160E-03 (2002,324,0300) |
| 1392 | -379.146 | -429.803 | 9.9621E-03 (2002,324,0500) | 9.2964E-03 (2002,324,0400) | 5.6112E-03 (2002,324,0600) | 5.3104E-03 (2002,324,0300) |
| 1393 | -376.897 | -429.909 | 9.8043E-03 (2002,324,0500) | 9.7921E-03 (2002,324,0400) | 5.8310E-03 (2002,324,0300) | 5.0703E-03 (2002,324,0600) |
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| 1395 | -367.903 | -430.327 | 1.0096E-02 (2002,324,0400) | 7.5302E-03 (2002,324,0500) | 7.1472E-03 (2002,324,0300) | 3.7449E-03 (2002,324,0200) |
| 1396 | -365.654 | -430.430 | 9.8997E-03 (2002,324,0400) | 7.3657E-03 (2002,324,0300) | 6.8122E-03 (2002,324,0500) | 3.8971E-03 (2002,324,0200) |
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| 1398 | -352.162 | -431.034 | 7.0593E-03 (2002,324,0300) | 6.5332E-03 (2002,324,0400) | 4.1203E-03 (2002,324,0200) | 2.9734E-03 (2002,024,1000) |
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| 1400 | -347.664 | -431.230 | 5.9298E-03 (2002,324,0300) | 4.7375E-03 (2002,324,0400) | 3.8134E-03 (2002,024,1000) | 3.6850E-03 (2002,324,0200) |
| 1401 | -248.691 | -434.910 | 1.8911E-02 (2002,010,0900) | 1.8664E-02 (2002,010,0800) | 1.3534E-02 (2002,010,1000) | 1.3496E-02 (2002,262,0600) |
| 1402 | -246.441 | -434.980 | 2.0490E-02 (2002,010,0800) | 2.0176E-02 (2002,010,0900) | 1.4171E-02 (2002,010,0700) | 1.4047E-02 (2002,010,1000) |
| 1403 | -244.191 | -435.049 | 2.2320E-02 (2002,010,0800) | 2.1352E-02 (2002,010,0900) | 1.5812E-02 (2002,010,0700) | 1.4472E-02 (2002,010,1000) |
| 1404 | -241.942 | -435.117 | 2.4106E-02 (2002,010,0800) | 2.2416E-02 (2002,010,0900) | 1.7480E-02 (2002,010,0700) | 1.4798E-02 (2002,010,1000) |
| 1405 | -239.692 | -435.184 | 2.5831E-02 (2002,010,0800) | 2.3333E-02 (2002,010,0900) | 1.9159E-02 (2002,010,0700) | 1.4976E-02 (2002,010,1000) |
| 1406 | -237.442 | -435.251 | 2.7441E-02 (2002,010,0800) | 2.4078E-02 (2002,010,0900) | 2.0817E-02 (2002,010,0700) | 1.4841E-02 (2002,010,1000) |
| 1407 | -235.192 | -435.318 | 2.8905E-02 (2002,010,0800) | 2.4636E-02 (2002,010,0900) | 2.2411E-02 (2002,010,0700) | 1.4760E-02 (2002,010,1000) |
| 1408 | -232.942 | -435.383 | 3.0177E-02 (2002,010,0800) | 2.4989E-02 (2002,010,0900) | 2.3912E-02 (2002,010,0700) | 1.4518E-02 (2002,010,1000) |
| 1409 | -230.692 | -435.448 | 3.1002E-02 (2002,010,0800) | 2.5064E-02 (2002,010,0700) | 2.5018E-02 (2002,010,0900) | 1.3490E-02 (2002,010,1000) |
| 1410 | -228.442 | -435.513 | 3.1624E-02 (2002,010,0800) | 2.5957E-02 (2002,010,0700) | 2.4764E-02 (2002,010,0900) | 1.3684E-02 (2002,010,0600) |
| 1411 | -226.192 | -435.577 | 3.2179E-02 (2002,010,0800) | 2.7005E-02 (2002,010,0700) | 2.4416E-02 (2002,010,0900) | 1.4411E-02 (2002,010,0600) |

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|---|---|---|---|---|---|---|
| 1412 | -223.941 | -435.640 | 3.1832E-02 (2002,010,0800) | 2.7093E-02 (2002,010,0700) | 2.3722E-02 (2002,010,0900) | 1.4700E-02 (2002,010,0600) |
| 1413 | -221.691 | -435.702 | 3.2379E-02 (2002,010,0800) | 2.8444E-02 (2002,010,0700) | 2.3028E-02 (2002,010,0900) | 1.5523E-02 (2002,010,0600) |
| 1414 | -219.441 | -435.764 | 3.1955E-02 (2002,010,0800) | 2.8734E-02 (2002,010,0700) | 2.1928E-02 (2002,010,0900) | 1.5849E-02 (2002,010,0600) |
| 1415 | -217.191 | -435.825 | 3.1426E-02 (2002,010,0800) | 2.9087E-02 (2002,010,0700) | 2.0876E-02 (2002,010,0900) | 1.6410E-02 (2002,010,0600) |
| 1416 | -214.941 | -435.886 | 2.9225E-02 (2002,010,0800) | 2.7456E-02 (2002,010,0700) | 1.9502E-02 (2002,010,0900) | 1.5805E-02 (2002,010,0600) |
| 1417 | -212.691 | -435.946 | 2.9329E-02 (2002,010,0800) | 2.8414E-02 (2002,010,0700) | 1.8223E-02 (2002,010,0900) | 1.6305E-02 (2002,010,0600) |
| 1418 | -210.441 | -436.005 | 2.8242E-02 (2002,010,0700) | 2.8223E-02 (2002,010,0800) | 1.6927E-02 (2002,010,0900) | 1.6668E-02 (2002,010,0600) |
| 1419 | -208.190 | -436.064 | 2.7473E-02 (2002,010,0700) | 2.6731E-02 (2002,010,0800) | 1.6453E-02 (2002,010,0600) | 1.5674E-02 (2002,010,0900) |
| 1420 | -205.940 | -436.122 | 2.6509E-02 (2002,010,0700) | 2.5088E-02 (2002,010,0800) | 1.6134E-02 (2002,010,0600) | 1.4237E-02 (2002,010,0900) |
| 1421 | -203.690 | -436.179 | 2.5398E-02 (2002,010,0700) | 2.3369E-02 (2002,010,0800) | 1.5735E-02 (2002,010,0600) | 1.2855E-02 (2002,010,0900) |
| 1422 | -401.489 | -425.927 | 8.3457E-03 (2002,324,0600) | 7.0193E-03 (2002,324,0500) | 5.6986E-03 (2002,324,0700) | 3.7791E-03 (2002,324,0400) |
| 1423 | -399.242 | -426.039 | 8.5716E-03 (2002,324,0600) | 7.7186E-03 (2002,324,0500) | 5.4145E-03 (2002,324,0700) | 4.3743E-03 (2002,324,0400) |
| 1424 | -396.994 | -426.151 | 8.4672E-03 (2002,324,0600) | 8.1399E-03 (2002,324,0500) | 5.0125E-03 (2002,324,0700) | 4.8443E-03 (2002,324,0400) |
| 1425 | -394.747 | -426.262 | 6.6106E-03 (2002,324,0600) | 6.5287E-03 (2002,324,0500) | 4.3620E-03 (2002,324,0400) | 3.3767E-03 (2002,324,0700) |
| 1426 | -392.499 | -426.372 | 9.3687E-03 (2002,324,0500) | 8.4272E-03 (2002,324,0600) | 6.2076E-03 (2002,324,0400) | 4.2532E-03 (2002,324,0700) |
| 1427 | -390.252 | -426.482 | 9.6037E-03 (2002,324,0500) | 8.0501E-03 (2002,324,0600) | 6.7157E-03 (2002,324,0400) | 3.8004E-03 (2002,324,0700) |
| 1428 | -388.004 | -426.591 | 1.0053E-02 (2002,324,0500) | 7.7989E-03 (2002,324,0600) | 7.4463E-03 (2002,324,0400) | 3.7462E-03 (2002,324,0300) |
| 1429 | -385.757 | -426.700 | 1.0260E-02 (2002,324,0500) | 8.0538E-03 (2002,324,0400) | 7.3720E-03 (2002,324,0600) | 4.1938E-03 (2002,324,0300) |
| 1430 | -383.509 | -426.808 | 1.0327E-02 (2002,324,0500) | 8.6107E-03 (2002,324,0400) | 6.8661E-03 (2002,324,0600) | 4.6376E-03 (2002,324,0300) |
| 1431 | -381.262 | -426.915 | 1.0327E-02 (2002,324,0500) | 9.1671E-03 (2002,324,0400) | 6.3399E-03 (2002,324,0600) | 5.1269E-03 (2002,324,0300) |
| 1432 | -379.014 | -427.022 | 1.0213E-02 (2002,324,0500) | 9.6777E-03 (2002,324,0400) | 5.7813E-03 (2002,324,0600) | 5.6282E-03 (2002,324,0300) |
| 1433 | -376.766 | -427.128 | 1.0276E-02 (2002,324,0400) | 1.0125E-02 (2002,324,0500) | 6.2423E-03 (2002,324,0300) | 5.2679E-03 (2002,324,0600) |
| 1434 | -374.519 | -427.233 | 1.0430E-02 (2002,324,0400) | 9.5916E-03 (2002,324,0500) | 6.5921E-03 (2002,324,0300) | 4.6081E-03 (2002,324,0600) |
| 1435 | -365.527 | -427.648 | 1.0677E-02 (2002,324,0400) | 8.2048E-03 (2002,324,0300) | 7.2293E-03 (2002,324,0500) | 4.2583E-03 (2002,324,0200) |
| 1436 | -349.792 | -428.351 | 7.5996E-03 (2002,324,0300) | 6.2943E-03 (2002,324,0400) | 4.6383E-03 (2002,324,0200) | 3.3697E-03 (2002,024,1000) |
| 1437 | -347.544 | -428.448 | 7.0511E-03 (2002,324,0300) | 5.4008E-03 (2002,324,0400) | 4.4538E-03 (2002,324,0200) | 3.8228E-03 (2002,024,1000) |
| 1438 | -345.296 | -428.546 | 6.3815E-03 (2002,324,0300) | 4.5134E-03 (2002,324,0400) | 4.2830E-03 (2002,024,1000) | 4.1969E-03 (2002,324,0200) |
| 1439 | -250.854 | -432.057 | 1.6777E-02 (2002,010,0800) | 1.6675E-02 (2002,010,0900) | 1.4104E-02 (2002,262,0600) | 1.2082E-02 (2002,010,1000) |
| 1440 | -248.605 | -432.128 | 1.8606E-02 (2002,010,0800) | 1.7988E-02 (2002,010,0900) | 1.4070E-02 (2002,262,0600) | 1.3281E-02 (2002,010,0700) |
| 1441 | -246.356 | -432.197 | 2.0462E-02 (2002,010,0800) | 1.9253E-02 (2002,010,0900) | 1.4979E-02 (2002,010,0700) | 1.3892E-02 (2002,262,0600) |
| 1442 | -244.107 | -432.266 | 2.0453E-02 (2002,010,0800) | 2.0328E-02 (2002,010,0900) | 1.5118E-02 (2002,010,0700) | 1.3356E-02 (2002,010,1000) |
| 1443 | -241.858 | -432.334 | 2.2161E-02 (2002,010,0800) | 2.1378E-02 (2002,010,0900) | 1.6771E-02 (2002,010,0700) | 1.3597E-02 (2002,010,1000) |
| 1444 | -239.608 | -432.401 | 2.5596E-02 (2002,010,0800) | 2.2342E-02 (2002,010,0900) | 1.9909E-02 (2002,010,0700) | 1.3777E-02 (2002,010,1000) |
| 1445 | -237.359 | -432.468 | 2.7516E-02 (2002,010,0800) | 2.3236E-02 (2002,010,0900) | 2.2097E-02 (2002,010,0700) | 1.4039E-02 (2002,010,1000) |
| 1446 | -235.110 | -432.535 | 2.8667E-02 (2002,010,0800) | 2.3630E-02 (2002,010,0900) | 2.3320E-02 (2002,010,0700) | 1.3548E-02 (2002,010,1000) |
| 1447 | -232.861 | -432.600 | 3.0138E-02 (2002,010,0800) | 2.5252E-02 (2002,010,0700) | 2.4139E-02 (2002,010,0900) | 1.4174E-02 (2002,010,0600) |
| 1448 | -230.612 | -432.665 | 3.1018E-02 (2002,010,0800) | 2.6382E-02 (2002,010,0700) | 2.4099E-02 (2002,010,0900) | 1.4717E-02 (2002,010,0600) |
| 1449 | -228.362 | -432.730 | 3.0009E-02 (2002,010,0800) | 2.5946E-02 (2002,010,0700) | 2.3859E-02 (2002,010,0900) | 1.4948E-02 (2002,010,0600) |
| 1450 | -226.113 | -432.793 | 3.2338E-02 (2002,010,0800) | 2.8753E-02 (2002,010,0700) | 2.3603E-02 (2002,010,0900) | 1.6374E-02 (2002,010,0600) |
| 1451 | -223.864 | -432.857 | 3.2672E-02 (2002,010,0800) | 2.9877E-02 (2002,010,0700) | 2.3150E-02 (2002,010,0900) | 1.7380E-02 (2002,010,0600) |
| 1452 | -221.614 | -432.919 | 3.2571E-02 (2002,010,0800) | 3.0475E-02 (2002,010,0700) | 2.2305E-02 (2002,010,0900) | 1.7911E-02 (2002,010,0600) |
| 1453 | -219.365 | -432.981 | 3.2474E-02 (2002,010,0800) | 3.1173E-02 (2002,010,0700) | 2.2161E-02 (2002,010,0900) | 1.8601E-02 (2002,010,0600) |
| 1454 | -217.116 | -433.042 | 3.1543E-02 (2002,010,0800) | 3.0972E-02 (2002,010,0700) | 2.0279E-02 (2002,010,0900) | 1.8665E-02 (2002,010,0600) |
| 1455 | -214.866 | -433.103 | 2.8547E-02 (2002,010,0700) | 2.8395E-02 (2002,010,0800) | 1.8850E-02 (2002,010,0900) | 1.7685E-02 (2002,010,0600) |
| 1456 | -212.617 | -433.163 | 2.7795E-02 (2002,010,0700) | 2.6661E-02 (2002,010,0800) | 1.7621E-02 (2002,010,0600) | 1.7515E-02 (2002,010,0900) |
| 1457 | -210.368 | -433.222 | 2.8132E-02 (2002,010,0700) | 2.6843E-02 (2002,010,0800) | 1.7665E-02 (2002,010,0600) | 1.6358E-02 (2002,010,0900) |
| 1458 | -208.118 | -433.281 | 2.8647E-02 (2002,010,0700) | 2.6312E-02 (2002,010,0800) | 1.8137E-02 (2002,010,0600) | 1.5009E-02 (2002,010,0900) |
| 1459 | -205.869 | -433.339 | 2.7858E-02 (2002,010,0700) | 2.4833E-02 (2002,010,0800) | 1.8022E-02 (2002,010,0600) | 1.3819E-02 (2002,010,0900) |
| 1460 | -203.619 | -433.396 | 2.6607E-02 (2002,010,0700) | 2.3053E-02 (2002,010,0800) | 1.7512E-02 (2002,010,0600) | 1.2419E-02 (2002,010,0900) |
| 1461 | -401.350 | -423.146 | 4.6824E-03 (2002,324,0600) | 3.8383E-03 (2002,324,0500) | 3.2045E-03 (2002,324,0700) | 2.9010E-03 (2002,036,0800) |
| 1462 | -399.103 | -423.258 | 8.2665E-03 (2002,324,0600) | 7.3973E-03 (2002,324,0500) | 5.3829E-03 (2002,324,0700) | 4.2064E-03 (2002,324,0400) |
| 1463 | -396.857 | -423.370 | 8.2281E-03 (2002,324,0600) | 7.8633E-03 (2002,324,0500) | 5.0181E-03 (2002,324,0700) | 4.7084E-03 (2002,324,0400) |
| 1464 | -394.610 | -423.481 | 8.7167E-03 (2002,324,0500) | 8.4621E-03 (2002,324,0600) | 5.5138E-03 (2002,324,0400) | 4.7186E-03 (2002,324,0700) |
| 1465 | -392.363 | -423.592 | 9.2093E-03 (2002,324,0500) | 8.3277E-03 (2002,324,0600) | 6.1500E-03 (2002,324,0400) | 4.3177E-03 (2002,324,0700) |
| 1466 | -390.117 | -423.701 | 9.6054E-03 (2002,324,0500) | 8.0823E-03 (2002,324,0600) | 6.7811E-03 (2002,324,0400) | 3.8968E-03 (2002,324,0700) |
| 1467 | -387.870 | -423.810 | 9.9300E-03 (2002,324,0500) | 7.7611E-03 (2002,324,0600) | 7.4233E-03 (2002,324,0400) | 3.7709E-03 (2002,324,0300) |
| 1468 | -385.623 | -423.919 | 1.0240E-02 (2002,324,0500) | 8.1239E-03 (2002,324,0400) | 7.4134E-03 (2002,324,0600) | 4.2804E-03 (2002,324,0300) |
| 1469 | -383.376 | -424.027 | 1.0360E-02 (2002,324,0500) | 8.7381E-03 (2002,324,0400) | 6.9491E-03 (2002,324,0600) | 4.7814E-03 (2002,324,0300) |
| 1470 | -381.129 | -424.134 | 1.0486E-02 (2002,324,0500) | 9.4273E-03 (2002,324,0400) | 6.4946E-03 (2002,324,0600) | 5.3699E-03 (2002,324,0300) |
| 1471 | -378.882 | -424.241 | 1.0464E-02 (2002,324,0500) | 1.0047E-02 (2002,324,0400) | 5.9809E-03 (2002,324,0600) | 5.9706E-03 (2002,324,0300) |
| 1472 | -376.636 | -424.347 | 1.0499E-02 (2002,324,0400) | 1.0218E-02 (2002,324,0500) | 6.5051E-03 (2002,324,0300) | 5.3931E-03 (2002,324,0600) |
| 1473 | -347.423 | -425.667 | 7.6647E-03 (2002,324,0300) | 5.6543E-03 (2002,324,0400) | 4.9697E-03 (2002,324,0200) | 3.6911E-03 (2002,024,1000) |
| 1474 | -345.176 | -425.764 | 7.0951E-03 (2002,324,0300) | 4.8290E-03 (2002,324,0400) | 4.8053E-03 (2002,324,0200) | 4.1667E-03 (2002,024,1000) |
| 1475 | -342.929 | -425.860 | 6.3800E-03 (2002,324,0300) | 4.6182E-03 (2002,024,1000) | 4.5152E-03 (2002,324,0200) | 3.9877E-03 (2002,324,0400) |
| 1476 | -340.681 | -425.956 | 5.6839E-03 (2002,324,0300) | 5.0819E-03 (2002,024,1000) | 4.2407E-03 (2002,324,0200) | 3.7557E-03 (2002,024,1100) |
| 1477 | -336.186 | -426.146 | 6.0832E-03 (2002,024,1000) | 4.3754E-03 (2002,324,0300) | 4.0703E-03 (2002,024,0900) | 3.9720E-03 (2002,024,1100) |
| 1478 | -255.264 | -429.133 | 1.4265E-02 (2002,262,0600) | 1.3334E-02 (2002,024,0500) | 1.3065E-02 (2002,010,0900) | 1.3032E-02 (2002,010,0800) |
| 1479 | -253.015 | -429.204 | 1.4720E-02 (2002,010,0800) | 1.4523E-02 (2002,262,0600) | 1.4363E-02 (2002,010,0900) | 1.2850E-02 (2002,024,0500) |
| 1480 | -250.767 | -429.275 | 1.6496E-02 (2002,010,0800) | 1.5674E-02 (2002,010,0900) | 1.4642E-02 (2002,262,0600) | 1.2162E-02 (2002,024,0500) |
| 1481 | -248.519 | -429.345 | 1.7675E-02 (2002,010,0800) | 1.6868E-02 (2002,010,0900) | 1.3060E-02 (2002,010,0700) | 1.1620E-02 (2002,010,1000) |
| 1482 | -246.270 | -429.414 | 1.8223E-02 (2002,010,0800) | 1.8079E-02 (2002,010,0900) | 1.3903E-02 (2002,010,0700) | 1.2097E-02 (2002,010,1000) |
| 1483 | -244.022 | -429.483 | 1.8821E-02 (2002,010,0900) | 1.8539E-02 (2002,010,0800) | 1.4845E-02 (2002,010,0700) | 1.2467E-02 (2002,010,1000) |
| 1484 | -241.774 | -429.551 | 2.1928E-02 (2002,010,0800) | 2.0304E-02 (2002,010,0900) | 1.7551E-02 (2002,010,0700) | 1.2783E-02 (2002,010,1000) |
| 1485 | -239.525 | -429.619 | 2.0564E-02 (2002,010,0900) | 2.0512E-02 (2002,010,0800) | 1.7631E-02 (2002,010,0700) | 1.2915E-02 (2002,010,1000) |
| 1486 | -237.277 | -429.685 | 2.3382E-02 (2002,010,0800) | 2.1678E-02 (2002,010,0900) | 2.0040E-02 (2002,010,0700) | 1.2980E-02 (2002,010,1000) |
| 1487 | -235.028 | -429.752 | 2.6419E-02 (2002,010,0800) | 2.2661E-02 (2002,010,0700) | 2.2501E-02 (2002,010,0900) | 1.3647E-02 (2002,010,0600) |
| 1488 | -232.780 | -429.817 | 2.7687E-02 (2002,010,0800) | 2.4275E-02 (2002,010,0700) | 2.2850E-02 (2002,010,0900) | 1.4754E-02 (2002,010,0600) |
| 1489 | -230.532 | -429.882 | 3.0908E-02 (2002,010,0800) | 2.7860E-02 (2002,010,0700) | 2.3122E-02 (2002,010,0900) | 1.6641E-02 (2002,010,0600) |
| 1490 | -228.283 | -429.947 | 3.1728E-02 (2002,010,0800) | 2.9248E-02 (2002,010,0700) | 2.3049E-02 (2002,010,0900) | 1.7639E-02 (2002,010,0600) |
| 1491 | -226.035 | -430.010 | 3.2232E-02 (2002,010,0800) | 3.0384E-02 (2002,010,0700) | 2.2747E-02 (2002,010,0900) | 1.8504E-02 (2002,010,0600) |
| 1492 | -223.786 | -430.073 | 3.2429E-02 (2002,010,0800) | 3.1276E-02 (2002,010,0700) | 2.2255E-02 (2002,010,0900) | 1.9234E-02 (2002,010,0600) |
| 1493 | -221.538 | -430.136 | 3.2501E-02 (2002,010,0800) | 3.2276E-02 (2002,010,0700) | 2.1640E-02 (2002,010,0900) | 2.0323E-02 (2002,010,0600) |
| 1494 | -219.289 | -430.198 | 3.2876E-02 (2002,010,0700) | 3.2296E-02 (2002,010,0800) | 2.1117E-02 (2002,010,0900) | 2.0924E-02 (2002,010,0600) |
| 1495 | -217.040 | -430.259 | 3.2251E-02 (2002,010,0700) | 3.1152E-02 (2002,010,0800) | 2.0465E-02 (2002,010,0600) | 1.9676E-02 (2002,010,0900) |
| 1496 | -214.792 | -430.320 | 3.2311E-02 (2002,010,0700) | 3.0272E-02 (2002,010,0800) | 2.1005E-02 (2002,010,0600) | 1.8546E-02 (2002,010,0900) |
| 1497 | -212.543 | -430.379 | 3.1695E-02 (2002,010,0700) | 2.8961E-02 (2002,010,0800) | 2.0798E-02 (2002,010,0600) | 1.7266E-02 (2002,010,0900) |
| 1498 | -210.295 | -430.439 | 2.9984E-02 (2002,010,0700) | 2.7026E-02 (2002,010,0800) | 1.9862E-02 (2002,010,0600) | 1.5914E-02 (2002,010,0900) |
| 1499 | -208.046 | -430.497 | 2.8423E-02 (2002,010,0700) | 2.4921E-02 (2002,010,0800) | 1.9293E-02 (2002,010,0600) | 1.4542E-02 (2002,010,0900) |
| 1500 | -205.797 | -430.556 | 2.8991E-02 (2002,010,0700) | 2.4354E-02 (2002,010,0800) | 1.9980E-02 (2002,010,0600) | 1.3351E-02 (2002,010,0900) |
| 1501 | -203.549 | -430.613 | 2.7593E-02 (2002,010,0700) | 2.2521E-02 (2002,010,0800) | 1.9356E-02 (2002,010,0600) | 1.1920E-02 (2002,010,0900) |
| 1502 | -396.719 | -420.589 | 8.0026E-03 (2002,324,0600) | 7.5787E-03 (2002,324,0500) | 5.0333E-03 (2002,324,0700) | 4.5593E-03 (2002,324,0400) |
| 1503 | -394.473 | -420.700 | 8.4237E-03 (2002,324,0500) | 8.2574E-03 (2002,324,0600) | 5.3544E-03 (2002,324,0400) | 4.7533E-03 (2002,324,0700) |
| 1504 | -392.227 | -420.811 | 8.9316E-03 (2002,324,0500) | 8.1652E-03 (2002,324,0600) | 5.9998E-03 (2002,324,0400) | 4.3713E-03 (2002,324,0700) |
| 1505 | -389.981 | -420.921 | 9.3138E-03 (2002,324,0500) | 7.9390E-03 (2002,324,0600) | 6.6183E-03 (2002,324,0400) | 3.9604E-03 (2002,324,0700) |
| 1506 | -387.735 | -421.030 | 9.6222E-03 (2002,324,0500) | 7.6335E-03 (2002,324,0600) | 7.2446E-03 (2002,324,0400) | 3.7138E-03 (2002,324,0300) |
| 1507 | -385.489 | -421.138 | 1.0076E-02 (2002,324,0500) | 8.0578E-03 (2002,324,0400) | 7.3983E-03 (2002,324,0600) | 4.3103E-03 (2002,324,0300) |
| 1508 | -383.243 | -421.246 | 1.0469E-02 (2002,324,0500) | 8.9150E-03 (2002,324,0400) | 7.1010E-03 (2002,324,0600) | 4.9774E-03 (2002,324,0300) |
| 1509 | -380.997 | -421.353 | 1.0464E-02 (2002,324,0500) | 9.4898E-03 (2002,324,0400) | 6.5844E-03 (2002,324,0600) | 5.5109E-03 (2002,324,0300) |
| 1510 | -345.056 | -422.982 | 8.1262E-03 (2002,324,0300) | 5.7229E-03 (2002,324,0200) | 5.3413E-03 (2002,324,0400) | 4.0684E-03 (2002,024,1000) |
| 1511 | -333.823 | -423.459 | 6.3337E-03 (2002,024,1000) | 4.7454E-03 (2002,024,0900) | 4.2466E-03 (2002,324,0300) | 4.0444E-03 (2002,324,0200) |
| 1512 | -259.670 | -426.206 | 1.3924E-02 (2002,024,0500) | 1.3760E-02 (2002,262,0600) | 1.1518E-02 (2002,057,0600) | 1.1328E-02 (2002,262,0700) |
| 1513 | -257.422 | -426.278 | 1.4310E-02 (2002,262,0600) | 1.3890E-02 (2002,024,0500) | 1.1426E-02 (2002,057,0600) | 1.1142E-02 (2002,262,0700) |
| 1514 | -255.175 | -426.350 | 1.2398E-02 (2002,010,0800) | 1.2005E-02 (2002,010,0900) | 1.1014E-02 (2002,057,0500) | 1.0739E-02 (2002,057,0600) |
| 1515 | -252.927 | -426.421 | 1.4120E-02 (2002,010,0800) | 1.3283E-02 (2002,010,0900) | 1.1539E-02 (2002,057,0500) | 1.0685E-02 (2002,010,0700) |
| 1516 | -250.680 | -426.492 | 1.4472E-02 (2002,010,0900) | 1.4447E-02 (2002,010,0800) | 1.1589E-02 (2002,057,0500) | 1.1044E-02 (2002,010,0700) |
| 1517 | -248.432 | -426.562 | 1.5973E-02 (2002,010,0800) | 1.5640E-02 (2002,010,0900) | 1.2542E-02 (2002,010,0700) | 1.1607E-02 (2002,057,0500) |
| 1518 | -246.185 | -426.631 | 1.6380E-02 (2002,010,0900) | 1.5625E-02 (2002,010,0800) | 1.3102E-02 (2002,010,0700) | 1.1201E-02 (2002,010,1000) |
| 1519 | -243.937 | -426.700 | 1.1438E-02 (2002,010,0800) | 1.8238E-02 (2002,010,0900) | 1.8025E-02 (2002,010,0700) | 1.1783E-02 (2002,010,1000) |
| 1520 | -241.690 | -426.768 | 2.3323E-02 (2002,010,0800) | 2.0086E-02 (2002,010,0700) | 1.9365E-02 (2002,010,0900) | 1.2452E-02 (2002,010,0600) |
| 1521 | -239.442 | -426.836 | 2.4385E-02 (2002,010,0800) | 2.1051E-02 (2002,010,0700) | 2.0030E-02 (2002,010,0900) | 1.3017E-02 (2002,010,0600) |
| 1522 | -237.195 | -426.903 | 2.6816E-02 (2002,010,0800) | 2.4179E-02 (2002,010,0700) | 2.1194E-02 (2002,010,0900) | 1.5298E-02 (2002,010,0600) |
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| 1524 | -232.699 | -427.034 | 2.9507E-02 (2002,010,0800) | 2.7760E-02 (2002,010,0700) | 2.1976E-02 (2002,010,0900) | 1.7845E-02 (2002,010,0600) |
| 1525 | -230.452 | -427.099 | 3.0598E-02 (2002,010,0800) | 2.9425E-02 (2002,010,0700) | 2.2187E-02 (2002,010,0900) | 1.9079E-02 (2002,010,0600) |

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|---|---|---|---|---|---|---|
| 1526 | -228.204 | -427.164 | 3.1751E-02 (2002,010,0800) | 3.1307E-02 (2002,010,0700) | 2.2941E-02 (2002,010,0900) | 2.0533E-02 (2002,010,0600) |
| 1527 | -225.956 | -427.227 | 3.1796E-02 (2002,010,0800) | 3.1769E-02 (2002,010,0700) | 2.1948E-02 (2002,010,0900) | 2.0727E-02 (2002,010,0600) |
| 1528 | -223.708 | -427.290 | 3.2968E-02 (2002,010,0700) | 3.2080E-02 (2002,010,0800) | 2.1941E-02 (2002,010,0600) | 2.1572E-02 (2002,010,0900) |
| 1529 | -221.461 | -427.353 | 3.4035E-02 (2002,010,0700) | 3.2292E-02 (2002,010,0800) | 2.2936E-02 (2002,010,0600) | 2.1365E-02 (2002,010,0900) |
| 1530 | -219.213 | -427.415 | 3.4326E-02 (2002,010,0700) | 3.1819E-02 (2002,010,0800) | 2.3364E-02 (2002,010,0600) | 2.0529E-02 (2002,010,0900) |
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| 1532 | -214.717 | -427.536 | 3.3946E-02 (2002,010,0700) | 2.9970E-02 (2002,010,0800) | 2.3620E-02 (2002,010,0600) | 1.8291E-02 (2002,010,0900) |
| 1533 | -212.469 | -427.596 | 3.2950E-02 (2002,010,0700) | 2.8396E-02 (2002,010,0800) | 2.3197E-02 (2002,010,0600) | 1.6817E-02 (2002,010,0900) |
| 1534 | -210.222 | -427.656 | 3.0318E-02 (2002,010,0700) | 2.5828E-02 (2002,010,0800) | 2.1662E-02 (2002,010,0600) | 1.5462E-02 (2002,010,0900) |
| 1535 | -207.974 | -427.714 | 2.8820E-02 (2002,010,0700) | 2.3583E-02 (2002,010,0800) | 2.1125E-02 (2002,010,0600) | 1.4054E-02 (2002,010,0900) |
| 1536 | -205.726 | -427.772 | 2.9857E-02 (2002,010,0700) | 2.3680E-02 (2002,010,0800) | 2.1989E-02 (2002,010,0600) | 1.2962E-02 (2002,010,0900) |
| 1537 | -203.478 | -427.830 | 2.8321E-02 (2002,010,0700) | 2.1832E-02 (2002,010,0800) | 2.1232E-02 (2002,010,0600) | 1.1535E-02 (2002,010,0900) |
| 1538 | -385.355 | -418.357 | 9.8909E-03 (2002,324,0500) | 7.9523E-03 (2002,324,0400) | 7.3962E-03 (2002,324,0600) | 4.3207E-03 (2002,324,0300) |
| 1539 | -347.182 | -420.104 | 9.6519E-03 (2002,324,0300) | 6.7293E-03 (2002,324,0200) | 6.6438E-03 (2002,324,0400) | 3.6626E-03 (2002,324,0100) |
| 1540 | -266.320 | -423.202 | 1.2689E-02 (2002,024,0500) | 1.1808E-02 (2002,262,0600) | 1.1356E-02 (2002,262,0700) | 1.0669E-02 (2002,057,0600) |
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| 1543 | -259.580 | -423.423 | 1.4185E-02 (2002,024,0500) | 1.4102E-02 (2002,262,0600) | 1.1578E-02 (2002,057,0600) | 1.1380E-02 (2002,262,0700) |
| 1544 | -257.333 | -423.496 | 1.4679E-02 (2002,262,0600) | 1.4145E-02 (2002,024,0500) | 1.1480E-02 (2002,057,0600) | 1.1333E-02 (2002,057,0500) |
| 1545 | -255.086 | -423.568 | 1.4549E-02 (2002,262,0600) | 1.3436E-02 (2002,024,0500) | 1.2018E-02 (2002,010,0800) | 1.1899E-02 (2002,057,0500) |
| 1546 | -252.840 | -423.639 | 1.2231E-02 (2002,010,0800) | 1.2101E-02 (2002,010,0900) | 1.1921E-02 (2002,057,0500) | 1.0204E-02 (2002,057,0600) |
| 1547 | -250.593 | -423.709 | 1.3681E-02 (2002,010,0800) | 1.3280E-02 (2002,010,0900) | 1.2093E-02 (2002,057,0500) | 1.1060E-02 (2002,010,0700) |
| 1548 | -248.346 | -423.779 | 1.4742E-02 (2002,010,0800) | 1.4288E-02 (2002,010,0900) | 1.2342E-02 (2002,010,0700) | 1.2063E-02 (2002,057,0500) |
| 1549 | -246.099 | -423.849 | 1.8873E-02 (2002,010,0800) | 1.6412E-02 (2002,010,0700) | 1.5845E-02 (2002,010,0900) | 1.2068E-02 (2002,057,0500) |
| 1550 | -243.853 | -423.917 | 2.0597E-02 (2002,010,0800) | 1.8217E-02 (2002,010,0700) | 1.6819E-02 (2002,010,0900) | 1.1791E-02 (2002,010,0600) |
| 1551 | -241.606 | -423.986 | 2.2750E-02 (2002,010,0800) | 2.0845E-02 (2002,010,0700) | 1.8299E-02 (2002,010,0900) | 1.3928E-02 (2002,010,0600) |
| 1552 | -239.359 | -424.053 | 2.4624E-02 (2002,010,0800) | 2.3105E-02 (2002,010,0700) | 1.9759E-02 (2002,010,0900) | 1.5968E-02 (2002,262,0500) |
| 1553 | -237.112 | -424.120 | 2.6019E-02 (2002,010,0800) | 2.4880E-02 (2002,010,0700) | 1.9791E-02 (2002,010,0900) | 1.6973E-02 (2002,010,0600) |
| 1554 | -234.865 | -424.186 | 2.7478E-02 (2002,010,0800) | 2.6825E-02 (2002,010,0700) | 2.0410E-02 (2002,010,0900) | 1.8392E-02 (2002,010,0600) |
| 1555 | -232.618 | -424.252 | 2.8934E-02 (2002,010,0800) | 2.8910E-02 (2002,010,0700) | 2.0979E-02 (2002,010,0900) | 2.0040E-02 (2002,010,0600) |
| 1556 | -230.371 | -424.317 | 3.0243E-02 (2002,010,0700) | 2.9834E-02 (2002,010,0800) | 2.1190E-02 (2002,010,0900) | 2.0830E-02 (2002,010,0600) |
| 1557 | -228.125 | -424.381 | 3.2433E-02 (2002,010,0700) | 3.1034E-02 (2002,010,0800) | 2.2857E-02 (2002,010,0600) | 2.1542E-02 (2002,010,0900) |
| 1558 | -225.878 | -424.445 | 3.3686E-02 (2002,010,0700) | 3.1549E-02 (2002,010,0800) | 2.3933E-02 (2002,010,0600) | 2.1655E-02 (2002,010,0900) |
| 1559 | -223.631 | -424.508 | 3.4613E-02 (2002,010,0700) | 3.1721E-02 (2002,010,0800) | 2.4807E-02 (2002,010,0600) | 2.1243E-02 (2002,010,0900) |
| 1560 | -221.384 | -424.570 | 3.5217E-02 (2002,010,0700) | 3.1558E-02 (2002,010,0800) | 2.5463E-02 (2002,010,0600) | 2.0648E-02 (2002,010,0900) |
| 1561 | -219.137 | -424.632 | 3.5474E-02 (2002,010,0700) | 3.1068E-02 (2002,010,0800) | 2.5894E-02 (2002,010,0600) | 1.9878E-02 (2002,010,0900) |
| 1562 | -216.890 | -424.693 | 3.5316E-02 (2002,010,0700) | 3.0215E-02 (2002,010,0800) | 2.6077E-02 (2002,010,0600) | 1.8703E-02 (2002,010,0900) |
| 1563 | -214.643 | -424.754 | 3.4481E-02 (2002,010,0700) | 2.8857E-02 (2002,010,0800) | 2.5633E-02 (2002,010,0600) | 1.7559E-02 (2002,010,0900) |
| 1564 | -212.396 | -424.813 | 3.2607E-02 (2002,010,0700) | 2.7034E-02 (2002,010,0800) | 2.4388E-02 (2002,010,0600) | 1.6318E-02 (2002,010,0900) |
| 1565 | -210.149 | -424.873 | 3.0951E-02 (2002,010,0700) | 2.5023E-02 (2002,010,0800) | 2.3692E-02 (2002,010,0600) | 1.5038E-02 (2002,010,0900) |
| 1566 | -207.902 | -424.931 | 2.8435E-02 (2002,010,0700) | 2.2850E-02 (2002,010,0600) | 2.1859E-02 (2002,010,0800) | 1.3610E-02 (2002,010,0900) |
| 1567 | -205.654 | -424.989 | 3.0416E-02 (2002,010,0700) | 2.4005E-02 (2002,010,0600) | 2.2860E-02 (2002,010,0800) | 1.2606E-02 (2002,010,0900) |
| 1568 | -203.407 | -425.047 | 2.8764E-02 (2002,010,0700) | 2.3106E-02 (2002,010,0600) | 2.1021E-02 (2002,010,0800) | 1.1207E-02 (2002,010,0900) |
| 1569 | -349.306 | -417.225 | 1.1007E-02 (2002,324,0300) | 7.9459E-03 (2002,324,0400) | 7.6273E-03 (2002,324,0200) | 3.9798E-03 (2002,324,0100) |
| 1570 | -329.101 | -418.081 | 6.8856E-03 (2002,024,1000) | 6.4946E-03 (2002,024,0900) | 4.8838E-03 (2002,324,0200) | 4.0972E-03 (2002,329,1000) |
| 1571 | -326.856 | -418.173 | 7.0515E-03 (2002,024,0900) | 6.8434E-03 (2002,024,1000) | 4.2784E-03 (2002,329,1000) | 4.1730E-03 (2002,324,0200) |
| 1572 | -302.157 | -419.144 | 1.3032E-02 (2002,061,0700) | 9.9095E-03 (2002,024,0900) | 8.3470E-03 (2002,004,1200) | 7.8903E-03 (2002,024,0800) |
| 1573 | -266.227 | -420.420 | 1.0591E-02 (2002,024,0500) | 1.0417E-02 (2002,057,0600) | 9.5434E-03 (2002,004,1100) | 8.9101E-03 (2002,057,0700) |
| 1574 | -263.981 | -420.494 | 1.0918E-02 (2002,024,0500) | 1.0867E-02 (2002,057,0600) | 9.1325E-03 (2002,004,1100) | 9.0523E-03 (2002,057,0500) |
| 1575 | -261.735 | -420.568 | 1.2796E-02 (2002,024,0500) | 1.1369E-02 (2002,057,0600) | 1.1106E-02 (2002,262,0600) | 1.0136E-02 (2002,057,0500) |
| 1576 | -259.489 | -420.641 | 1.4384E-02 (2002,024,0500) | 1.4341E-02 (2002,262,0600) | 1.1605E-02 (2002,057,0600) | 1.1340E-02 (2002,262,0700) |
| 1577 | -257.244 | -420.713 | 1.4944E-02 (2002,262,0600) | 1.4347E-02 (2002,024,0500) | 1.1859E-02 (2002,057,0500) | 1.1499E-02 (2002,057,0600) |
| 1578 | -254.998 | -420.785 | 1.2051E-02 (2002,057,0500) | 1.0877E-02 (2002,010,0800) | 1.0687E-02 (2002,057,0600) | 9.9356E-03 (2002,024,0500) |
| 1579 | -252.752 | -420.856 | 1.1497E-02 (2002,057,0500) | 1.0707E-02 (2002,010,0900) | 1.0387E-02 (2002,010,0800) | 9.4076E-03 (2002,057,0600) |
| 1580 | -250.506 | -420.927 | 1.4037E-02 (2002,010,0800) | 1.2585E-02 (2002,057,0500) | 1.2102E-02 (2002,010,0900) | 1.2035E-02 (2002,010,0700) |
| 1581 | -248.260 | -420.997 | 1.6181E-02 (2002,010,0800) | 1.4573E-02 (2002,010,0700) | 1.3361E-02 (2002,010,0900) | 1.2661E-02 (2002,057,0500) |
| 1582 | -246.014 | -421.066 | 1.8118E-02 (2002,010,0800) | 1.6790E-02 (2002,010,0700) | 1.4664E-02 (2002,010,0900) | 1.3421E-02 (2002,024,0400) |
| 1583 | -243.768 | -421.135 | 1.9887E-02 (2002,010,0800) | 1.8864E-02 (2002,010,0700) | 1.5714E-02 (2002,010,0900) | 1.3445E-02 (2002,010,0600) |
| 1584 | -241.522 | -421.203 | 2.1592E-02 (2002,010,0800) | 2.0791E-02 (2002,010,0700) | 1.6711E-02 (2002,010,0900) | 1.4735E-02 (2002,010,0600) |
| 1585 | -239.276 | -421.270 | 2.3696E-02 (2002,010,0800) | 2.3604E-02 (2002,010,0700) | 1.8324E-02 (2002,010,0900) | 1.7141E-02 (2002,010,0600) |
| 1586 | -237.030 | -421.337 | 2.5824E-02 (2002,010,0700) | 2.5359E-02 (2002,010,0800) | 1.9233E-02 (2002,010,0900) | 1.8931E-02 (2002,010,0600) |
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| 1588 | -232.538 | -421.469 | 2.9940E-02 (2002,010,0700) | 2.8202E-02 (2002,010,0800) | 2.2332E-02 (2002,010,0600) | 2.0362E-02 (2002,010,0900) |
| 1589 | -230.291 | -421.534 | 3.1735E-02 (2002,010,0700) | 2.9276E-02 (2002,010,0800) | 2.3863E-02 (2002,010,0600) | 2.0697E-02 (2002,010,0900) |
| 1590 | -228.045 | -421.598 | 3.2739E-02 (2002,010,0700) | 2.9708E-02 (2002,010,0800) | 2.4789E-02 (2002,010,0600) | 2.0475E-02 (2002,010,0900) |
| 1591 | -225.799 | -421.662 | 3.4538E-02 (2002,010,0700) | 3.0576E-02 (2002,010,0800) | 2.6399E-02 (2002,010,0600) | 2.0811E-02 (2002,010,0900) |
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| 1593 | -221.307 | -421.787 | 3.6051E-02 (2002,010,0700) | 3.0582E-02 (2002,010,0800) | 2.8032E-02 (2002,010,0600) | 2.0041E-02 (2002,010,0900) |
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| 1595 | -216.814 | -421.910 | 3.6061E-02 (2002,010,0700) | 2.9254E-02 (2002,010,0800) | 2.8617E-02 (2002,010,0600) | 1.8240E-02 (2002,010,0900) |
| 1596 | -214.568 | -421.971 | 3.5233E-02 (2002,010,0700) | 2.8232E-02 (2002,010,0600) | 2.7970E-02 (2002,010,0800) | 1.7120E-02 (2002,010,0900) |
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| 1603 | -324.498 | -415.483 | 8.0773E-03 (2002,024,0900) | 7.1793E-03 (2002,024,1000) | 4.5070E-03 (2002,329,1000) | 4.4362E-03 (2002,324,0200) |
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| 1606 | -268.380 | -417.562 | 1.2292E-02 (2002,061,0700) | 1.2033E-02 (2002,024,0500) | 1.1047E-02 (2002,262,0600) | 1.1009E-02 (2002,004,1100) |
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| 1609 | -261.644 | -417.785 | 1.1586E-02 (2002,024,0500) | 1.1186E-02 (2002,057,0600) | 1.0412E-02 (2002,057,0500) | 9.1174E-03 (2002,004,1100) |
| 1610 | -259.399 | -417.858 | 1.3473E-02 (2002,024,0500) | 1.2489E-02 (2002,262,0600) | 1.1510E-02 (2002,057,0600) | 1.1462E-02 (2002,057,0500) |
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| 1613 | -252.664 | -418.074 | 1.2872E-02 (2002,057,0500) | 1.1848E-02 (2002,010,0800) | 1.0639E-02 (2002,010,0700) | 1.0229E-02 (2002,057,0600) |
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| 1616 | -245.928 | -418.284 | 1.7065E-02 (2002,010,0800) | 1.6810E-02 (2002,010,0700) | 1.3698E-02 (2002,024,0400) | 1.3402E-02 (2002,010,0900) |
| 1617 | -243.683 | -418.352 | 1.9238E-02 (2002,010,0700) | 1.9011E-02 (2002,010,0800) | 1.6541E-02 (2002,262,0500) | 1.5929E-02 (2002,024,0400) |
| 1618 | -241.438 | -418.420 | 2.1491E-02 (2002,010,0700) | 2.0774E-02 (2002,010,0800) | 1.6703E-02 (2002,010,0600) | 1.5795E-02 (2002,010,0900) |
| 1619 | -239.193 | -418.488 | 2.3531E-02 (2002,010,0700) | 2.2330E-02 (2002,010,0800) | 1.8504E-02 (2002,010,0600) | 1.6557E-02 (2002,010,0900) |
| 1620 | -236.947 | -418.555 | 2.6136E-02 (2002,010,0700) | 2.4199E-02 (2002,010,0800) | 2.0687E-02 (2002,010,0600) | 1.7861E-02 (2002,010,0900) |
| 1621 | -234.702 | -418.621 | 2.8324E-02 (2002,010,0700) | 2.5706E-02 (2002,010,0800) | 2.2611E-02 (2002,010,0600) | 1.8658E-02 (2002,010,0900) |
| 1622 | -232.457 | -418.686 | 3.0364E-02 (2002,010,0700) | 2.7014E-02 (2002,010,0800) | 2.4437E-02 (2002,010,0600) | 1.9315E-02 (2002,010,0900) |
| 1623 | -230.211 | -418.751 | 3.2194E-02 (2002,010,0700) | 2.8094E-02 (2002,010,0800) | 2.6117E-02 (2002,010,0600) | 1.9783E-02 (2002,010,0900) |
| 1624 | -227.966 | -418.815 | 3.3764E-02 (2002,010,0700) | 2.8901E-02 (2002,010,0800) | 2.7606E-02 (2002,010,0600) | 2.0045E-02 (2002,010,0900) |
| 1625 | -225.721 | -418.879 | 3.5032E-02 (2002,010,0700) | 2.9400E-02 (2002,010,0800) | 2.8866E-02 (2002,010,0600) | 2.0082E-02 (2002,010,0900) |
| 1626 | -223.475 | -418.942 | 3.5950E-02 (2002,010,0700) | 2.9868E-02 (2002,010,0600) | 2.9583E-02 (2002,010,0800) | 1.9889E-02 (2002,010,0900) |
| 1627 | -221.230 | -419.004 | 3.6501E-02 (2002,010,0700) | 3.0585E-02 (2002,010,0600) | 2.9433E-02 (2002,010,0800) | 1.9460E-02 (2002,010,0900) |
| 1628 | -218.984 | -419.066 | 3.6669E-02 (2002,010,0700) | 3.1010E-02 (2002,010,0600) | 2.8961E-02 (2002,010,0800) | 1.8789E-02 (2002,010,0900) |
| 1629 | -216.739 | -419.127 | 3.6421E-02 (2002,010,0700) | 3.1125E-02 (2002,010,0600) | 2.8160E-02 (2002,010,0800) | 1.7762E-02 (2002,010,0900) |
| 1630 | -214.494 | -419.188 | 3.5858E-02 (2002,010,0700) | 3.0970E-02 (2002,010,0600) | 2.7119E-02 (2002,010,0800) | 1.6862E-02 (2002,010,0900) |
| 1631 | -212.248 | -419.248 | 3.4861E-02 (2002,010,0700) | 3.0508E-02 (2002,010,0600) | 2.5775E-02 (2002,010,0800) | 1.5620E-02 (2002,010,0900) |
| 1632 | -210.003 | -419.307 | 3.3337E-02 (2002,010,0700) | 2.9505E-02 (2002,010,0600) | 2.4121E-02 (2002,010,0800) | 1.4372E-02 (2002,010,0900) |
| 1633 | -207.757 | -419.365 | 2.7937E-02 (2002,010,0700) | 2.6326E-02 (2002,010,0600) | 1.9666E-02 (2002,010,0800) | 1.2922E-02 (2002,010,0900) |
| 1634 | -205.512 | -419.423 | 3.0240E-02 (2002,010,0700) | 2.7569E-02 (2002,010,0600) | 2.0834E-02 (2002,010,0800) | 1.3364E-02 (2002,010,0500) |
| 1635 | -203.266 | -419.481 | 2.8648E-02 (2002,010,0700) | 2.6646E-02 (2002,010,0600) | 1.9206E-02 (2002,010,0800) | 1.3258E-02 (2002,010,0500) |
| 1636 | -328.872 | -412.519 | 7.5496E-03 (2002,024,1000) | 7.4952E-03 (2002,324,0200) | 6.9764E-03 (2002,024,0900) | 5.2894E-03 (2002,324,0300) |
| 1637 | -326.629 | -412.611 | 7.7077E-03 (2002,024,0900) | 7.5949E-03 (2002,024,1000) | 6.5044E-03 (2002,324,0200) | 4.7919E-03 (2002,061,0700) |
| 1638 | -324.385 | -412.702 | 8.3845E-03 (2002,024,0900) | 7.5231E-03 (2002,024,1000) | 5.5088E-03 (2002,324,0200) | 4.5132E-03 (2002,329,1000) |
| 1639 | -322.141 | -412.793 | 9.1657E-03 (2002,024,0900) | 7.6342E-03 (2002,024,1000) | 4.6312E-03 (2002,324,0200) | 4.5830E-03 (2002,329,1000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1640 | -319.898 | -412.883 | 9.9862E-03 (2002,024,0900) | 7.8760E-03 (2002,024,1000) | 4.6403E-03 (2002,329,1000) | 4.1302E-03 (2002,057,0900) |
| 1641 | -317.654 | -412.972 | 9.3813E-03 (2002,024,0900) | 5.4532E-03 (2002,024,1000) | 4.6265E-03 (2002,329,1000) | 4.5601E-03 (2002,057,0900) |
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| 1643 | -272.775 | -414.628 | 1.0851E-02 (2002,004,1100) | 9.8866E-03 (2002,057,0700) | 7.9889E-03 (2002,004,1000) | 7.9333E-03 (2002,057,0600) |
| 1644 | -270.530 | -414.705 | 1.0777E-02 (2002,004,1100) | 9.9745E-03 (2002,057,0700) | 8.8753E-03 (2002,057,0600) | 8.7754E-03 (2002,024,0500) |
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| 1646 | -266.042 | -414.855 | 1.0015E-02 (2002,057,0600) | 9.1519E-03 (2002,057,0700) | 8.4311E-03 (2002,057,0500) | 6.8429E-03 (2002,052,0800) |
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| 1648 | -261.553 | -415.003 | 1.0886E-02 (2002,057,0600) | 1.0545E-02 (2002,057,0500) | 8.1260E-03 (2002,057,0700) | 7.7509E-03 (2002,024,0500) |
| 1649 | -259.309 | -415.076 | 1.2010E-02 (2002,024,0500) | 1.1653E-02 (2002,057,0500) | 1.1300E-02 (2002,057,0600) | 9.2952E-03 (2002,004,1000) |
| 1650 | -257.065 | -415.149 | 1.2261E-02 (2002,057,0500) | 1.0974E-02 (2002,057,0600) | 1.0688E-02 (2002,024,0500) | 8.9194E-03 (2002,024,0400) |
| 1651 | -254.820 | -415.220 | 7.4853E-03 (2002,010,0900) | 7.3297E-03 (2002,329,0800) | 7.2800E-03 (2002,057,0600) | 6.8611E-03 (2002,010,0800) |
| 1652 | -252.576 | -415.292 | 1.3165E-02 (2002,057,0500) | 1.0901E-02 (2002,010,0800) | 1.0539E-02 (2002,024,0400) | 1.0409E-02 (2002,010,0700) |
| 1653 | -250.332 | -415.362 | 1.6344E-02 (2002,262,0600) | 1.5548E-02 (2002,024,0400) | 1.4715E-02 (2002,262,0500) | 1.3656E-02 (2002,057,0500) |
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| 1666 | -221.153 | -416.222 | 3.6555E-02 (2002,010,0700) | 3.3074E-02 (2002,010,0600) | 2.8178E-02 (2002,010,0800) | 1.8832E-02 (2002,010,0900) |
| 1667 | -218.908 | -416.284 | 3.6536E-02 (2002,010,0700) | 3.3423E-02 (2002,010,0600) | 2.7656E-02 (2002,010,0800) | 1.8042E-02 (2002,010,0900) |
| 1668 | -216.664 | -416.345 | 3.6387E-02 (2002,010,0700) | 3.3550E-02 (2002,010,0600) | 2.7002E-02 (2002,010,0800) | 1.7482E-02 (2002,010,0900) |
| 1669 | -214.419 | -416.405 | 3.5098E-02 (2002,010,0700) | 3.2674E-02 (2002,010,0600) | 2.5634E-02 (2002,010,0800) | 1.6279E-02 (2002,010,0900) |
| 1670 | -212.174 | -416.465 | 3.4119E-02 (2002,010,0700) | 3.2137E-02 (2002,010,0600) | 2.4410E-02 (2002,010,0800) | 1.5422E-02 (2002,010,0500) |
| 1671 | -209.930 | -416.524 | 3.2676E-02 (2002,010,0700) | 3.0899E-02 (2002,010,0600) | 2.2983E-02 (2002,010,0800) | 1.4431E-02 (2002,010,0500) |
| 1672 | -207.685 | -416.583 | 3.1810E-02 (2002,010,0700) | 3.0858E-02 (2002,010,0600) | 2.1714E-02 (2002,010,0800) | 1.5753E-02 (2002,010,0500) |
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| 1674 | -326.515 | -409.829 | 8.0391E-03 (2002,024,1000) | 7.8458E-03 (2002,324,0200) | 7.7674E-03 (2002,024,0900) | 5.4714E-03 (2002,324,0100) |
| 1675 | -324.272 | -409.921 | 8.3152E-03 (2002,024,0900) | 7.2033E-03 (2002,024,1000) | 6.5610E-03 (2002,324,0200) | 4.8592E-03 (2002,324,0100) |
| 1676 | -322.029 | -410.011 | 9.1407E-03 (2002,024,0900) | 7.2877E-03 (2002,024,1000) | 5.5537E-03 (2002,324,0200) | 4.4675E-03 (2002,329,1000) |
| 1677 | -319.786 | -410.101 | 1.0073E-02 (2002,024,0900) | 7.5841E-03 (2002,024,1000) | 4.6510E-03 (2002,324,0200) | 4.4701E-03 (2002,329,1000) |
| 1678 | -317.543 | -410.191 | 1.0795E-02 (2002,024,0900) | 7.3425E-03 (2002,024,1000) | 5.0556E-03 (2002,024,0800) | 4.9204E-03 (2002,088,0800) |
| 1679 | -315.300 | -410.279 | 1.0382E-02 (2002,024,0900) | 5.4794E-03 (2002,024,1000) | 5.3867E-03 (2002,024,0800) | 4.9639E-03 (2002,057,0900) |
| 1680 | -313.057 | -410.367 | 1.1989E-02 (2002,024,0900) | 8.0695E-03 (2002,061,0700) | 6.9773E-03 (2002,024,1000) | 6.6170E-03 (2002,024,0800) |
| 1681 | -310.814 | -410.455 | 1.1809E-02 (2002,024,0900) | 7.0971E-03 (2002,024,0800) | 6.3907E-03 (2002,004,1200) | 6.3151E-03 (2002,088,0800) |
| 1682 | -308.571 | -410.542 | 1.1850E-02 (2002,024,0900) | 7.7467E-03 (2002,024,0800) | 7.0606E-03 (2002,004,1200) | 6.7827E-03 (2002,088,0800) |
| 1683 | -301.842 | -410.799 | 1.0688E-02 (2002,024,0900) | 9.0802E-03 (2002,024,0800) | 8.6617E-03 (2002,004,1200) | 7.8899E-03 (2002,088,0800) |
| 1684 | -299.599 | -410.883 | 1.0101E-02 (2002,024,0900) | 9.4045E-03 (2002,024,0800) | 9.3673E-03 (2002,004,1200) | 8.3037E-03 (2002,057,0800) |
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| 1686 | -295.113 | -411.050 | 1.3721E-02 (2002,061,0700) | 1.1236E-02 (2002,061,0600) | 1.0315E-02 (2002,024,0800) | 1.0245E-02 (2002,004,1200) |
| 1687 | -272.680 | -411.846 | 1.0802E-02 (2002,004,1100) | 1.0317E-02 (2002,057,0700) | 8.6691E-03 (2002,004,1000) | 7.8089E-03 (2002,057,0600) |
| 1688 | -270.436 | -411.922 | 1.1302E-02 (2002,004,1100) | 1.0499E-02 (2002,057,0700) | 9.6621E-03 (2002,004,1000) | 8.8585E-03 (2002,057,0600) |
| 1689 | -268.193 | -411.998 | 1.0954E-02 (2002,004,1100) | 1.0280E-02 (2002,057,0700) | 9.8531E-03 (2002,004,1000) | 9.7418E-03 (2002,024,0500) |
| 1690 | -265.949 | -412.073 | 1.0096E-02 (2002,057,0600) | 9.9652E-03 (2002,004,1100) | 9.6797E-03 (2002,057,0700) | 9.4775E-03 (2002,024,0500) |
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| 1695 | -254.732 | -412.438 | 1.2932E-02 (2002,057,0500) | 1.0454E-02 (2002,057,0600) | 7.7685E-03 (2002,057,0400) | 7.5141E-03 (2002,329,0800) |
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| 1698 | -248.001 | -412.650 | 1.6813E-02 (2002,024,0400) | 1.6582E-02 (2002,262,0600) | 1.6053E-02 (2002,262,0500) | 1.4359E-02 (2002,010,0700) |
| 1699 | -245.757 | -412.719 | 1.7067E-02 (2002,024,0400) | 1.6841E-02 (2002,262,0500) | 1.6605E-02 (2002,262,0600) | 1.6532E-02 (2002,010,0700) |
| 1700 | -243.514 | -412.788 | 1.8814E-02 (2002,010,0700) | 1.7442E-02 (2002,262,0500) | 1.6995E-02 (2002,024,0400) | 1.6952E-02 (2002,010,0600) |
| 1701 | -241.270 | -412.856 | 2.1170E-02 (2002,010,0700) | 1.9272E-02 (2002,010,0600) | 1.8186E-02 (2002,010,0800) | 1.7839E-02 (2002,262,0500) |
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| 1704 | -234.539 | -413.056 | 2.8131E-02 (2002,010,0700) | 2.6259E-02 (2002,010,0600) | 2.2919E-02 (2002,010,0800) | 1.7539E-02 (2002,262,0500) |
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| 1707 | -227.808 | -413.250 | 3.3639E-02 (2002,010,0700) | 3.2113E-02 (2002,010,0600) | 2.6151E-02 (2002,010,0800) | 1.8423E-02 (2002,010,0900) |
| 1708 | -225.564 | -413.314 | 3.4879E-02 (2002,010,0700) | 3.3548E-02 (2002,010,0600) | 2.6705E-02 (2002,010,0800) | 1.8607E-02 (2002,010,0900) |
| 1709 | -223.320 | -413.377 | 3.5746E-02 (2002,010,0700) | 3.4654E-02 (2002,010,0600) | 2.6950E-02 (2002,010,0800) | 1.8564E-02 (2002,010,0900) |
| 1710 | -221.076 | -413.439 | 3.6217E-02 (2002,010,0700) | 3.5404E-02 (2002,010,0600) | 2.6885E-02 (2002,010,0800) | 1.8288E-02 (2002,010,0900) |
| 1711 | -218.832 | -413.501 | 3.5725E-02 (2002,010,0700) | 3.5315E-02 (2002,010,0600) | 2.6203E-02 (2002,010,0800) | 1.7607E-02 (2002,010,0500) |
| 1712 | -216.588 | -413.562 | 3.4991E-02 (2002,010,0700) | 3.4509E-02 (2002,010,0600) | 2.5408E-02 (2002,010,0800) | 1.6771E-02 (2002,010,0900) |
| 1713 | -214.344 | -413.622 | 3.4797E-02 (2002,010,0600) | 3.4602E-02 (2002,010,0700) | 2.4567E-02 (2002,010,0800) | 1.7786E-02 (2002,010,0500) |
| 1714 | -212.101 | -413.682 | 3.4391E-02 (2002,010,0600) | 3.3788E-02 (2002,010,0700) | 2.3526E-02 (2002,010,0800) | 1.8192E-02 (2002,010,0500) |
| 1715 | -209.857 | -413.741 | 3.2666E-02 (2002,010,0600) | 3.1957E-02 (2002,010,0700) | 2.1986E-02 (2002,010,0800) | 1.6458E-02 (2002,010,0500) |
| 1716 | -207.613 | -413.800 | 3.2137E-02 (2002,010,0600) | 3.0685E-02 (2002,010,0700) | 2.0591E-02 (2002,010,0800) | 1.7809E-02 (2002,010,0500) |
| 1717 | -328.643 | -406.956 | 1.0180E-02 (2002,324,0200) | 7.0825E-03 (2002,324,0100) | 6.9649E-03 (2002,024,1000) | 6.6032E-03 (2002,324,0300) |
| 1718 | -326.401 | -407.048 | 9.1390E-03 (2002,324,0200) | 7.7324E-03 (2002,024,1000) | 7.5484E-03 (2002,024,0900) | 6.7449E-03 (2002,324,0100) |
| 1719 | -324.159 | -407.139 | 8.1458E-03 (2002,024,0900) | 7.7227E-03 (2002,324,0200) | 6.7860E-03 (2002,024,1000) | 6.0601E-03 (2002,324,0100) |
| 1720 | -321.917 | -407.230 | 8.9900E-03 (2002,024,0900) | 6.6530E-03 (2002,024,1000) | 6.5699E-03 (2002,324,0200) | 5.5274E-03 (2002,324,0100) |
| 1721 | -319.675 | -407.320 | 1.0034E-02 (2002,024,0900) | 7.1026E-03 (2002,024,1000) | 5.5653E-03 (2002,324,0200) | 5.1180E-03 (2002,061,0700) |
| 1722 | -317.433 | -407.409 | 1.1311E-02 (2002,024,0900) | 9.8556E-03 (2002,024,1000) | 7.1210E-03 (2002,061,0700) | 6.3102E-03 (2002,061,0600) |
| 1723 | -315.191 | -407.498 | 1.1382E-02 (2002,024,0900) | 6.4111E-03 (2002,024,1000) | 6.1424E-03 (2002,024,0800) | 5.8872E-03 (2002,088,0800) |
| 1724 | -312.949 | -407.586 | 1.2606E-02 (2002,024,0900) | 9.5329E-03 (2002,024,1000) | 8.4973E-03 (2002,061,0700) | 7.7358E-03 (2002,061,0600) |
| 1725 | -310.706 | -407.673 | 1.2411E-02 (2002,024,0900) | 7.8449E-03 (2002,024,0800) | 7.0828E-03 (2002,088,0800) | 6.9170E-03 (2002,061,0700) |
| 1726 | -308.464 | -407.760 | 1.2206E-02 (2002,024,0900) | 8.3965E-03 (2002,024,0800) | 7.4600E-03 (2002,088,0800) | 7.2451E-03 (2002,004,1200) |
| 1727 | -306.222 | -407.847 | 1.1980E-02 (2002,024,0900) | 8.9509E-03 (2002,024,0800) | 7.8951E-03 (2002,004,1200) | 7.8811E-03 (2002,088,0800) |
| 1728 | -303.980 | -407.932 | 1.1637E-02 (2002,024,0900) | 9.4412E-03 (2002,024,0800) | 8.4841E-03 (2002,004,1200) | 8.2897E-03 (2002,088,0800) |
| 1729 | -301.737 | -408.017 | 9.6312E-03 (2002,024,0900) | 7.5295E-03 (2002,004,1300) | 6.9671E-03 (2002,024,0800) | 6.2791E-03 (2002,057,0800) |
| 1730 | -299.495 | -408.101 | 8.8522E-03 (2002,024,0900) | 7.8398E-03 (2002,004,1300) | 6.5901E-03 (2002,024,0800) | 6.4030E-03 (2002,329,0900) |
| 1731 | -297.253 | -408.185 | 1.0070E-02 (2002,024,0800) | 9.5975E-03 (2002,024,0900) | 9.5116E-03 (2002,004,1200) | 9.2440E-03 (2002,057,0800) |
| 1732 | -295.010 | -408.268 | 9.8744E-03 (2002,057,0800) | 9.7678E-03 (2002,024,0800) | 9.1642E-03 (2002,088,0800) | 8.5185E-03 (2002,024,0900) |
| 1733 | -292.768 | -408.351 | 1.0471E-02 (2002,057,0800) | 1.0466E-02 (2002,004,1200) | 1.0207E-02 (2002,004,1100) | 1.0001E-02 (2002,024,0800) |
| 1734 | -286.040 | -408.594 | 1.4422E-02 (2002,061,0700) | 1.2602E-02 (2002,061,0600) | 1.2213E-02 (2002,004,1100) | 1.1329E-02 (2002,057,0800) |
| 1735 | -281.555 | -408.753 | 1.4924E-02 (2002,061,0700) | 1.2890E-02 (2002,061,0600) | 1.2866E-02 (2002,004,1100) | 1.0949E-02 (2002,057,0800) |
| 1736 | -279.313 | -408.832 | 1.5241E-02 (2002,061,0700) | 1.3086E-02 (2002,004,1100) | 1.3060E-02 (2002,061,0600) | 1.0493E-02 (2002,057,0800) |
| 1737 | -274.828 | -408.988 | 1.5379E-02 (2002,061,0700) | 1.3147E-02 (2002,004,1100) | 1.2869E-02 (2002,061,0600) | 1.1293E-02 (2002,057,0700) |
| 1738 | -272.585 | -409.064 | 1.1820E-02 (2002,004,1100) | 1.1009E-02 (2002,057,0700) | 9.7734E-03 (2002,004,1000) | 8.1184E-03 (2002,057,0800) |
| 1739 | -270.342 | -409.141 | 6.6211E-03 (2002,057,0800) | 6.1608E-03 (2002,329,0900) | 5.6395E-03 (2002,057,0700) | 5.5391E-03 (2002,329,0800) |
| 1740 | -268.100 | -409.216 | 1.1129E-02 (2002,004,1100) | 1.0745E-02 (2002,057,0700) | 1.0218E-02 (2002,004,1000) | 9.5694E-03 (2002,057,0600) |
| 1741 | -265.857 | -409.291 | 1.1929E-02 (2002,061,0700) | 1.1229E-02 (2002,004,1000) | 1.1052E-02 (2002,024,0500) | 1.1016E-02 (2002,004,1100) |
| 1742 | -263.614 | -409.365 | 1.3366E-02 (2002,061,0700) | 1.3324E-02 (2002,024,0500) | 1.2410E-02 (2002,004,1000) | 1.2215E-02 (2002,262,0600) |
| 1743 | -261.372 | -409.439 | 1.3964E-02 (2002,024,0500) | 1.3133E-02 (2002,262,0600) | 1.2790E-02 (2002,061,0700) | 1.2471E-02 (2002,004,1000) |
| 1744 | -259.129 | -409.512 | 1.3269E-02 (2002,024,0500) | 1.2160E-02 (2002,057,0500) | 1.1767E-02 (2002,262,0600) | 1.1477E-02 (2002,057,0600) |
| 1745 | -256.886 | -409.584 | 1.4758E-02 (2002,262,0600) | 1.4364E-02 (2002,024,0500) | 1.3621E-02 (2002,024,0400) | 1.3056E-02 (2002,057,0500) |
| 1746 | -254.643 | -409.656 | 1.3233E-02 (2002,057,0500) | 1.1072E-02 (2002,024,0400) | 1.0663E-02 (2002,057,0600) | 1.0621E-02 (2002,024,0500) |
| 1747 | -252.400 | -409.727 | 1.3516E-02 (2002,057,0500) | 1.1683E-02 (2002,024,0400) | 1.0111E-02 (2002,057,0600) | 1.0040E-02 (2002,024,0500) |
| 1748 | -250.158 | -409.798 | 1.3603E-02 (2002,057,0500) | 1.2737E-02 (2002,024,0400) | 1.1434E-02 (2002,010,0700) | 1.0726E-02 (2002,057,0400) |
| 1749 | -247.915 | -409.867 | 1.4418E-02 (2002,024,0400) | 1.3595E-02 (2002,010,0700) | 1.3475E-02 (2002,057,0500) | 1.3075E-02 (2002,010,0600) |
| 1750 | -245.672 | -409.937 | 1.7588E-02 (2002,024,0400) | 1.7173E-02 (2002,262,0500) | 1.6784E-02 (2002,262,0600) | 1.6007E-02 (2002,010,0700) |
| 1751 | -243.429 | -410.005 | 1.8279E-02 (2002,010,0700) | 1.7869E-02 (2002,010,0600) | 1.7784E-02 (2002,262,0500) | 1.7405E-02 (2002,024,0400) |
| 1752 | -241.186 | -410.073 | 2.0625E-02 (2002,010,0700) | 2.0348E-02 (2002,010,0600) | 1.8157E-02 (2002,262,0500) | 1.6899E-02 (2002,024,0400) |
| 1753 | -238.943 | -410.141 | 2.3002E-02 (2002,010,0700) | 2.2883E-02 (2002,010,0600) | 1.8407E-02 (2002,010,0800) | 1.8298E-02 (2002,262,0500) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1754 | -236.700 | -410.207 | 2.5404E-02 (2002,010,0600) | 2.5336E-02 (2002,010,0700) | 1.9974E-02 (2002,010,0800) | 1.8168E-02 (2002,262,0500) |
| 1755 | -234.457 | -410.273 | 2.7856E-02 (2002,010,0600) | 2.7572E-02 (2002,010,0700) | 2.1436E-02 (2002,010,0800) | 1.7995E-02 (2002,262,0400) |
| 1756 | -232.214 | -410.339 | 3.0163E-02 (2002,010,0600) | 2.9649E-02 (2002,010,0700) | 2.2743E-02 (2002,010,0800) | 1.8482E-02 (2002,262,0400) |
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| 1759 | -225.485 | -410.531 | 3.5599E-02 (2002,010,0600) | 3.4257E-02 (2002,010,0700) | 2.5331E-02 (2002,010,0800) | 1.8348E-02 (2002,262,0400) |
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| 1761 | -220.999 | -410.657 | 3.7433E-02 (2002,010,0600) | 3.5421E-02 (2002,010,0700) | 2.5591E-02 (2002,010,0800) | 1.9926E-02 (2002,010,0500) |
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| 1763 | -216.513 | -410.779 | 3.6990E-02 (2002,010,0600) | 3.4382E-02 (2002,010,0700) | 2.4363E-02 (2002,010,0800) | 2.0056E-02 (2002,010,0500) |
| 1764 | -214.270 | -410.840 | 3.5673E-02 (2002,010,0600) | 3.3256E-02 (2002,010,0700) | 2.3382E-02 (2002,010,0800) | 1.6755E-02 (2002,010,0500) |
| 1765 | -212.027 | -410.900 | 3.5124E-02 (2002,010,0600) | 3.2221E-02 (2002,010,0700) | 2.2322E-02 (2002,010,0800) | 1.7888E-02 (2002,010,0500) |
| 1766 | -209.784 | -410.959 | 3.5360E-02 (2002,010,0600) | 3.1744E-02 (2002,010,0700) | 2.1426E-02 (2002,010,0800) | 2.0800E-02 (2002,010,0500) |
| 1767 | -328.529 | -404.175 | 1.1540E-02 (2002,324,0200) | 8.5038E-03 (2002,324,0100) | 7.2682E-03 (2002,324,0300) | 6.4492E-03 (2002,024,1000) |
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| 1771 | -315.081 | -404.717 | 1.1939E-02 (2002,024,0900) | 8.9577E-03 (2002,024,1000) | 7.3168E-03 (2002,061,0600) | 7.1344E-03 (2002,061,0700) |
| 1772 | -312.840 | -404.805 | 1.2598E-02 (2002,024,0900) | 8.7989E-03 (2002,024,1000) | 8.0807E-03 (2002,061,0600) | 7.8035E-03 (2002,061,0700) |
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| 1774 | -308.357 | -404.979 | 1.2528E-02 (2002,024,0900) | 9.0647E-03 (2002,024,0800) | 8.1757E-03 (2002,088,0800) | 7.3475E-03 (2002,004,1200) |
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| 1778 | -299.391 | -405.320 | 1.1951E-02 (2002,024,0900) | 1.1852E-02 (2002,061,0600) | 1.1821E-02 (2002,024,0800) | 1.1647E-02 (2002,061,0700) |
| 1779 | -297.149 | -405.404 | 1.1167E-02 (2002,024,0800) | 1.0384E-02 (2002,024,0900) | 1.0214E-02 (2002,088,0800) | 1.0201E-02 (2002,004,1200) |
| 1780 | -294.907 | -405.487 | 1.0076E-02 (2002,057,0800) | 9.9350E-03 (2002,024,0800) | 8.3477E-03 (2002,024,0900) | 8.1710E-03 (2002,004,1300) |
| 1781 | -292.666 | -405.569 | 1.0684E-02 (2002,057,0800) | 9.8512E-03 (2002,024,0800) | 8.4900E-03 (2002,088,0800) | 8.1798E-03 (2002,004,1300) |
| 1782 | -290.424 | -405.651 | 1.1209E-02 (2002,057,0800) | 1.0633E-02 (2002,004,1100) | 1.0286E-02 (2002,004,1200) | 1.0225E-02 (2002,088,0800) |
| 1783 | -288.182 | -405.732 | 1.1934E-02 (2002,004,1100) | 1.1545E-02 (2002,057,0800) | 1.0558E-02 (2002,004,1200) | 1.0319E-02 (2002,088,0800) |
| 1784 | -285.941 | -405.812 | 1.1637E-02 (2002,057,0800) | 1.1512E-02 (2002,004,1100) | 9.7924E-03 (2002,088,0800) | 9.6210E-03 (2002,004,1200) |
| 1785 | -283.699 | -405.892 | 1.2548E-02 (2002,004,1100) | 1.1589E-02 (2002,057,0800) | 9.8548E-03 (2002,004,1200) | 9.6308E-03 (2002,088,0800) |
| 1786 | -281.457 | -405.972 | 1.1289E-02 (2002,057,0800) | 1.0886E-02 (2002,004,1100) | 1.0056E-02 (2002,057,0700) | 8.9461E-03 (2002,088,0800) |
| 1787 | -279.216 | -406.050 | 1.5104E-02 (2002,061,0700) | 1.3770E-02 (2002,061,0600) | 1.3633E-02 (2002,004,1100) | 1.1094E-02 (2002,057,0700) |
| 1788 | -274.732 | -406.206 | 1.5691E-02 (2002,061,0700) | 1.3746E-02 (2002,061,0600) | 1.3624E-02 (2002,004,1100) | 1.1967E-02 (2002,057,0700) |
| 1789 | -272.490 | -406.282 | 1.1814E-02 (2002,004,1100) | 1.1629E-02 (2002,057,0700) | 1.0528E-02 (2002,004,1000) | 8.5783E-03 (2002,057,0800) |
| 1790 | -270.248 | -406.359 | 1.2860E-02 (2002,061,0700) | 1.2170E-02 (2002,004,1100) | 1.1774E-02 (2002,057,0700) | 1.1659E-02 (2002,004,1000) |
| 1791 | -268.006 | -406.434 | 8.5837E-03 (2002,057,0700) | 7.8251E-03 (2002,057,0600) | 6.5650E-03 (2002,057,0800) | 6.4738E-03 (2002,329,0800) |
| 1792 | -265.764 | -406.509 | 1.2054E-02 (2002,061,0700) | 1.1915E-02 (2002,004,1000) | 1.1133E-02 (2002,004,1100) | 1.0976E-02 (2002,057,0700) |
| 1793 | -263.523 | -406.583 | 1.1956E-02 (2002,004,1000) | 1.1619E-02 (2002,061,0700) | 1.1280E-02 (2002,024,0500) | 1.0960E-02 (2002,057,0600) |
| 1794 | -261.281 | -406.657 | 1.3487E-02 (2002,024,0500) | 1.3388E-02 (2002,061,0700) | 1.2703E-02 (2002,004,1000) | 1.2533E-02 (2002,262,0600) |
| 1795 | -259.039 | -406.730 | 1.4088E-02 (2002,024,0500) | 1.3555E-02 (2002,262,0600) | 1.3059E-02 (2002,061,0700) | 1.3058E-02 (2002,004,1000) |
| 1796 | -256.797 | -406.802 | 1.4378E-02 (2002,262,0600) | 1.4235E-02 (2002,024,0500) | 1.4227E-02 (2002,024,0400) | 1.3115E-02 (2002,057,0500) |
| 1797 | -254.555 | -406.874 | 1.3719E-02 (2002,024,0400) | 1.3546E-02 (2002,057,0500) | 1.2535E-02 (2002,024,0500) | 1.1449E-02 (2002,004,1000) |
| 1798 | -252.313 | -406.945 | 1.6667E-02 (2002,024,0400) | 1.5763E-02 (2002,262,0600) | 1.4431E-02 (2002,262,0500) | 1.4006E-02 (2002,057,0500) |
| 1799 | -250.071 | -407.015 | 1.7475E-02 (2002,024,0400) | 1.6278E-02 (2002,262,0600) | 1.5575E-02 (2002,262,0500) | 1.4014E-02 (2002,057,0500) |
| 1800 | -247.828 | -407.085 | 1.7929E-02 (2002,024,0400) | 1.6688E-02 (2002,262,0600) | 1.6588E-02 (2002,262,0500) | 1.3737E-02 (2002,010,0600) |
| 1801 | -245.586 | -407.154 | 1.8013E-02 (2002,024,0400) | 1.7422E-02 (2002,262,0500) | 1.6931E-02 (2002,262,0600) | 1.6096E-02 (2002,010,0600) |
| 1802 | -243.344 | -407.223 | 1.8622E-02 (2002,010,0600) | 1.8056E-02 (2002,262,0500) | 1.7726E-02 (2002,024,0400) | 1.7550E-02 (2002,010,0700) |
| 1803 | -241.102 | -407.291 | 2.1250E-02 (2002,010,0600) | 1.9868E-02 (2002,010,0700) | 1.8442E-02 (2002,262,0500) | 1.7089E-02 (2002,024,0400) |
| 1804 | -238.860 | -407.358 | 2.3941E-02 (2002,010,0600) | 2.2212E-02 (2002,010,0700) | 1.8577E-02 (2002,262,0500) | 1.7260E-02 (2002,262,0400) |
| 1805 | -236.618 | -407.425 | 2.6622E-02 (2002,010,0600) | 2.4530E-02 (2002,010,0700) | 1.8512E-02 (2002,010,0800) | 1.8426E-02 (2002,262,0500) |
| 1806 | -234.376 | -407.491 | 2.9219E-02 (2002,010,0600) | 2.6744E-02 (2002,010,0700) | 1.9965E-02 (2002,010,0800) | 1.8863E-02 (2002,262,0400) |
| 1807 | -232.133 | -407.557 | 3.1663E-02 (2002,010,0600) | 2.8796E-02 (2002,010,0700) | 2.1285E-02 (2002,010,0800) | 1.9282E-02 (2002,262,0400) |
| 1808 | -229.891 | -407.621 | 3.3879E-02 (2002,010,0600) | 3.0616E-02 (2002,010,0700) | 2.2431E-02 (2002,010,0800) | 1.9420E-02 (2002,262,0400) |
| 1809 | -227.649 | -407.685 | 3.5796E-02 (2002,010,0600) | 3.2151E-02 (2002,010,0700) | 2.3348E-02 (2002,010,0800) | 1.9764E-02 (2002,010,0500) |
| 1810 | -225.407 | -407.749 | 3.7358E-02 (2002,010,0600) | 3.3332E-02 (2002,010,0700) | 2.4013E-02 (2002,010,0800) | 2.0960E-02 (2002,010,0500) |
| 1811 | -223.165 | -407.812 | 3.8525E-02 (2002,010,0600) | 3.4123E-02 (2002,010,0700) | 2.4393E-02 (2002,010,0800) | 2.1979E-02 (2002,010,0500) |
| 1812 | -220.922 | -407.874 | 3.9257E-02 (2002,010,0600) | 3.4514E-02 (2002,010,0700) | 2.4480E-02 (2002,010,0800) | 2.2796E-02 (2002,010,0500) |
| 1813 | -218.680 | -407.936 | 3.9545E-02 (2002,010,0600) | 3.4481E-02 (2002,010,0700) | 2.4266E-02 (2002,010,0800) | 2.3393E-02 (2002,010,0500) |
| 1814 | -216.438 | -407.997 | 3.9380E-02 (2002,010,0600) | 3.4012E-02 (2002,010,0700) | 2.3754E-02 (2002,010,0500) | 2.3738E-02 (2002,010,0800) |
| 1815 | -214.195 | -408.057 | 3.8285E-02 (2002,010,0600) | 3.2683E-02 (2002,010,0700) | 2.3634E-02 (2002,010,0500) | 2.2715E-02 (2002,010,0800) |
| 1816 | -211.953 | -408.117 | 3.2649E-02 (2002,010,0600) | 2.5081E-02 (2002,010,0700) | 1.7643E-02 (2002,010,0800) | 1.6723E-02 (2002,010,0500) |
| 1817 | -317.212 | -401.847 | 1.0510E-02 (2002,024,0900) | 7.1534E-03 (2002,324,0100) | 6.3642E-03 (2002,324,0200) | 6.2838E-03 (2002,024,1000) |
| 1818 | -314.971 | -401.935 | 1.1679E-02 (2002,024,0900) | 8.0952E-03 (2002,024,1000) | 7.5244E-03 (2002,061,0600) | 7.1148E-03 (2002,088,0800) |
| 1819 | -312.731 | -402.023 | 1.2421E-02 (2002,024,0900) | 8.3276E-03 (2002,061,0600) | 8.0731E-03 (2002,024,0800) | 8.0413E-03 (2002,024,1000) |
| 1820 | -310.490 | -402.111 | 1.2980E-02 (2002,024,0900) | 9.0992E-03 (2002,024,0800) | 9.0947E-03 (2002,061,0600) | 8.5619E-03 (2002,088,0800) |
| 1821 | -308.249 | -402.198 | 1.3285E-02 (2002,024,0900) | 1.0061E-02 (2002,024,0800) | 9.7069E-03 (2002,061,0600) | 9.2330E-03 (2002,088,0800) |
| 1822 | -306.009 | -402.284 | 1.2404E-02 (2002,024,0900) | 1.0241E-02 (2002,024,0800) | 9.2364E-03 (2002,088,0800) | 8.0700E-03 (2002,004,1200) |
| 1823 | -303.768 | -402.369 | 1.1470E-02 (2002,024,0900) | 1.0319E-02 (2002,024,0800) | 8.2400E-03 (2002,088,0800) | 7.0053E-03 (2002,004,1300) |
| 1824 | -301.527 | -402.454 | 1.2623E-02 (2002,024,0900) | 1.2005E-02 (2002,024,0800) | 1.0745E-02 (2002,088,0800) | 1.0713E-02 (2002,061,0600) |
| 1825 | -299.286 | -402.538 | 1.1800E-02 (2002,024,0800) | 1.1482E-02 (2002,024,0900) | 1.0681E-02 (2002,088,0800) | 9.8607E-03 (2002,004,1200) |
| 1826 | -297.046 | -402.622 | 1.2990E-02 (2002,061,0600) | 1.2834E-02 (2002,024,0800) | 1.1793E-02 (2002,088,0800) | 1.1658E-02 (2002,024,0900) |
| 1827 | -294.805 | -402.705 | 1.2726E-02 (2002,061,0600) | 1.2556E-02 (2002,024,0800) | 1.1820E-02 (2002,088,0800) | 1.1693E-02 (2002,061,0700) |
| 1828 | -292.564 | -402.787 | 1.1105E-02 (2002,024,0800) | 1.0921E-02 (2002,057,0800) | 1.0896E-02 (2002,088,0800) | 9.3727E-03 (2002,088,0700) |
| 1829 | -290.323 | -402.869 | 1.1468E-02 (2002,057,0800) | 1.1430E-02 (2002,004,1100) | 1.1125E-02 (2002,088,0800) | 1.0906E-02 (2002,024,0800) |
| 1830 | -288.082 | -402.950 | 1.1810E-02 (2002,057,0800) | 1.0760E-02 (2002,088,0800) | 1.0270E-02 (2002,004,1100) | 1.0012E-02 (2002,024,0800) |
| 1831 | -285.841 | -403.031 | 1.2794E-02 (2002,004,1100) | 1.2011E-02 (2002,057,0800) | 1.0723E-02 (2002,088,0800) | 1.0177E-02 (2002,004,1200) |
| 1832 | -283.600 | -403.111 | 1.1908E-02 (2002,057,0800) | 7.6500E-03 (2002,024,0800) | 7.3073E-03 (2002,088,0800) | 7.2219E-03 (2002,329,0900) |
| 1833 | -281.359 | -403.190 | 1.2452E-02 (2002,004,1100) | 1.1750E-02 (2002,057,0800) | 1.0720E-02 (2002,057,0700) | 9.8930E-03 (2002,004,1000) |
| 1834 | -279.118 | -403.269 | 1.3892E-02 (2002,061,0700) | 1.3829E-02 (2002,004,1100) | 1.3590E-02 (2002,061,0600) | 1.1650E-02 (2002,057,0700) |
| 1835 | -276.877 | -403.347 | 1.5472E-02 (2002,061,0700) | 1.4690E-02 (2002,061,0600) | 1.4249E-02 (2002,004,1100) | 1.2325E-02 (2002,057,0700) |
| 1836 | -272.395 | -403.501 | 1.5753E-02 (2002,061,0700) | 1.4164E-02 (2002,061,0600) | 1.3695E-02 (2002,004,1100) | 1.3145E-02 (2002,004,1000) |
| 1837 | -270.154 | -403.577 | 1.5709E-02 (2002,061,0700) | 1.3694E-02 (2002,061,0600) | 1.3516E-02 (2002,004,1000) | 1.3269E-02 (2002,004,1100) |
| 1838 | -267.913 | -403.652 | 1.2010E-02 (2002,057,0700) | 1.1899E-02 (2002,004,1000) | 1.1601E-02 (2002,004,1100) | 9.6558E-03 (2002,057,0600) |
| 1839 | -265.672 | -403.727 | 7.3112E-03 (2002,329,0800) | 5.9083E-03 (2002,057,0600) | 5.7625E-03 (2002,057,0700) | 5.4946E-03 (2002,057,0800) |
| 1840 | -263.431 | -403.801 | 1.2724E-02 (2002,004,1000) | 1.2101E-02 (2002,061,0700) | 1.1079E-02 (2002,057,0600) | 1.0899E-02 (2002,024,0500) |
| 1841 | -261.190 | -403.875 | 1.2916E-02 (2002,004,1000) | 1.2696E-02 (2002,061,0700) | 1.2282E-02 (2002,024,0500) | 1.1525E-02 (2002,057,0600) |
| 1842 | -258.948 | -403.948 | 1.3917E-02 (2002,061,0700) | 1.3726E-02 (2002,024,0500) | 1.3565E-02 (2002,004,1000) | 1.3073E-02 (2002,024,0400) |
| 1843 | -256.707 | -404.020 | 1.4614E-02 (2002,024,0400) | 1.3954E-02 (2002,024,0500) | 1.3876E-02 (2002,262,0600) | 1.3391E-02 (2002,004,1000) |
| 1844 | -254.466 | -404.092 | 1.5981E-02 (2002,024,0400) | 1.4667E-02 (2002,262,0600) | 1.3885E-02 (2002,024,0500) | 1.3688E-02 (2002,057,0500) |
| 1845 | -252.225 | -404.163 | 1.7097E-02 (2002,024,0400) | 1.5428E-02 (2002,262,0600) | 1.4490E-02 (2002,262,0500) | 1.3996E-02 (2002,057,0500) |
| 1846 | -249.984 | -404.233 | 1.7894E-02 (2002,024,0400) | 1.6055E-02 (2002,262,0600) | 1.5673E-02 (2002,262,0500) | 1.3998E-02 (2002,057,0500) |
| 1847 | -247.742 | -404.303 | 1.8313E-02 (2002,024,0400) | 1.6724E-02 (2002,262,0500) | 1.6579E-02 (2002,262,0600) | 1.4061E-02 (2002,010,0600) |
| 1848 | -245.501 | -404.372 | 1.8325E-02 (2002,024,0400) | 1.7612E-02 (2002,262,0500) | 1.7011E-02 (2002,262,0600) | 1.6530E-02 (2002,010,0600) |
| 1849 | -243.260 | -404.441 | 1.9172E-02 (2002,010,0600) | 1.8273E-02 (2002,262,0500) | 1.7947E-02 (2002,024,0400) | 1.7289E-02 (2002,262,0600) |
| 1850 | -241.018 | -404.509 | 2.1935E-02 (2002,010,0600) | 1.8927E-02 (2002,010,0700) | 1.8701E-02 (2002,262,0500) | 1.7448E-02 (2002,262,0600) |
| 1851 | -238.777 | -404.576 | 2.4756E-02 (2002,010,0600) | 2.1227E-02 (2002,010,0700) | 1.8864E-02 (2002,262,0500) | 1.8068E-02 (2002,262,0400) |
| 1852 | -236.536 | -404.643 | 2.7573E-02 (2002,010,0600) | 2.3506E-02 (2002,010,0700) | 1.8955E-02 (2002,262,0400) | 1.8745E-02 (2002,262,0500) |
| 1853 | -234.294 | -404.709 | 3.0300E-02 (2002,010,0600) | 2.5696E-02 (2002,010,0700) | 1.9580E-02 (2002,262,0400) | 1.8554E-02 (2002,010,0800) |
| 1854 | -232.053 | -404.774 | 3.2857E-02 (2002,010,0600) | 2.7715E-02 (2002,010,0700) | 1.9915E-02 (2002,262,0400) | 1.9894E-02 (2002,010,0800) |
| 1855 | -229.811 | -404.839 | 3.5162E-02 (2002,010,0600) | 2.9505E-02 (2002,010,0700) | 2.1081E-02 (2002,010,0800) | 2.0919E-02 (2002,010,0500) |
| 1856 | -211.879 | -405.335 | 3.3010E-02 (2002,010,0600) | 2.3340E-02 (2002,010,0700) | 1.8338E-02 (2002,010,0500) | 1.6769E-02 (2002,010,0800) |
| 1857 | -314.862 | -399.154 | 1.1235E-02 (2002,024,0900) | 7.9635E-03 (2002,324,0100) | 7.6116E-03 (2002,061,0600) | 7.5105E-03 (2002,088,0800) |
| 1858 | -312.622 | -399.242 | 1.2051E-02 (2002,024,0900) | 8.4230E-03 (2002,061,0600) | 8.3546E-03 (2002,024,0800) | 8.3032E-03 (2002,088,0800) |
| 1859 | -310.382 | -399.330 | 1.2686E-02 (2002,024,0900) | 9.4698E-03 (2002,024,0800) | 9.1724E-03 (2002,061,0600) | 9.0825E-03 (2002,088,0800) |
| 1860 | -308.142 | -399.416 | 1.3133E-02 (2002,024,0900) | 1.0536E-02 (2002,024,0800) | 9.9090E-03 (2002,061,0600) | 9.8309E-03 (2002,088,0800) |
| 1861 | -305.902 | -399.502 | 1.2719E-02 (2002,024,0900) | 1.1043E-02 (2002,024,0800) | 1.0069E-02 (2002,088,0800) | 8.0780E-03 (2002,004,1200) |
| 1862 | -303.662 | -399.588 | 1.2169E-02 (2002,024,0900) | 1.1380E-02 (2002,024,0800) | 1.0279E-02 (2002,088,0800) | 8.4940E-03 (2002,004,1200) |
| 1863 | -301.422 | -399.673 | 1.2942E-02 (2002,024,0900) | 1.2846E-02 (2002,024,0800) | 1.1596E-02 (2002,088,0800) | 1.1357E-02 (2002,061,0600) |
| 1864 | -299.182 | -399.757 | 1.3546E-02 (2002,024,0800) | 1.2990E-02 (2002,061,0600) | 1.2784E-02 (2002,024,0900) | 1.2343E-02 (2002,088,0800) |
| 1865 | -296.942 | -399.841 | 1.3787E-02 (2002,024,0800) | 1.3722E-02 (2002,061,0600) | 1.2760E-02 (2002,088,0800) | 1.2157E-02 (2002,024,0900) |
| 1866 | -294.702 | -399.924 | 1.4043E-02 (2002,061,0600) | 1.3679E-02 (2002,024,0800) | 1.2960E-02 (2002,088,0800) | 1.1796E-02 (2002,004,1100) |
| 1867 | -292.462 | -400.006 | 1.3398E-02 (2002,061,0600) | 1.3018E-02 (2002,024,0800) | 1.2711E-02 (2002,088,0800) | 1.2203E-02 (2002,004,1100) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1868 | -290.222 | -400.088 | 1.2522E-02 (2002,004,1100) | 1.2090E-02 (2002,088,0800) | 1.1877E-02 (2002,024,0800) | 1.1614E-02 (2002,057,0800) |
| 1869 | -287.982 | -400.169 | 1.1982E-02 (2002,057,0800) | 1.0502E-02 (2002,088,0800) | 1.0336E-02 (2002,024,0800) | 9.8396E-03 (2002,088,0700) |
| 1870 | -285.742 | -400.249 | 1.1075E-02 (2002,057,0800) | 7.7076E-03 (2002,088,0800) | 7.4617E-03 (2002,004,1300) | 7.2921E-03 (2002,024,0800) |
| 1871 | -283.502 | -400.329 | 9.5480E-03 (2002,057,0800) | 7.0578E-03 (2002,004,1300) | 6.9508E-03 (2002,329,0900) | 6.6000E-03 (2002,004,1200) |
| 1872 | -281.261 | -400.408 | 1.3936E-02 (2002,004,1100) | 1.2144E-02 (2002,057,0800) | 1.1401E-02 (2002,057,0700) | 1.1233E-02 (2002,088,0700) |
| 1873 | -279.021 | -400.487 | 1.1982E-02 (2002,057,0700) | 1.1719E-02 (2002,057,0800) | 1.0091E-02 (2002,088,0700) | 9.4471E-03 (2002,088,0800) |
| 1874 | -276.781 | -400.565 | 1.4013E-02 (2002,004,1100) | 1.2822E-02 (2002,057,0700) | 1.2498E-02 (2002,004,1000) | 1.1380E-02 (2002,061,0600) |
| 1875 | -274.541 | -400.642 | 1.5898E-02 (2002,061,0700) | 1.5504E-02 (2002,061,0600) | 1.4703E-02 (2002,004,1100) | 1.3888E-02 (2002,004,1000) |
| 1876 | -272.300 | -400.719 | 1.3315E-02 (2002,057,0700) | 1.3211E-02 (2002,004,1100) | 1.3102E-02 (2002,004,1000) | 1.1142E-02 (2002,061,0700) |
| 1877 | -270.060 | -400.795 | 1.5961E-02 (2002,061,0700) | 1.4552E-02 (2002,061,0600) | 1.4522E-02 (2002,004,1000) | 1.3667E-02 (2002,004,1100) |
| 1878 | -267.820 | -400.870 | 1.5426E-02 (2002,061,0700) | 1.4295E-02 (2002,004,1000) | 1.3686E-02 (2002,061,0600) | 1.3073E-02 (2002,057,0700) |
| 1879 | -265.579 | -400.945 | 7.9233E-03 (2002,057,0600) | 7.8601E-03 (2002,057,0700) | 7.7423E-03 (2002,329,0800) | 6.4125E-03 (2002,057,0800) |
| 1880 | -263.339 | -401.019 | 1.1164E-02 (2002,057,0700) | 1.0737E-02 (2002,057,0600) | 9.6893E-03 (2002,004,1000) | 9.4865E-03 (2002,057,0500) |
| 1881 | -261.099 | -401.093 | 1.3156E-02 (2002,004,1000) | 1.1758E-02 (2002,061,0700) | 1.1576E-02 (2002,057,0600) | 1.0928E-02 (2002,057,0500) |
| 1882 | -258.858 | -401.166 | 1.4043E-02 (2002,061,0700) | 1.3605E-02 (2002,004,1000) | 1.2962E-02 (2002,024,0500) | 1.2877E-02 (2002,024,0400) |
| 1883 | -256.618 | -401.238 | 1.4859E-02 (2002,024,0400) | 1.4254E-02 (2002,061,0700) | 1.3696E-02 (2002,004,1000) | 1.3594E-02 (2002,024,0500) |
| 1884 | -216.287 | -402.432 | 4.1375E-02 (2002,010,0600) | 3.1329E-02 (2002,010,0700) | 2.9994E-02 (2002,010,0500) | 2.2205E-02 (2002,010,0800) |
| 1885 | -214.046 | -402.493 | 3.3631E-02 (2002,010,0600) | 2.2237E-02 (2002,010,0700) | 1.9825E-02 (2002,010,0500) | 1.6634E-02 (2002,010,0800) |
| 1886 | -211.805 | -402.552 | 3.9231E-02 (2002,010,0600) | 2.9722E-02 (2002,010,0500) | 2.9119E-02 (2002,010,0700) | 2.0632E-02 (2002,010,0800) |
| 1887 | -314.752 | -396.373 | 1.0619E-02 (2002,024,0900) | 9.6554E-03 (2002,324,0100) | 7.8460E-03 (2002,088,0800) | 7.5499E-03 (2002,061,0600) |
| 1888 | -312.513 | -396.461 | 1.1499E-02 (2002,024,0900) | 8.6968E-03 (2002,088,0800) | 8.5353E-03 (2002,024,0800) | 8.4500E-03 (2002,324,0100) |
| 1889 | -310.274 | -396.548 | 1.2236E-02 (2002,024,0900) | 9.7449E-03 (2002,024,0800) | 9.5473E-03 (2002,088,0800) | 9.2055E-03 (2002,061,0600) |
| 1890 | -308.035 | -396.635 | 1.2798E-02 (2002,024,0900) | 1.0930E-02 (2002,024,0800) | 1.0372E-02 (2002,088,0800) | 1.0003E-02 (2002,061,0600) |
| 1891 | -305.796 | -396.721 | 1.2336E-02 (2002,024,0900) | 1.1361E-02 (2002,024,0800) | 1.0475E-02 (2002,088,0800) | 8.4408E-03 (2002,088,0700) |
| 1892 | -303.556 | -396.807 | 1.3267E-02 (2002,024,0900) | 1.2946E-02 (2002,024,0800) | 1.1839E-02 (2002,088,0800) | 1.1423E-02 (2002,061,0600) |
| 1893 | -301.317 | -396.892 | 1.3428E-02 (2002,024,0800) | 1.2869E-02 (2002,024,0900) | 1.2177E-02 (2002,088,0800) | 1.1239E-02 (2002,061,0600) |
| 1894 | -299.078 | -396.976 | 1.4366E-02 (2002,024,0800) | 1.3306E-02 (2002,061,0600) | 1.3147E-02 (2002,088,0800) | 1.2994E-02 (2002,024,0900) |
| 1895 | -296.839 | -397.059 | 1.4655E-02 (2002,024,0800) | 1.4012E-02 (2002,061,0600) | 1.3586E-02 (2002,088,0800) | 1.2483E-02 (2002,024,0900) |
| 1896 | -294.599 | -397.142 | 1.4470E-02 (2002,024,0800) | 1.3969E-02 (2002,061,0600) | 1.3667E-02 (2002,088,0800) | 1.2765E-02 (2002,088,0700) |
| 1897 | -292.360 | -397.225 | 1.3489E-02 (2002,024,0800) | 1.3070E-02 (2002,088,0800) | 1.2501E-02 (2002,088,0700) | 1.2421E-02 (2002,004,1100) |
| 1898 | -290.121 | -397.306 | 1.3066E-02 (2002,004,1100) | 1.2904E-02 (2002,088,0800) | 1.2803E-02 (2002,024,0800) | 1.2698E-02 (2002,088,0700) |
| 1899 | -287.882 | -397.387 | 1.4985E-02 (2002,061,0600) | 1.4196E-02 (2002,004,1100) | 1.3790E-02 (2002,088,0700) | 1.3513E-02 (2002,088,0800) |
| 1900 | -285.642 | -397.468 | 1.4309E-02 (2002,004,1100) | 1.3399E-02 (2002,088,0700) | 1.2796E-02 (2002,088,0800) | 1.2444E-02 (2002,057,0800) |
| 1901 | -283.403 | -397.548 | 1.4105E-02 (2002,004,1100) | 1.2584E-02 (2002,088,0700) | 1.2519E-02 (2002,057,0800) | 1.1722E-02 (2002,088,0800) |
| 1902 | -281.163 | -397.627 | 1.3106E-02 (2002,004,1100) | 1.2412E-02 (2002,057,0800) | 1.2089E-02 (2002,088,0700) | 1.1896E-02 (2002,057,0700) |
| 1903 | -278.924 | -397.705 | 1.4373E-02 (2002,004,1100) | 1.2761E-02 (2002,057,0700) | 1.2493E-02 (2002,004,1000) | 1.2115E-02 (2002,057,0800) |
| 1904 | -276.684 | -397.783 | 1.4196E-02 (2002,004,1100) | 1.3411E-02 (2002,057,0700) | 1.2999E-02 (2002,004,1000) | 1.1731E-02 (2002,088,0700) |
| 1905 | -274.445 | -397.861 | 1.3761E-02 (2002,057,0700) | 1.3564E-02 (2002,004,1100) | 1.3212E-02 (2002,004,1000) | 1.0883E-02 (2002,057,0800) |
| 1906 | -272.206 | -397.937 | 1.4078E-02 (2002,057,0700) | 1.4014E-02 (2002,004,1000) | 1.3513E-02 (2002,004,1100) | 1.0871E-02 (2002,088,0700) |
| 1907 | -269.966 | -398.013 | 1.3829E-02 (2002,057,0700) | 1.3524E-02 (2002,004,1000) | 1.2545E-02 (2002,004,1100) | 9.4521E-03 (2002,088,0700) |
| 1908 | -267.726 | -398.089 | 7.8462E-03 (2002,329,0800) | 6.0654E-03 (2002,057,0800) | 5.9299E-03 (2002,057,0700) | 5.1669E-03 (2002,004,1000) |
| 1909 | -265.487 | -398.164 | 8.1290E-03 (2002,329,0800) | 6.3390E-03 (2002,057,0700) | 6.2567E-03 (2002,057,0800) | 6.0735E-03 (2002,057,0600) |
| 1910 | -263.247 | -398.238 | 1.4282E-02 (2002,004,1000) | 1.3193E-02 (2002,061,0700) | 1.2235E-02 (2002,057,0700) | 1.1827E-02 (2002,061,0600) |
| 1911 | -261.008 | -398.311 | 1.2628E-02 (2002,004,1000) | 1.1539E-02 (2002,057,0600) | 1.0970E-02 (2002,057,0700) | 1.0535E-02 (2002,057,0500) |
| 1912 | -258.768 | -398.384 | 1.2083E-02 (2002,004,1000) | 1.1555E-02 (2002,057,0600) | 1.1515E-02 (2002,057,0500) | 9.7865E-03 (2002,057,0700) |
| 1913 | -256.528 | -398.456 | 1.5036E-02 (2002,061,0700) | 1.4962E-02 (2002,024,0400) | 1.4185E-02 (2002,004,1000) | 1.3173E-02 (2002,024,0500) |
| 1914 | -254.289 | -398.528 | 1.6401E-02 (2002,024,0400) | 1.4611E-02 (2002,061,0700) | 1.3688E-02 (2002,004,1000) | 1.3490E-02 (2002,057,0500) |
| 1915 | -213.972 | -399.710 | 3.9134E-02 (2002,010,0600) | 2.9114E-02 (2002,010,0500) | 2.8130E-02 (2002,010,0700) | 2.0746E-02 (2002,010,0800) |
| 1916 | -211.732 | -399.770 | 3.3553E-02 (2002,010,0600) | 2.2654E-02 (2002,010,0700) | 2.1934E-02 (2002,010,0500) | 1.8139E-02 (2002,010,0800) |
| 1917 | -209.492 | -399.829 | 3.6121E-02 (2002,010,0600) | 2.7118E-02 (2002,010,0500) | 2.5516E-02 (2002,010,0700) | 1.8854E-02 (2002,010,0800) |
| 1918 | -314.642 | -393.592 | 1.1491E-02 (2002,324,0100) | 9.8225E-03 (2002,024,0900) | 8.0697E-03 (2002,088,0800) | 7.9727E-03 (2002,324,0200) |
| 1919 | -312.404 | -393.680 | 1.0765E-02 (2002,024,0900) | 1.0168E-02 (2002,324,0100) | 8.9967E-03 (2002,088,0800) | 8.5955E-03 (2002,024,0800) |
| 1920 | -310.166 | -393.767 | 1.1611E-02 (2002,024,0900) | 9.9281E-03 (2002,088,0800) | 9.9187E-03 (2002,024,0800) | 9.1466E-03 (2002,061,0600) |
| 1921 | -307.927 | -393.854 | 1.2257E-02 (2002,024,0900) | 1.1189E-02 (2002,024,0800) | 1.0812E-02 (2002,088,0800) | 9.9381E-03 (2002,061,0600) |
| 1922 | -305.689 | -393.940 | 1.2744E-02 (2002,024,0900) | 1.2403E-02 (2002,024,0800) | 1.1668E-02 (2002,088,0800) | 1.0771E-02 (2002,061,0600) |
| 1923 | -303.451 | -394.025 | 1.3422E-02 (2002,024,0800) | 1.2945E-02 (2002,024,0900) | 1.2371E-02 (2002,088,0800) | 1.1327E-02 (2002,061,0600) |
| 1924 | -301.212 | -394.110 | 1.4408E-02 (2002,024,0800) | 1.3186E-02 (2002,088,0800) | 1.3120E-02 (2002,024,0900) | 1.2469E-02 (2002,061,0600) |
| 1925 | -298.974 | -394.194 | 1.5094E-02 (2002,024,0800) | 1.3815E-02 (2002,088,0800) | 1.3327E-02 (2002,061,0600) | 1.2993E-02 (2002,024,0900) |
| 1926 | -296.735 | -394.278 | 1.5433E-02 (2002,024,0800) | 1.4249E-02 (2002,088,0800) | 1.3943E-02 (2002,061,0600) | 1.3537E-02 (2002,088,0700) |
| 1927 | -294.497 | -394.361 | 1.5479E-02 (2002,024,0800) | 1.4556E-02 (2002,088,0800) | 1.4542E-02 (2002,061,0600) | 1.4240E-02 (2002,088,0700) |
| 1928 | -292.258 | -394.443 | 1.5231E-02 (2002,024,0800) | 1.5178E-02 (2002,061,0600) | 1.4868E-02 (2002,088,0700) | 1.4743E-02 (2002,088,0800) |
| 1929 | -290.020 | -394.525 | 1.5775E-02 (2002,061,0600) | 1.5366E-02 (2002,088,0700) | 1.4780E-02 (2002,088,0800) | 1.4697E-02 (2002,024,0800) |
| 1930 | -287.781 | -394.606 | 1.6343E-02 (2002,061,0600) | 1.5739E-02 (2002,088,0700) | 1.5186E-02 (2002,004,1100) | 1.4684E-02 (2002,088,0800) |
| 1931 | -285.543 | -394.686 | 1.6640E-02 (2002,061,0600) | 1.5860E-02 (2002,088,0700) | 1.5649E-02 (2002,004,1100) | 1.4353E-02 (2002,088,0800) |
| 1932 | -283.304 | -394.766 | 1.6909E-02 (2002,061,0600) | 1.5973E-02 (2002,004,1100) | 1.5841E-02 (2002,088,0700) | 1.3903E-02 (2002,088,0800) |
| 1933 | -281.065 | -394.845 | 1.3349E-02 (2002,004,1100) | 1.3309E-02 (2002,088,0700) | 1.2608E-02 (2002,057,0800) | 1.2446E-02 (2002,004,1000) |
| 1934 | -278.827 | -394.924 | 1.4792E-02 (2002,004,1100) | 1.3419E-02 (2002,004,1000) | 1.3317E-02 (2002,057,0700) | 1.3289E-02 (2002,088,0700) |
| 1935 | -276.588 | -395.002 | 1.3963E-02 (2002,057,0700) | 1.3497E-02 (2002,004,1000) | 1.3138E-02 (2002,004,1100) | 1.2357E-02 (2002,088,0700) |
| 1936 | -274.349 | -395.079 | 1.3707E-02 (2002,057,0700) | 1.1260E-02 (2002,057,0800) | 9.3040E-03 (2002,088,0700) | 7.4990E-03 (2002,088,0800) |
| 1937 | -272.111 | -395.156 | 1.4510E-02 (2002,057,0700) | 1.0453E-02 (2002,057,0800) | 8.8184E-03 (2002,088,0700) | 8.3499E-03 (2002,057,0600) |
| 1938 | -269.872 | -395.232 | 1.4565E-02 (2002,057,0700) | 1.4064E-02 (2002,004,1000) | 1.1741E-02 (2002,004,1100) | 1.0080E-02 (2002,088,0700) |
| 1939 | -267.633 | -395.307 | 1.4875E-02 (2002,004,1000) | 1.4369E-02 (2002,057,0700) | 1.2236E-02 (2002,004,1100) | 1.0574E-02 (2002,057,0600) |
| 1940 | -265.394 | -395.382 | 1.5202E-02 (2002,004,1000) | 1.3856E-02 (2002,057,0700) | 1.3286E-02 (2002,061,0700) | 1.3168E-02 (2002,061,0600) |
| 1941 | -263.156 | -395.456 | 1.4988E-02 (2002,004,1000) | 1.3519E-02 (2002,061,0700) | 1.2985E-02 (2002,057,0700) | 1.2668E-02 (2002,061,0600) |
| 1942 | -260.917 | -395.530 | 1.4828E-02 (2002,004,1000) | 1.4437E-02 (2002,061,0700) | 1.2508E-02 (2002,061,0600) | 1.2483E-02 (2002,057,0600) |
| 1943 | -258.678 | -395.602 | 1.4164E-02 (2002,004,1000) | 1.3409E-02 (2002,061,0700) | 1.2472E-02 (2002,057,0600) | 1.2151E-02 (2002,024,0400) |
| 1944 | -216.136 | -396.868 | 4.1346E-02 (2002,010,0600) | 3.6347E-02 (2002,010,0500) | 2.8484E-02 (2002,010,0700) | 2.1241E-02 (2002,010,0800) |
| 1945 | -213.897 | -396.928 | 4.0263E-02 (2002,010,0600) | 3.6207E-02 (2002,010,0500) | 2.7623E-02 (2002,010,0700) | 2.0770E-02 (2002,010,0800) |
| 1946 | -211.658 | -396.988 | 3.7199E-02 (2002,010,0600) | 2.9493E-02 (2002,010,0500) | 2.5569E-02 (2002,010,0700) | 1.9587E-02 (2002,010,0800) |
| 1947 | -209.419 | -397.047 | 3.6939E-02 (2002,010,0600) | 3.4800E-02 (2002,010,0500) | 2.5028E-02 (2002,010,0700) | 1.9005E-02 (2002,010,0800) |
| 1948 | -285.443 | -391.905 | 1.7281E-02 (2002,088,0700) | 1.6689E-02 (2002,061,0600) | 1.6061E-02 (2002,004,1100) | 1.4972E-02 (2002,088,0800) |
| 1949 | -283.205 | -391.985 | 1.5641E-02 (2002,088,0700) | 1.5343E-02 (2002,004,1100) | 1.3124E-02 (2002,088,0800) | 1.3117E-02 (2002,004,1000) |
| 1950 | -280.967 | -392.064 | 1.2664E-02 (2002,057,0800) | 9.4209E-03 (2002,088,0700) | 8.4172E-03 (2002,024,0800) | 8.2325E-03 (2002,088,0800) |
| 1951 | -278.730 | -392.142 | 1.5227E-02 (2002,004,1100) | 1.4620E-02 (2002,088,0700) | 1.4403E-02 (2002,004,1000) | 1.3786E-02 (2002,057,0700) |
| 1952 | -276.492 | -392.220 | 1.5381E-02 (2002,004,1000) | 1.5275E-02 (2002,004,1100) | 1.4826E-02 (2002,088,0700) | 1.4686E-02 (2002,057,0700) |
| 1953 | -274.254 | -392.298 | 1.5400E-02 (2002,004,1000) | 1.5180E-02 (2002,057,0700) | 1.4590E-02 (2002,004,1100) | 1.3649E-02 (2002,088,0700) |
| 1954 | -272.016 | -392.374 | 1.5393E-02 (2002,057,0700) | 1.5337E-02 (2002,004,1000) | 1.3796E-02 (2002,004,1100) | 1.2303E-02 (2002,088,0700) |
| 1955 | -269.778 | -392.450 | 1.5822E-02 (2002,004,1000) | 1.5470E-02 (2002,057,0700) | 1.3258E-02 (2002,004,1100) | 1.1969E-02 (2002,088,0700) |
| 1956 | -267.540 | -392.526 | 1.5818E-02 (2002,004,1000) | 1.5165E-02 (2002,057,0700) | 1.2442E-02 (2002,004,1100) | 1.1107E-02 (2002,061,0600) |
| 1957 | -265.302 | -392.600 | 1.6044E-02 (2002,004,1000) | 1.4663E-02 (2002,057,0700) | 1.4251E-02 (2002,061,0600) | 1.3618E-02 (2002,061,0700) |
| 1958 | -263.064 | -392.674 | 1.6587E-02 (2002,004,1000) | 1.6224E-02 (2002,061,0700) | 1.5184E-02 (2002,061,0600) | 1.3853E-02 (2002,057,0700) |
| 1959 | -260.826 | -392.748 | 1.6281E-02 (2002,061,0700) | 1.6058E-02 (2002,004,1000) | 1.4349E-02 (2002,061,0600) | 1.4081E-02 (2002,004,0900) |
| 1960 | -258.588 | -392.821 | 1.6038E-02 (2002,061,0700) | 1.5069E-02 (2002,004,1000) | 1.3620E-02 (2002,004,0900) | 1.3347E-02 (2002,061,0600) |
| 1961 | -213.823 | -394.146 | 3.9442E-02 (2002,010,0600) | 3.9106E-02 (2002,010,0500) | 2.6424E-02 (2002,010,0700) | 2.0573E-02 (2002,010,0800) |
| 1962 | -211.584 | -394.206 | 3.8445E-02 (2002,010,0500) | 3.7898E-02 (2002,010,0600) | 2.5349E-02 (2002,010,0700) | 1.9907E-02 (2002,010,0800) |
| 1963 | -285.344 | -389.124 | 1.8576E-02 (2002,088,0700) | 1.6499E-02 (2002,061,0600) | 1.6386E-02 (2002,004,1100) | 1.5439E-02 (2002,088,0800) |
| 1964 | -283.107 | -389.203 | 1.5597E-02 (2002,088,0700) | 1.2525E-02 (2002,057,0800) | 1.2377E-02 (2002,088,0800) | 1.2296E-02 (2002,004,1000) |
| 1965 | -280.869 | -389.283 | 1.3831E-02 (2002,088,0700) | 1.2903E-02 (2002,057,0700) | 1.2687E-02 (2002,057,0800) | 1.0765E-02 (2002,088,0800) |
| 1966 | -278.632 | -389.361 | 1.4984E-02 (2002,088,0700) | 1.4651E-02 (2002,004,1000) | 1.4019E-02 (2002,057,0700) | 1.3557E-02 (2002,004,1100) |
| 1967 | -276.395 | -389.439 | 1.6171E-02 (2002,004,1000) | 1.5726E-02 (2002,088,0700) | 1.5481E-02 (2002,004,1100) | 1.5043E-02 (2002,057,0700) |
| 1968 | -274.158 | -389.516 | 1.8418E-02 (2002,061,0600) | 1.7775E-02 (2002,004,1000) | 1.6889E-02 (2002,088,0700) | 1.6303E-02 (2002,004,1100) |
| 1969 | -269.684 | -389.669 | 1.8094E-02 (2002,004,1000) | 1.7960E-02 (2002,061,0600) | 1.6359E-02 (2002,057,0700) | 1.5133E-02 (2002,088,0600) |
| 1970 | -267.447 | -389.744 | 1.7798E-02 (2002,004,1000) | 1.7478E-02 (2002,061,0600) | 1.6091E-02 (2002,057,0700) | 1.5437E-02 (2002,061,0700) |
| 1971 | -211.510 | -391.424 | 4.0878E-02 (2002,010,0500) | 3.6559E-02 (2002,010,0600) | 2.4342E-02 (2002,010,0700) | 1.9842E-02 (2002,010,0800) |
| 1972 | -209.273 | -391.483 | 2.8643E-02 (2002,010,0600) | 2.5389E-02 (2002,010,0500) | 1.8441E-02 (2002,010,0700) | 1.6669E-02 (2002,010,0800) |
| 1973 | -278.535 | -386.580 | 1.5152E-02 (2002,088,0700) | 1.4101E-02 (2002,057,0700) | 1.2693E-02 (2002,057,0800) | 1.1151E-02 (2002,004,1000) |
| 1974 | -276.299 | -386.658 | 1.7077E-02 (2002,004,1000) | 1.6778E-02 (2002,088,0700) | 1.5779E-02 (2002,004,1100) | 1.5256E-02 (2002,057,0700) |
| 1975 | -215.910 | -388.522 | 4.4330E-02 (2002,010,0500) | 3.7860E-02 (2002,010,0600) | 2.5095E-02 (2002,010,0700) | 2.1772E-02 (2002,010,0400) |
| 1976 | -213.599 | -385.800 | 4.5223E-02 (2002,010,0500) | 3.4657E-02 (2002,010,0600) | 2.5595E-02 (2002,010,0400) | 2.3771E-02 (2002,010,0700) |
| 1977 | -211.363 | -385.860 | 4.4064E-02 (2002,010,0500) | 3.2988E-02 (2002,010,0600) | 2.5726E-02 (2002,010,0400) | 2.2940E-02 (2002,010,0700) |
| 1978 | -209.054 | -383.137 | 4.3154E-02 (2002,010,0500) | 2.9308E-02 (2002,010,0600) | 2.9251E-02 (2002,010,0400) | 2.1539E-02 (2002,010,0700) |
| 1979 | -206.746 | -380.413 | 2.7099E-02 (2002,010,0500) | 2.2950E-02 (2002,010,0600) | 1.8788E-02 (2002,010,0700) | 1.7755E-02 (2002,010,0400) |
| 1980 | -204.440 | -377.689 | 3.7270E-02 (2002,010,0500) | 3.4534E-02 (2002,010,0400) | 2.1928E-02 (2002,010,0600) | 1.9469E-02 (2002,285,0600) |
| 1981 | -202.136 | -374.965 | 2.9379E-02 (2002,010,0500) | 2.8240E-02 (2002,010,0400) | 1.8105E-02 (2002,010,0600) | 1.6388E-02 (2002,010,0700) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1982 | -202.065 | -372.183 | 2.0046E-02 (2002,010,0400) | 1.9997E-02 (2002,010,0500) | 1.4382E-02 (2002,010,0600) | 1.3821E-02 (2002,010,0700) |
| 1983 | -201.994 | -369.401 | 2.8775E-02 (2002,010,0400) | 2.4722E-02 (2002,010,0500) | 1.6821E-02 (2002,010,0600) | 1.6457E-02 (2002,010,0700) |
| 1984 | -199.763 | -369.458 | 2.2040E-02 (2002,010,0400) | 1.9159E-02 (2002,010,0500) | 1.4600E-02 (2002,089,0300) | 1.4300E-02 (2002,010,0600) |
| 1985 | -199.693 | -366.676 | 3.7432E-02 (2002,010,0400) | 2.3971E-02 (2002,010,0500) | 1.7499E-02 (2002,010,0300) | 1.6937E-02 (2002,089,0300) |
| 1986 | -195.231 | -366.787 | 3.2560E-02 (2002,010,0400) | 1.9045E-02 (2002,010,0500) | 1.8298E-02 (2002,089,0300) | 1.7150E-02 (2002,010,0300) |
| 1987 | -197.393 | -363.950 | 2.9714E-02 (2002,010,0400) | 1.8453E-02 (2002,010,0500) | 1.7188E-02 (2002,089,0300) | 1.6821E-02 (2002,010,0300) |
| 1988 | -192.798 | -358.497 | 1.8507E-02 (2002,010,0400) | 1.6248E-02 (2002,010,0300) | 1.4749E-02 (2002,089,0300) | 1.4726E-02 (2002,016,0800) |

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CALPOST Version 5.6394 Level 070622
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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1198 | -355.887 | -464.319 | 4.7212E-06 | 1593 | -221.307 | -421.787 | 5.6104E-05 |
| 1199 | -353.629 | -464.418 | 4.9143E-06 | 1594 | -219.061 | -421.849 | 5.5949E-05 |
| 1200 | -351.371 | -464.517 | 4.8637E-06 | 1595 | -216.814 | -421.910 | 5.3547E-05 |
| 1201 | -362.536 | -461.234 | 5.4068E-06 | 1596 | -214.568 | -421.971 | 4.9158E-05 |
| 1202 | -360.279 | -461.336 | 5.3640E-06 | 1597 | -212.322 | -422.030 | 4.7463E-05 |
| 1203 | -358.021 | -461.436 | 5.4214E-06 | 1598 | -210.076 | -422.090 | 4.8536E-05 |
| 1204 | -355.764 | -461.536 | 5.7017E-06 | 1599 | -207.829 | -422.148 | 3.6550E-05 |
| 1205 | -353.507 | -461.636 | 5.8902E-06 | 1600 | -205.583 | -422.206 | 3.7123E-05 |
| 1206 | -351.249 | -461.735 | 5.4775E-06 | 1601 | -203.337 | -422.264 | 5.2184E-05 |
| 1207 | -348.992 | -461.833 | 5.3343E-06 | 1602 | -326.742 | -415.392 | 1.5156E-05 |
| 1208 | -366.923 | -458.247 | 5.2088E-06 | 1603 | -324.498 | -415.483 | 1.4931E-05 |
| 1209 | -364.667 | -458.350 | 5.9122E-06 | 1604 | -322.253 | -415.574 | 1.4912E-05 |
| 1210 | -362.410 | -458.452 | 5.6858E-06 | 1605 | -302.052 | -416.362 | 2.2002E-05 |
| 1211 | -360.154 | -458.553 | 6.0016E-06 | 1606 | -268.380 | -417.562 | 3.7880E-05 |
| 1212 | -357.897 | -458.654 | 5.9568E-06 | 1607 | -266.134 | -417.637 | 3.0943E-05 |
| 1213 | -355.641 | -458.754 | 6.1675E-06 | 1608 | -263.889 | -417.712 | 2.2225E-05 |
| 1214 | -353.384 | -458.853 | 6.0348E-06 | 1609 | -261.644 | -417.785 | 3.4516E-05 |
| 1215 | -351.128 | -458.952 | 6.2414E-06 | 1610 | -259.399 | -417.858 | 3.9483E-05 |
| 1216 | -348.871 | -459.050 | 6.2406E-06 | 1611 | -257.154 | -417.931 | 3.7545E-05 |
| 1217 | -346.614 | -459.148 | 5.5792E-06 | 1612 | -254.909 | -418.003 | 2.5858E-05 |
| 1218 | -373.563 | -455.154 | 6.2674E-06 | 1613 | -252.664 | -418.074 | 3.5045E-05 |
| 1219 | -366.796 | -455.465 | 5.8209E-06 | 1614 | -250.419 | -418.144 | 3.7294E-05 |
| 1220 | -364.541 | -455.568 | 6.2199E-06 | 1615 | -248.174 | -418.214 | 4.7911E-05 |
| 1221 | -362.285 | -455.670 | 6.2811E-06 | 1616 | -245.928 | -418.284 | 4.4470E-05 |
| 1222 | -360.029 | -455.771 | 6.3284E-06 | 1617 | -243.683 | -418.352 | 5.0462E-05 |
| 1223 | -357.774 | -455.872 | 6.3843E-06 | 1618 | -241.438 | -418.420 | 5.0019E-05 |
| 1224 | -355.518 | -455.972 | 6.5481E-06 | 1619 | -239.193 | -418.488 | 4.6853E-05 |
| 1225 | -353.262 | -456.071 | 6.5221E-06 | 1620 | -236.947 | -418.555 | 5.4470E-05 |
| 1226 | -351.006 | -456.170 | 6.3291E-06 | 1621 | -234.702 | -418.621 | 5.5564E-05 |
| 1227 | -348.750 | -456.268 | 6.0845E-06 | 1622 | -232.457 | -418.686 | 5.6553E-05 |
| 1228 | -346.494 | -456.366 | 5.8165E-06 | 1623 | -230.211 | -418.751 | 5.7310E-05 |
| 1229 | -375.689 | -452.267 | 5.8956E-06 | 1624 | -227.966 | -418.815 | 5.7929E-05 |
| 1230 | -373.434 | -452.372 | 6.6072E-06 | 1625 | -225.721 | -418.879 | 5.8354E-05 |
| 1231 | -371.179 | -452.476 | 5.8017E-06 | 1626 | -223.475 | -418.942 | 5.8743E-05 |
| 1232 | -368.924 | -452.580 | 6.6260E-06 | 1627 | -221.230 | -419.004 | 5.8836E-05 |
| 1233 | -366.670 | -452.683 | 6.6429E-06 | 1628 | -218.984 | -419.066 | 5.8519E-05 |
| 1234 | -364.415 | -452.786 | 6.3805E-06 | 1629 | -216.739 | -419.127 | 5.6662E-05 |
| 1235 | -362.160 | -452.888 | 6.6448E-06 | 1630 | -214.494 | -419.188 | 5.6875E-05 |
| 1236 | -359.905 | -452.989 | 6.5226E-06 | 1631 | -212.248 | -419.248 | 5.4735E-05 |
| 1237 | -357.650 | -453.089 | 6.7874E-06 | 1632 | -210.003 | -419.307 | 5.0474E-05 |
| 1238 | -353.140 | -453.289 | 6.8105E-06 | 1633 | -207.757 | -419.365 | 3.7403E-05 |
| 1239 | -350.885 | -453.388 | 6.7269E-06 | 1634 | -205.512 | -419.423 | 5.1080E-05 |
| 1240 | -348.630 | -453.486 | 6.5985E-06 | 1635 | -203.266 | -419.481 | 5.4720E-05 |
| 1241 | -346.375 | -453.583 | 6.9410E-06 | 1636 | -328.872 | -412.519 | 1.6545E-05 |
| 1242 | -377.813 | -449.379 | 6.3252E-06 | 1637 | -326.629 | -412.611 | 1.6676E-05 |
| 1243 | -375.559 | -449.485 | 7.0291E-06 | 1638 | -324.385 | -412.702 | 1.6436E-05 |
| 1244 | -373.305 | -449.590 | 6.6024E-06 | 1639 | -322.141 | -412.793 | 1.6852E-05 |
| 1245 | -371.051 | -449.694 | 6.7853E-06 | 1640 | -319.898 | -412.883 | 1.7726E-05 |
| 1246 | -368.797 | -449.798 | 7.0641E-06 | 1641 | -317.654 | -412.972 | 1.4929E-05 |
| 1247 | -366.543 | -449.901 | 7.0332E-06 | 1642 | -301.947 | -413.580 | 2.0719E-05 |
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| | | | | 1988 | -192.798 | -358.497 | 9.1141E-05 |

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CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1976 | -213.599 | -385.800 | DISCRETE | 4.5223E-02 (2002,010,0500) | RANK 1 | 1 | HOUR |
| 1961 | -213.823 | -394.146 | DISCRETE | 3.9106E-02 (2002,010,0500) | RANK 2 | 1 | HOUR |
| 1884 | -216.287 | -402.432 | DISCRETE | 2.9994E-02 (2002,010,0500) | RANK 3 | 1 | HOUR |
| 1976 | -213.599 | -385.800 | DISCRETE | 2.3771E-02 (2002,010,0700) | RANK 4 | 1 | HOUR |
| 1986 | -195.231 | -366.787 | DISCRETE | 1.0722E-04 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Zion

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                             (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1988*0, 224*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

OUTPUT FILES

| Default Name | Unit No. | File Name and Path |
|---|---|---|
| CALPOST.LST | 8 | C:\SPC_FF\CALPOST\2002\2002_ZION_NOX.LST |
| (TOPN) | 11 | C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_ZI.DAT |

CALPOST Version 5.6394 Level 070622

NOX 1

4 RANKED 1 HOUR AVERAGE CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR (YEAR,DAY,ENDING TIME) (ug/m**3)

| RECEPTOR | COORDINATES (km) | | 1 RANK | 2 RANK | 3 RANK | 4 RANK |
|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 2.2318E-02 (2002,077,1000) | 1.5822E-02 (2002,077,0900) | 1.3560E-02 (2002,077,1100) | 9.9001E-03 (2002,342,1000) |
| 1990 | -306.221 | -311.322 | 2.2363E-02 (2002,077,1000) | 1.6724E-02 (2002,077,0900) | 1.3054E-02 (2002,077,1100) | 1.0543E-02 (2002,342,1000) |
| 1991 | -304.745 | -311.379 | 2.3146E-02 (2002,077,1000) | 1.9132E-02 (2002,077,0900) | 1.5072E-02 (2002,036,0300) | 1.3544E-02 (2002,330,0400) |
| 1992 | -303.268 | -311.436 | 2.6381E-02 (2002,036,0300) | 2.4037E-02 (2002,077,1000) | 2.2132E-02 (2002,077,0900) | 2.1991E-02 (2002,044,0400) |
| 1993 | -301.791 | -311.492 | 2.5139E-02 (2002,036,0300) | 2.3121E-02 (2002,077,1000) | 2.2181E-02 (2002,077,0900) | 2.1582E-02 (2002,044,0400) |
| 1994 | -307.626 | -309.412 | 2.3099E-02 (2002,077,1000) | 1.7777E-02 (2002,077,0900) | 1.3389E-02 (2002,077,1100) | 1.0175E-02 (2002,330,0400) |
| 1995 | -306.150 | -309.469 | 2.3022E-02 (2002,077,1000) | 1.8542E-02 (2002,077,0900) | 1.2894E-02 (2002,077,1100) | 1.0109E-02 (2002,342,1000) |
| 1996 | -304.673 | -309.526 | 2.3761E-02 (2002,077,1000) | 2.1029E-02 (2002,077,0900) | 1.3100E-02 (2002,330,0400) | 1.2505E-02 (2002,077,1100) |
| 1997 | -303.197 | -309.583 | 2.4992E-02 (2002,077,1000) | 2.4901E-02 (2002,077,0900) | 2.3842E-02 (2002,036,0300) | 2.1169E-02 (2002,330,0300) |
| 1998 | -301.720 | -309.640 | 2.3189E-02 (2002,077,0900) | 2.3173E-02 (2002,077,1000) | 1.5391E-02 (2002,036,0300) | 1.4108E-02 (2002,342,1000) |
| 1999 | -300.244 | -309.696 | 2.5587E-02 (2002,077,0900) | 2.4417E-02 (2002,036,0300) | 2.3310E-02 (2002,077,1000) | 2.3101E-02 (2002,044,0400) |
| 2000 | -298.767 | -309.752 | 2.5468E-02 (2002,077,0900) | 2.4526E-02 (2002,036,0300) | 2.4290E-02 (2002,044,0400) | 2.2121E-02 (2002,077,1000) |
| 2001 | -317.886 | -307.150 | 1.7775E-02 (2002,077,1000) | 1.2947E-02 (2002,330,0400) | 1.2871E-02 (2002,077,1100) | 1.0392E-02 (2002,077,0900) |
| 2002 | -316.410 | -307.209 | 1.9008E-02 (2002,077,1000) | 1.3242E-02 (2002,077,1100) | 1.3067E-02 (2002,330,0400) | 1.1735E-02 (2002,077,0900) |
| 2003 | -314.934 | -307.268 | 2.0124E-02 (2002,077,1000) | 1.3507E-02 (2002,077,1100) | 1.3050E-02 (2002,077,0900) | 1.2564E-02 (2002,330,0400) |
| 2004 | -313.458 | -307.327 | 2.1339E-02 (2002,077,1000) | 1.4721E-02 (2002,077,0900) | 1.4077E-02 (2002,330,0400) | 1.3726E-02 (2002,077,1100) |
| 2005 | -311.982 | -307.385 | 2.2453E-02 (2002,077,1000) | 1.6493E-02 (2002,077,0900) | 1.5445E-02 (2002,330,0400) | 1.3831E-02 (2002,077,1100) |
| 2006 | -309.030 | -307.501 | 2.4026E-02 (2002,077,1000) | 1.9789E-02 (2002,077,0900) | 1.6074E-02 (2002,330,0400) | 1.3639E-02 (2002,077,1100) |
| 2007 | -307.554 | -307.559 | 2.9607E-02 (2002,330,0300) | 2.8084E-02 (2002,330,0400) | 2.6991E-02 (2002,044,0500) | 2.6762E-02 (2002,077,1000) |
| 2008 | -306.078 | -307.616 | 2.5030E-02 (2002,077,1000) | 2.3359E-02 (2002,077,0900) | 1.7384E-02 (2002,330,0400) | 1.3922E-02 (2002,330,0300) |
| 2009 | -304.602 | -307.673 | 2.7544E-02 (2002,077,0900) | 2.6445E-02 (2002,077,1000) | 2.5825E-02 (2002,330,0300) | 2.3593E-02 (2002,036,0300) |
| 2010 | -303.125 | -307.730 | 2.4613E-02 (2002,077,0900) | 2.4170E-02 (2002,077,1000) | 1.3677E-02 (2002,330,0400) | 1.2478E-02 (2002,342,1000) |
| 2011 | -301.649 | -307.787 | 2.2942E-02 (2002,077,0900) | 2.2449E-02 (2002,077,1000) | 1.1643E-02 (2002,342,1000) | 1.0920E-02 (2002,077,1100) |
| 2012 | -300.173 | -307.843 | 2.6113E-02 (2002,077,0900) | 2.2939E-02 (2002,077,1000) | 1.4165E-02 (2002,342,1000) | 1.3482E-02 (2002,036,0300) |
| 2013 | -298.697 | -307.899 | 2.3672E-02 (2002,077,0900) | 2.0762E-02 (2002,077,1000) | 1.3081E-02 (2002,342,1000) | 9.3873E-03 (2002,077,1100) |
| 2014 | -317.812 | -305.297 | 1.8013E-02 (2002,077,1000) | 1.6572E-02 (2002,330,0400) | 1.2416E-02 (2002,077,1100) | 1.1688E-02 (2002,077,0900) |
| 2015 | -316.336 | -305.356 | 1.8926E-02 (2002,077,1000) | 1.2713E-02 (2002,077,1100) | 1.2616E-02 (2002,077,0900) | 1.2321E-02 (2002,330,0400) |
| 2016 | -314.860 | -305.415 | 2.0534E-02 (2002,077,1000) | 1.6887E-02 (2002,330,0400) | 1.4823E-02 (2002,077,0900) | 1.3130E-02 (2002,077,1100) |
| 2017 | -313.385 | -305.474 | 3.2427E-02 (2002,330,0400) | 2.6495E-02 (2002,330,0300) | 2.4022E-02 (2002,044,0500) | 2.3584E-02 (2002,077,1000) |
| 2018 | -311.909 | -305.533 | 3.2781E-02 (2002,330,0400) | 2.9062E-02 (2002,330,0300) | 2.6068E-02 (2002,044,0500) | 2.4854E-02 (2002,077,1000) |
| 2019 | -308.957 | -305.649 | 2.3470E-02 (2002,077,1000) | 2.0291E-02 (2002,077,0900) | 1.3191E-02 (2002,077,1100) | 1.1180E-02 (2002,330,0400) |
| 2020 | -307.482 | -305.706 | 2.4644E-02 (2002,077,1000) | 2.3247E-02 (2002,077,0900) | 1.6023E-02 (2002,330,0400) | 1.3096E-02 (2002,077,1100) |
| 2021 | -306.006 | -305.764 | 3.0547E-02 (2002,330,0300) | 2.9680E-02 (2002,077,0900) | 2.7653E-02 (2002,330,0400) | 2.7250E-02 (2002,077,1000) |
| 2022 | -304.530 | -305.821 | 3.2590E-02 (2002,330,0300) | 3.1804E-02 (2002,077,0900) | 2.7663E-02 (2002,044,0500) | 2.7492E-02 (2002,077,1000) |
| 2023 | -303.054 | -305.878 | 3.0417E-02 (2002,077,0900) | 2.6029E-02 (2002,077,1000) | 2.2756E-02 (2002,330,0300) | 2.0820E-02 (2002,330,0400) |
| 2024 | -301.579 | -305.934 | 3.2889E-02 (2002,077,0900) | 2.7775E-02 (2002,330,0300) | 2.6120E-02 (2002,077,1000) | 2.4634E-02 (2002,044,0400) |
| 2025 | -300.103 | -305.990 | 3.2762E-02 (2002,077,0900) | 2.5004E-02 (2002,077,1000) | 2.4986E-02 (2002,330,0300) | 2.4496E-02 (2002,044,0400) |
| 2026 | -298.627 | -306.046 | 3.1099E-02 (2002,077,0900) | 2.3209E-02 (2002,077,1000) | 1.9843E-02 (2002,044,0400) | 1.8943E-02 (2002,330,0300) |
| 2027 | -319.212 | -303.385 | 2.0833E-02 (2002,330,0400) | 1.6803E-02 (2002,077,1000) | 1.1538E-02 (2002,077,0900) | 1.1476E-02 (2002,077,1100) |
| 2028 | -317.737 | -303.445 | 1.7825E-02 (2002,077,1000) | 1.7417E-02 (2002,330,0400) | 1.2616E-02 (2002,077,0900) | 1.1883E-02 (2002,077,1100) |
| 2029 | -316.262 | -303.504 | 1.9182E-02 (2002,077,1000) | 1.8205E-02 (2002,330,0400) | 1.4369E-02 (2002,077,0900) | 1.2318E-02 (2002,077,1100) |
| 2030 | -314.786 | -303.563 | 2.0215E-02 (2002,077,1000) | 1.6195E-02 (2002,330,0400) | 1.5767E-02 (2002,077,0900) | 1.2614E-02 (2002,077,1100) |
| 2031 | -313.311 | -303.622 | 2.1564E-02 (2002,077,1000) | 1.8091E-02 (2002,330,0400) | 1.7945E-02 (2002,077,0900) | 1.2917E-02 (2002,077,1100) |
| 2032 | -311.836 | -303.680 | 3.6723E-02 (2002,330,0400) | 3.5335E-02 (2002,330,0300) | 2.9479E-02 (2002,044,0500) | 2.5441E-02 (2002,077,1000) |
| 2033 | -310.360 | -303.738 | 2.3625E-02 (2002,077,1000) | 2.2014E-02 (2002,077,0900) | 1.8814E-02 (2002,330,0400) | 1.3153E-02 (2002,077,1100) |
| 2034 | -308.885 | -303.796 | 2.3669E-02 (2002,077,1000) | 2.2567E-02 (2002,077,0900) | 1.3837E-02 (2002,330,0400) | 1.2964E-02 (2002,077,1100) |
| 2035 | -307.409 | -303.854 | 2.4080E-02 (2002,077,0900) | 2.4061E-02 (2002,077,1000) | 1.3048E-02 (2002,330,0400) | 1.2766E-02 (2002,077,1100) |
| 2036 | -305.934 | -303.911 | 2.7978E-02 (2002,077,0900) | 2.5377E-02 (2002,077,1000) | 1.8981E-02 (2002,330,0400) | 1.4907E-02 (2002,330,0300) |
| 2037 | -304.459 | -303.968 | 3.1294E-02 (2002,077,0900) | 2.6171E-02 (2002,077,1000) | 2.2053E-02 (2002,330,0400) | 2.1704E-02 (2002,330,0300) |
| 2038 | -302.983 | -304.025 | 3.3939E-02 (2002,077,0900) | 2.6578E-02 (2002,330,0300) | 2.6473E-02 (2002,077,1000) | 2.3188E-02 (2002,330,0400) |
| 2039 | -301.508 | -304.082 | 3.7327E-02 (2002,077,0900) | 3.4023E-02 (2002,330,0300) | 2.7283E-02 (2002,044,0400) | 2.6855E-02 (2002,044,0500) |
| 2040 | -300.032 | -304.138 | 3.8837E-02 (2002,077,0900) | 3.4300E-02 (2002,330,0300) | 2.8900E-02 (2002,044,0400) | 2.6456E-02 (2002,036,0300) |
| 2041 | -298.557 | -304.194 | 3.7729E-02 (2002,077,0900) | 3.0720E-02 (2002,330,0300) | 3.0393E-02 (2002,044,0400) | 2.5959E-02 (2002,036,0300) |
| 2042 | -319.137 | -301.533 | 1.8798E-02 (2002,330,0400) | 1.6200E-02 (2002,077,1000) | 1.1935E-02 (2002,077,0900) | 1.0879E-02 (2002,077,1100) |
| 2043 | -317.662 | -301.592 | 1.7350E-02 (2002,077,1000) | 1.7259E-02 (2002,330,0400) | 1.3318E-02 (2002,077,0900) | 1.1342E-02 (2002,077,1100) |
| 2044 | -316.187 | -301.651 | 1.9168E-02 (2002,330,0400) | 1.8807E-02 (2002,077,1000) | 1.5385E-02 (2002,077,0900) | 1.1831E-02 (2002,077,1100) |
| 2045 | -314.712 | -301.710 | 1.9866E-02 (2002,077,1000) | 1.7515E-02 (2002,330,0400) | 1.6950E-02 (2002,077,0900) | 1.2171E-02 (2002,077,1100) |
| 2046 | -313.237 | -301.769 | 2.1380E-02 (2002,077,1000) | 2.0685E-02 (2002,330,0400) | 1.9631E-02 (2002,077,0900) | 1.2538E-02 (2002,077,1100) |
| 2047 | -311.762 | -301.827 | 3.7194E-02 (2002,330,0400) | 3.6426E-02 (2002,330,0300) | 2.9406E-02 (2002,044,0500) | 2.7228E-02 (2002,077,0900) |
| 2048 | -310.287 | -301.886 | 3.8158E-02 (2002,330,0300) | 3.6671E-02 (2002,330,0400) | 2.9905E-02 (2002,077,0900) | 2.9695E-02 (2002,044,0500) |
| 2049 | -308.812 | -301.944 | 3.9559E-02 (2002,330,0300) | 3.5812E-02 (2002,330,0400) | 3.2525E-02 (2002,077,0900) | 2.9784E-02 (2002,044,0500) |
| 2050 | -307.337 | -302.001 | 2.8151E-02 (2002,077,0900) | 2.4768E-02 (2002,077,1000) | 2.0181E-02 (2002,330,0400) | 1.4898E-02 (2002,330,0300) |
| 2051 | -305.862 | -302.059 | 3.4967E-02 (2002,077,0900) | 3.4233E-02 (2002,330,0300) | 3.0160E-02 (2002,330,0400) | 2.7107E-02 (2002,077,1000) |
| 2052 | -304.387 | -302.116 | 3.7758E-02 (2002,077,0900) | 3.7703E-02 (2002,330,0300) | 3.0100E-02 (2002,330,0400) | 2.7994E-02 (2002,044,0500) |
| 2053 | -302.912 | -302.172 | 4.0821E-02 (2002,330,0300) | 4.0650E-02 (2002,077,0900) | 2.9522E-02 (2002,330,0400) | 2.8319E-02 (2002,044,0500) |
| 2054 | -301.437 | -302.229 | 4.0643E-02 (2002,077,0900) | 3.7324E-02 (2002,330,0300) | 2.7290E-02 (2002,044,0500) | 2.7211E-02 (2002,044,0400) |
| 2055 | -299.962 | -302.285 | 4.1155E-02 (2002,077,0900) | 3.5839E-02 (2002,330,0300) | 2.8844E-02 (2002,044,0400) | 2.6208E-02 (2002,044,0500) |
| 2056 | -298.487 | -302.341 | 4.0324E-02 (2002,077,0900) | 3.1732E-02 (2002,330,0300) | 2.8187E-02 (2002,044,0400) | 2.4699E-02 (2002,077,1000) |
| 2057 | -319.062 | -299.680 | 2.5272E-02 (2002,330,0400) | 1.6242E-02 (2002,077,1000) | 1.4389E-02 (2002,330,0300) | 1.3780E-02 (2002,044,0500) |
| 2058 | -317.588 | -299.740 | 2.9562E-02 (2002,330,0400) | 1.9768E-02 (2002,330,0300) | 1.9294E-02 (2002,044,0500) | 1.7995E-02 (2002,077,1000) |
| 2059 | -316.113 | -299.799 | 3.3620E-02 (2002,330,0400) | 2.6050E-02 (2002,330,0300) | 2.5159E-02 (2002,044,0500) | 1.9817E-02 (2002,077,1000) |
| 2060 | -314.639 | -299.858 | 2.2262E-02 (2002,330,0400) | 1.9698E-02 (2002,077,1000) | 1.8807E-02 (2002,077,0900) | 1.2875E-02 (2002,330,0300) |
| 2061 | -313.164 | -299.917 | 2.5750E-02 (2002,330,0400) | 2.1910E-02 (2002,077,0900) | 2.1311E-02 (2002,077,1000) | 1.7707E-02 (2002,330,0300) |
| 2062 | -311.689 | -299.975 | 2.5612E-02 (2002,330,0400) | 2.4262E-02 (2002,077,0900) | 2.2410E-02 (2002,077,1000) | 1.8593E-02 (2002,330,0300) |
| 2063 | -310.214 | -300.033 | 3.9074E-02 (2002,330,0300) | 3.6798E-02 (2002,330,0400) | 3.1655E-02 (2002,077,0900) | 2.9294E-02 (2002,044,0500) |
| 2064 | -308.740 | -300.091 | 4.0962E-02 (2002,330,0300) | 3.6248E-02 (2002,330,0400) | 3.4542E-02 (2002,077,0900) | 2.9489E-02 (2002,044,0500) |
| 2065 | -307.265 | -300.149 | 4.2362E-02 (2002,330,0300) | 3.6825E-02 (2002,077,0900) | 3.5361E-02 (2002,330,0400) | 2.9482E-02 (2002,044,0500) |
| 2066 | -305.790 | -300.206 | 2.9933E-02 (2002,077,0900) | 2.3849E-02 (2002,077,1000) | 1.5866E-02 (2002,330,0400) | 1.2217E-02 (2002,077,1100) |
| 2067 | -304.316 | -300.263 | 4.1943E-02 (2002,330,0300) | 4.0893E-02 (2002,077,0900) | 3.1907E-02 (2002,330,0400) | 2.8984E-02 (2002,044,0500) |
| 2068 | -302.841 | -300.320 | 4.4195E-02 (2002,330,0300) | 4.3902E-02 (2002,077,0900) | 3.0895E-02 (2002,330,0400) | 2.8452E-02 (2002,044,0500) |
| 2069 | -301.366 | -300.376 | 4.5273E-02 (2002,077,0900) | 4.3727E-02 (2002,330,0300) | 2.8904E-02 (2002,330,0400) | 2.7758E-02 (2002,044,0500) |
| 2070 | -299.891 | -300.432 | 4.6049E-02 (2002,077,0900) | 4.2716E-02 (2002,330,0300) | 2.9337E-02 (2002,044,0400) | 2.6917E-02 (2002,044,0500) |
| 2071 | -298.417 | -300.488 | 4.5622E-02 (2002,077,0900) | 4.1029E-02 (2002,330,0300) | 3.1250E-02 (2002,044,0400) | 2.5981E-02 (2002,044,0500) |
| 2072 | -318.988 | -297.828 | 1.4405E-02 (2002,077,1000) | 1.3047E-02 (2002,330,0400) | 1.1933E-02 (2002,077,0900) | 1.1162E-02 (2002,329,0900) |
| 2073 | -317.513 | -297.887 | 2.0499E-02 (2002,330,0400) | 1.6292E-02 (2002,077,1000) | 1.5027E-02 (2002,077,0900) | 1.1221E-02 (2002,329,0900) |
| 2074 | -316.039 | -297.946 | 2.0837E-02 (2002,330,0400) | 1.7525E-02 (2002,077,1000) | 1.7059E-02 (2002,077,0900) | 1.1282E-02 (2002,330,0300) |
| 2075 | -314.565 | -298.005 | 3.5114E-02 (2002,330,0400) | 3.1079E-02 (2002,330,0300) | 2.6739E-02 (2002,044,0500) | 2.3582E-02 (2002,077,0900) |
| 2076 | -313.090 | -298.064 | 3.3006E-02 (2002,330,0400) | 2.9011E-02 (2002,330,0300) | 2.5188E-02 (2002,077,0900) | 2.4501E-02 (2002,044,0500) |
| 2077 | -311.616 | -298.122 | 3.6721E-02 (2002,330,0300) | 3.6205E-02 (2002,330,0400) | 2.9833E-02 (2002,077,0900) | 2.8049E-02 (2002,044,0500) |
| 2078 | -310.142 | -298.181 | 3.9351E-02 (2002,330,0300) | 3.6296E-02 (2002,330,0400) | 3.2968E-02 (2002,077,0900) | 2.8489E-02 (2002,044,0500) |
| 2079 | -308.667 | -298.238 | 4.1713E-02 (2002,330,0300) | 3.6060E-02 (2002,330,0400) | 3.6058E-02 (2002,077,0900) | 2.8745E-02 (2002,044,0500) |
| 2080 | -307.193 | -298.296 | 4.2317E-02 (2002,330,0300) | 3.8154E-02 (2002,077,0900) | 3.4978E-02 (2002,330,0400) | 2.8828E-02 (2002,044,0500) |
| 2081 | -305.719 | -298.353 | 3.8818E-02 (2002,077,0900) | 3.6693E-02 (2002,330,0300) | 3.1032E-02 (2002,330,0400) | 2.5739E-02 (2002,077,1000) |
| 2082 | -304.244 | -298.410 | 4.6143E-02 (2002,330,0300) | 4.3698E-02 (2002,077,0900) | 3.3280E-02 (2002,330,0400) | 2.8556E-02 (2002,044,0500) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2083 | -302.770 | -298.467 | 4.7084E-02 (2002,330,0300) | 4.6244E-02 (2002,077,0900) | 3.1790E-02 (2002,330,0400) | 2.8143E-02 (2002,044,0500) |
| 2084 | -301.295 | -298.524 | 4.7973E-02 (2002,077,0900) | 4.7114E-02 (2002,330,0300) | 2.9983E-02 (2002,330,0400) | 2.7576E-02 (2002,044,0500) |
| 2085 | -299.821 | -298.580 | 4.8945E-02 (2002,077,0900) | 4.6551E-02 (2002,330,0300) | 2.8974E-02 (2002,044,0400) | 2.7956E-02 (2002,330,0400) |
| 2086 | -318.913 | -295.975 | 1.6622E-02 (2002,330,0400) | 1.3946E-02 (2002,077,1000) | 1.2832E-02 (2002,077,0900) | 1.2000E-02 (2002,329,0900) |
| 2087 | -317.439 | -296.035 | 2.1468E-02 (2002,330,0400) | 1.5695E-02 (2002,077,0900) | 1.5581E-02 (2002,077,1000) | 1.2165E-02 (2002,330,0300) |
| 2088 | -315.965 | -296.094 | 1.6405E-02 (2002,077,0900) | 1.6400E-02 (2002,330,0400) | 1.6156E-02 (2002,077,1000) | 1.0707E-02 (2002,329,0900) |
| 2089 | -314.491 | -296.153 | 2.2098E-02 (2002,330,0400) | 2.0000E-02 (2002,077,0900) | 1.7926E-02 (2002,077,1000) | 1.3764E-02 (2002,330,0300) |
| 2090 | -313.017 | -296.212 | 2.1863E-02 (2002,077,0900) | 2.0642E-02 (2002,330,0400) | 1.8830E-02 (2002,077,1000) | 1.2657E-02 (2002,330,0300) |
| 2091 | -311.543 | -296.270 | 2.6378E-02 (2002,330,0400) | 2.6300E-02 (2002,077,0900) | 2.1119E-02 (2002,330,0300) | 2.0643E-02 (2002,077,1000) |
| 2092 | -310.069 | -296.328 | 3.8934E-02 (2002,330,0300) | 3.5173E-02 (2002,330,0400) | 3.3739E-02 (2002,077,0900) | 2.7277E-02 (2002,044,0500) |
| 2093 | -308.595 | -296.386 | 4.1047E-02 (2002,330,0300) | 3.6335E-02 (2002,077,0900) | 3.5025E-02 (2002,330,0400) | 2.7602E-02 (2002,044,0500) |
| 2094 | -307.121 | -296.444 | 4.4261E-02 (2002,330,0300) | 4.0228E-02 (2002,077,0900) | 3.4949E-02 (2002,330,0400) | 2.7800E-02 (2002,044,0500) |
| 2095 | -305.647 | -296.501 | 4.3299E-02 (2002,330,0300) | 4.1713E-02 (2002,077,0900) | 3.3234E-02 (2002,330,0400) | 2.7576E-02 (2002,044,0500) |
| 2096 | -304.173 | -296.558 | 4.4883E-02 (2002,330,0300) | 4.4315E-02 (2002,077,0900) | 3.2325E-02 (2002,330,0400) | 2.7444E-02 (2002,044,0500) |
| 2097 | -302.699 | -296.615 | 4.4035E-02 (2002,077,0900) | 3.8095E-02 (2002,330,0300) | 2.8190E-02 (2002,330,0400) | 2.4969E-02 (2002,077,1000) |
| 2098 | -301.225 | -296.671 | 4.9996E-02 (2002,077,0900) | 4.9935E-02 (2002,330,0300) | 3.0546E-02 (2002,330,0400) | 2.7022E-02 (2002,044,0500) |
| 2099 | -318.838 | -294.123 | 2.3540E-02 (2002,330,0400) | 1.7317E-02 (2002,044,0500) | 1.5216E-02 (2002,330,0300) | 1.4796E-02 (2002,077,0900) |
| 2100 | -317.364 | -294.182 | 2.7156E-02 (2002,330,0400) | 2.1824E-02 (2002,044,0500) | 2.0418E-02 (2002,330,0300) | 1.7848E-02 (2002,077,0900) |
| 2101 | -315.890 | -294.242 | 2.0185E-02 (2002,330,0400) | 1.7652E-02 (2002,077,0900) | 1.5650E-02 (2002,077,1000) | 1.1982E-02 (2002,330,0300) |
| 2102 | -314.417 | -294.301 | 3.0817E-02 (2002,330,0400) | 2.7907E-02 (2002,330,0300) | 2.4145E-02 (2002,077,0900) | 2.3767E-02 (2002,044,0500) |
| 2103 | -312.943 | -294.359 | 2.9796E-02 (2002,330,0400) | 2.7102E-02 (2002,330,0300) | 2.5749E-02 (2002,077,0900) | 2.2423E-02 (2002,044,0500) |
| 2104 | -311.470 | -294.418 | 3.4538E-02 (2002,330,0300) | 3.2845E-02 (2002,330,0400) | 3.0575E-02 (2002,077,0900) | 2.5216E-02 (2002,044,0500) |
| 2105 | -309.996 | -294.476 | 3.7850E-02 (2002,330,0300) | 3.3833E-02 (2002,077,0900) | 3.3472E-02 (2002,330,0400) | 2.5732E-02 (2002,044,0500) |
| 2106 | -308.522 | -294.534 | 4.1040E-02 (2002,330,0300) | 3.7365E-02 (2002,077,0900) | 3.3805E-02 (2002,330,0400) | 2.6113E-02 (2002,044,0500) |
| 2107 | -307.049 | -294.591 | 4.4066E-02 (2002,330,0300) | 4.0713E-02 (2002,077,0900) | 3.3822E-02 (2002,330,0400) | 2.6420E-02 (2002,044,0500) |
| 2108 | -305.575 | -294.648 | 4.1690E-02 (2002,077,0900) | 4.1685E-02 (2002,330,0300) | 3.1726E-02 (2002,330,0400) | 2.4995E-02 (2002,044,0500) |
| 2109 | -304.101 | -294.705 | 4.4674E-02 (2002,077,0900) | 4.4540E-02 (2002,330,0300) | 3.1398E-02 (2002,330,0400) | 2.5504E-02 (2002,044,0500) |
| 2110 | -302.627 | -294.762 | 5.0821E-02 (2002,330,0300) | 4.9232E-02 (2002,077,0900) | 3.1871E-02 (2002,330,0400) | 2.6359E-02 (2002,044,0500) |
| 2111 | -301.154 | -294.819 | 5.2010E-02 (2002,330,0300) | 5.1229E-02 (2002,077,0900) | 3.0586E-02 (2002,330,0400) | 2.8304E-02 (2002,077,0800) |
| 2112 | -318.763 | -292.271 | 2.2970E-02 (2002,330,0400) | 1.9222E-02 (2002,044,0500) | 1.6725E-02 (2002,357,0100) | 1.6058E-02 (2002,330,0300) |
| 2113 | -317.289 | -292.330 | 2.3480E-02 (2002,330,0400) | 1.8490E-02 (2002,044,0500) | 1.7099E-02 (2002,077,0900) | 1.7076E-02 (2002,330,0300) |
| 2114 | -315.816 | -292.389 | 2.6683E-02 (2002,330,0400) | 2.2529E-02 (2002,330,0300) | 2.1099E-02 (2002,044,0500) | 2.0496E-02 (2002,077,0900) |
| 2115 | -314.343 | -292.448 | 2.8102E-02 (2002,330,0400) | 2.5724E-02 (2002,330,0300) | 2.3741E-02 (2002,077,0900) | 2.1916E-02 (2002,044,0500) |
| 2116 | -312.870 | -292.507 | 2.8702E-02 (2002,330,0400) | 2.7621E-02 (2002,330,0300) | 2.6017E-02 (2002,077,0900) | 2.2724E-02 (2002,044,0500) |
| 2117 | -311.396 | -292.565 | 3.2587E-02 (2002,330,0300) | 3.0451E-02 (2002,330,0400) | 3.0164E-02 (2002,077,0900) | 2.3373E-02 (2002,044,0500) |
| 2118 | -309.923 | -292.623 | 3.5379E-02 (2002,330,0300) | 3.2867E-02 (2002,077,0900) | 3.1062E-02 (2002,330,0400) | 2.3916E-02 (2002,044,0500) |
| 2119 | -308.450 | -292.681 | 3.9679E-02 (2002,330,0300) | 3.7053E-02 (2002,077,0900) | 3.1863E-02 (2002,330,0400) | 2.4395E-02 (2002,044,0500) |
| 2120 | -306.976 | -292.739 | 4.1842E-02 (2002,330,0300) | 3.9508E-02 (2002,077,0900) | 3.1806E-02 (2002,330,0400) | 2.4712E-02 (2002,044,0500) |
| 2121 | -305.503 | -292.796 | 3.6706E-02 (2002,077,0900) | 2.5865E-02 (2002,330,0300) | 2.3852E-02 (2002,330,0400) | 2.1342E-02 (2002,077,1000) |
| 2122 | -304.030 | -292.853 | 3.8821E-02 (2002,077,0900) | 2.6556E-02 (2002,330,0300) | 2.3171E-02 (2002,330,0400) | 2.1720E-02 (2002,077,1000) |
| 2123 | -302.556 | -292.910 | 3.9636E-02 (2002,077,0900) | 2.4276E-02 (2002,330,0300) | 2.1665E-02 (2002,077,1000) | 2.1059E-02 (2002,330,0400) |
| 2124 | -301.083 | -292.966 | 4.3076E-02 (2002,077,0900) | 3.0396E-02 (2002,330,0300) | 2.3275E-02 (2002,077,0800) | 2.2526E-02 (2002,330,0400) |
| 2125 | -318.688 | -290.418 | 2.0578E-02 (2002,330,0400) | 1.9521E-02 (2002,357,0100) | 1.7375E-02 (2002,044,0500) | 1.7300E-02 (2002,330,0000) |
| 2126 | -317.215 | -290.478 | 2.2164E-02 (2002,330,0400) | 1.8285E-02 (2002,044,0500) | 1.8050E-02 (2002,357,0100) | 1.7307E-02 (2002,330,0300) |
| 2127 | -315.742 | -290.537 | 2.3708E-02 (2002,330,0400) | 2.0155E-02 (2002,330,0300) | 2.0111E-02 (2002,077,0900) | 1.9134E-02 (2002,044,0500) |
| 2128 | -314.269 | -290.596 | 2.5184E-02 (2002,330,0400) | 2.3286E-02 (2002,330,0300) | 2.2943E-02 (2002,077,0900) | 1.9950E-02 (2002,044,0500) |
| 2129 | -312.796 | -290.654 | 2.6640E-02 (2002,330,0300) | 2.6524E-02 (2002,330,0400) | 2.6001E-02 (2002,077,0900) | 2.0706E-02 (2002,044,0500) |
| 2130 | -311.323 | -290.713 | 2.8155E-02 (2002,330,0300) | 2.8141E-02 (2002,077,0900) | 2.6859E-02 (2002,330,0400) | 2.1136E-02 (2002,044,0500) |
| 2131 | -309.850 | -290.771 | 3.3896E-02 (2002,330,0300) | 3.2649E-02 (2002,077,0900) | 2.8720E-02 (2002,330,0400) | 2.1897E-02 (2002,044,0500) |
| 2132 | -308.377 | -290.829 | 3.7657E-02 (2002,330,0300) | 3.6085E-02 (2002,077,0900) | 2.9491E-02 (2002,330,0400) | 2.2414E-02 (2002,044,0500) |
| 2133 | -306.904 | -290.886 | 4.1383E-02 (2002,330,0300) | 3.9510E-02 (2002,077,0900) | 2.9994E-02 (2002,330,0400) | 2.2771E-02 (2002,044,0500) |
| 2134 | -305.431 | -290.943 | 3.2873E-02 (2002,077,0900) | 1.9420E-02 (2002,077,1000) | 1.8376E-02 (2002,330,0400) | 1.7156E-02 (2002,330,0300) |
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| 2136 | -302.485 | -291.057 | 5.1174E-02 (2002,330,0300) | 4.8701E-02 (2002,077,0900) | 3.1798E-02 (2002,077,0800) | 2.9770E-02 (2002,330,0400) |
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| 2138 | -318.613 | -288.566 | 2.2485E-02 (2002,357,0100) | 1.8796E-02 (2002,357,0200) | 1.8703E-02 (2002,330,0000) | 1.7672E-02 (2002,330,0400) |
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| 2140 | -315.668 | -288.684 | 2.0683E-02 (2002,330,0400) | 1.9314E-02 (2002,357,0100) | 1.9136E-02 (2002,077,0900) | 1.7672E-02 (2002,330,0300) |
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| 2142 | -312.722 | -288.802 | 2.4776E-02 (2002,077,0900) | 2.3947E-02 (2002,330,0300) | 2.3515E-02 (2002,330,0400) | 1.8588E-02 (2002,044,0500) |
| 2143 | -311.250 | -288.860 | 2.7921E-02 (2002,077,0900) | 2.7475E-02 (2002,330,0300) | 2.4772E-02 (2002,330,0400) | 1.9211E-02 (2002,044,0500) |
| 2144 | -309.777 | -288.918 | 3.1220E-02 (2002,330,0300) | 3.1187E-02 (2002,077,0900) | 2.5887E-02 (2002,330,0400) | 1.9809E-02 (2002,044,0500) |
| 2145 | -308.305 | -288.976 | 3.5084E-02 (2002,330,0300) | 3.4540E-02 (2002,077,0900) | 2.6796E-02 (2002,330,0400) | 2.0288E-02 (2002,044,0500) |
| 2146 | -306.832 | -289.034 | 3.8172E-02 (2002,330,0300) | 3.7059E-02 (2002,077,0900) | 2.7331E-02 (2002,330,0400) | 2.1333E-02 (2002,077,0800) |
| 2147 | -305.359 | -289.091 | 4.1921E-02 (2002,330,0300) | 4.0299E-02 (2002,077,0900) | 2.7779E-02 (2002,330,0400) | 2.5021E-02 (2002,077,0800) |
| 2148 | -303.887 | -289.148 | 4.3883E-02 (2002,330,0300) | 4.2787E-02 (2002,077,0900) | 2.8283E-02 (2002,077,0800) | 2.7433E-02 (2002,330,0400) |
| 2149 | -302.414 | -289.205 | 4.9992E-02 (2002,330,0300) | 4.7199E-02 (2002,077,0900) | 3.4644E-02 (2002,077,0800) | 2.8020E-02 (2002,330,0400) |
| 2150 | -300.941 | -289.261 | 5.2991E-02 (2002,330,0300) | 4.9689E-02 (2002,077,0900) | 3.9134E-02 (2002,077,0800) | 2.7608E-02 (2002,330,0400) |
| 2151 | -320.010 | -286.654 | 2.6945E-02 (2002,357,0100) | 2.4099E-02 (2002,357,0200) | 2.0401E-02 (2002,330,0000) | 1.8897E-02 (2002,329,2300) |
| 2152 | -318.538 | -286.714 | 2.5608E-02 (2002,357,0100) | 2.1047E-02 (2002,357,0200) | 1.9830E-02 (2002,330,0000) | 1.7037E-02 (2002,329,2300) |
| 2153 | -317.066 | -286.773 | 2.4096E-02 (2002,357,0100) | 1.9057E-02 (2002,330,0000) | 1.8083E-02 (2002,357,0200) | 1.6292E-02 (2002,330,0400) |
| 2154 | -315.593 | -286.832 | 2.2416E-02 (2002,357,0100) | 1.8141E-02 (2002,330,0000) | 1.7960E-02 (2002,077,0900) | 1.7710E-02 (2002,330,0400) |
| 2155 | -314.121 | -286.891 | 2.0605E-02 (2002,357,0100) | 2.0494E-02 (2002,077,0900) | 1.9107E-02 (2002,330,0400) | 1.7992E-02 (2002,330,0300) |
| 2156 | -312.649 | -286.950 | 2.3265E-02 (2002,077,0900) | 2.1104E-02 (2002,330,0300) | 2.0461E-02 (2002,330,0400) | 1.8707E-02 (2002,357,0100) |
| 2157 | -311.177 | -287.008 | 2.6221E-02 (2002,077,0900) | 2.4525E-02 (2002,330,0300) | 2.1741E-02 (2002,330,0400) | 1.7030E-02 (2002,044,0500) |
| 2158 | -309.704 | -287.066 | 2.9316E-02 (2002,077,0900) | 2.8178E-02 (2002,330,0300) | 2.2900E-02 (2002,330,0400) | 1.7618E-02 (2002,044,0500) |
| 2159 | -308.232 | -287.124 | 3.0797E-02 (2002,077,0900) | 2.8783E-02 (2002,330,0300) | 2.2778E-02 (2002,330,0400) | 1.7852E-02 (2002,077,0800) |
| 2160 | -306.760 | -287.181 | 3.6086E-02 (2002,330,0300) | 3.5809E-02 (2002,077,0900) | 2.4757E-02 (2002,330,0400) | 2.3489E-02 (2002,077,0800) |
| 2161 | -305.288 | -287.239 | 3.8311E-02 (2002,330,0300) | 3.7806E-02 (2002,077,0900) | 2.6063E-02 (2002,077,0800) | 2.4927E-02 (2002,330,0400) |
| 2162 | -303.815 | -287.296 | 3.6388E-02 (2002,077,0900) | 2.9864E-02 (2002,330,0300) | 2.5059E-02 (2002,077,0800) | 2.1192E-02 (2002,330,0400) |
| 2163 | -302.343 | -287.352 | 4.7930E-02 (2002,330,0300) | 4.5039E-02 (2002,077,0900) | 3.7015E-02 (2002,077,0800) | 2.5911E-02 (2002,330,0400) |
| 2164 | -300.871 | -287.409 | 5.1360E-02 (2002,330,0300) | 4.6990E-02 (2002,077,0900) | 4.0977E-02 (2002,077,0800) | 2.6258E-02 (2002,330,0200) |
| 2165 | -325.822 | -284.560 | 3.5525E-02 (2002,357,0200) | 3.1874E-02 (2002,357,0100) | 1.0262E-02 (2002,329,2300) | 1.0215E-02 (2002,190,0800) |
| 2166 | -324.350 | -284.621 | 3.3812E-02 (2002,357,0200) | 3.1770E-02 (2002,357,0100) | 1.5159E-02 (2002,329,2300) | 1.1870E-02 (2002,330,0000) |
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| 2170 | -318.463 | -284.861 | 2.8814E-02 (2002,357,0100) | 2.3252E-02 (2002,357,0200) | 2.0601E-02 (2002,330,0000) | 1.9459E-02 (2002,329,2300) |
| 2171 | -314.047 | -285.039 | 2.3845E-02 (2002,357,0100) | 1.9005E-02 (2002,077,0900) | 1.8544E-02 (2002,330,0000) | 1.6185E-02 (2002,330,0400) |
| 2172 | -312.575 | -285.097 | 2.1856E-02 (2002,357,0100) | 2.1563E-02 (2002,077,0900) | 1.8238E-02 (2002,330,0300) | 1.7503E-02 (2002,330,0000) |
| 2173 | -311.103 | -285.156 | 2.4284E-02 (2002,077,0900) | 2.1469E-02 (2002,330,0300) | 1.9786E-02 (2002,357,0100) | 1.8726E-02 (2002,330,0400) |
| 2174 | -309.632 | -285.214 | 2.7185E-02 (2002,077,0900) | 2.4987E-02 (2002,330,0300) | 1.9892E-02 (2002,330,0400) | 1.7651E-02 (2002,357,0100) |
| 2175 | -327.217 | -282.647 | 4.0226E-02 (2002,357,0200) | 3.4453E-02 (2002,357,0100) | 2.7677E-02 (2002,329,2300) | 1.7481E-02 (2002,330,0000) |
| 2176 | -325.745 | -282.708 | 3.7151E-02 (2002,357,0200) | 3.3928E-02 (2002,357,0100) | 1.3750E-02 (2002,329,2300) | 1.1898E-02 (2002,190,0800) |
| 2177 | -324.274 | -282.769 | 3.6490E-02 (2002,357,0200) | 3.4540E-02 (2002,357,0100) | 2.6382E-02 (2002,329,2300) | 1.8784E-02 (2002,330,0000) |
| 2178 | -322.802 | -282.829 | 3.4382E-02 (2002,357,0100) | 3.4213E-02 (2002,357,0200) | 2.6434E-02 (2002,329,2300) | 2.0240E-02 (2002,330,0000) |
| 2179 | -321.331 | -282.889 | 3.3743E-02 (2002,357,0100) | 3.1278E-02 (2002,357,0200) | 2.4214E-02 (2002,329,2300) | 1.9781E-02 (2002,330,0000) |
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| 2181 | -318.388 | -283.009 | 3.2034E-02 (2002,357,0100) | 2.5327E-02 (2002,357,0200) | 2.1841E-02 (2002,329,2300) | 2.0992E-02 (2002,330,0000) |
| 2182 | -309.559 | -283.361 | 2.4679E-02 (2002,077,0900) | 2.1690E-02 (2002,330,0300) | 2.0778E-02 (2002,357,0100) | 1.6968E-02 (2002,330,0400) |
| 2183 | -327.140 | -280.795 | 4.0787E-02 (2002,357,0200) | 3.5801E-02 (2002,357,0100) | 2.8116E-02 (2002,329,2300) | 1.5849E-02 (2002,330,0000) |
| 2184 | -325.669 | -280.856 | 3.8974E-02 (2002,357,0200) | 3.5959E-02 (2002,357,0100) | 2.2915E-02 (2002,329,2300) | 1.3923E-02 (2002,190,0800) |
| 2185 | -324.198 | -280.917 | 3.6912E-02 (2002,357,0200) | 3.6013E-02 (2002,357,0100) | 1.9727E-02 (2002,329,2300) | 1.4286E-02 (2002,190,0800) |
| 2186 | -322.726 | -280.977 | 3.5827E-02 (2002,357,0100) | 3.4422E-02 (2002,357,0200) | 1.6490E-02 (2002,329,2300) | 1.4534E-02 (2002,190,0800) |
| 2187 | -321.255 | -281.037 | 3.6453E-02 (2002,357,0100) | 3.3125E-02 (2002,357,0200) | 2.7026E-02 (2002,329,2300) | 1.9997E-02 (2002,330,0000) |
| 2188 | -319.784 | -281.097 | 3.5950E-02 (2002,357,0100) | 3.0251E-02 (2002,357,0200) | 2.5705E-02 (2002,329,2300) | 2.0565E-02 (2002,330,0000) |
| 2189 | -318.313 | -281.157 | 3.5157E-02 (2002,357,0100) | 2.7172E-02 (2002,357,0200) | 2.4099E-02 (2002,329,2300) | 2.0923E-02 (2002,330,0000) |
| 2190 | -327.063 | -278.943 | 4.0881E-02 (2002,357,0200) | 3.6734E-02 (2002,357,0100) | 2.8638E-02 (2002,329,2300) | 1.8522E-02 (2002,329,2200) |
| 2191 | -325.592 | -279.004 | 3.9336E-02 (2002,357,0200) | 3.7102E-02 (2002,357,0100) | 2.3268E-02 (2002,329,2300) | 1.5645E-02 (2002,190,0800) |
| 2192 | -324.121 | -279.064 | 3.8637E-02 (2002,357,0200) | 3.8167E-02 (2002,357,0100) | 2.9390E-02 (2002,329,2300) | 1.6852E-02 (2002,330,0000) |
| 2193 | -322.650 | -279.125 | 3.8551E-02 (2002,357,0100) | 3.6759E-02 (2002,357,0200) | 2.9154E-02 (2002,329,2300) | 1.7938E-02 (2002,330,0000) |
| 2194 | -321.180 | -279.185 | 3.8690E-02 (2002,357,0100) | 3.4435E-02 (2002,357,0200) | 2.8521E-02 (2002,329,2300) | 1.8921E-02 (2002,330,0000) |
| 2195 | -319.709 | -279.245 | 3.8361E-02 (2002,357,0100) | 3.1556E-02 (2002,357,0200) | 2.6337E-02 (2002,329,2300) | 1.8783E-02 (2002,330,0000) |
| 2196 | -318.238 | -279.305 | 3.8060E-02 (2002,357,0100) | 2.8792E-02 (2002,357,0200) | 2.6115E-02 (2002,329,2300) | 2.0394E-02 (2002,330,0000) |

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|---|---|---|---|---|---|---|
| 2197 | -326.986 | -277.091 | 4.0326E-02 (2002,357,0200) | 3.7098E-02 (2002,357,0100) | 2.8025E-02 (2002,329,2300) | 2.0876E-02 (2002,329,2200) |
| 2198 | -325.515 | -277.152 | 3.9618E-02 (2002,357,0200) | 3.7992E-02 (2002,357,0100) | 2.7325E-02 (2002,329,2300) | 1.9081E-02 (2002,329,2200) |
| 2199 | -324.045 | -277.212 | 3.9146E-02 (2002,357,0100) | 3.8861E-02 (2002,357,0200) | 2.9596E-02 (2002,329,2300) | 1.8760E-02 (2002,329,2200) |
| 2200 | -322.574 | -277.273 | 3.9943E-02 (2002,357,0100) | 3.7334E-02 (2002,357,0200) | 2.9774E-02 (2002,329,2300) | 1.9032E-02 (2002,190,0700) |
| 2201 | -328.379 | -275.177 | 3.7447E-02 (2002,357,0200) | 3.4482E-02 (2002,357,0100) | 2.0225E-02 (2002,357,0300) | 1.6657E-02 (2002,190,0800) |
| 2202 | -326.909 | -275.239 | 3.8426E-02 (2002,357,0200) | 3.6223E-02 (2002,357,0100) | 1.9536E-02 (2002,329,2300) | 1.8366E-02 (2002,329,2200) |
| 2203 | -325.439 | -275.300 | 3.8695E-02 (2002,357,0200) | 3.7824E-02 (2002,357,0100) | 2.4029E-02 (2002,329,2300) | 1.9876E-02 (2002,329,2200) |
| 2204 | -323.969 | -275.360 | 3.9563E-02 (2002,357,0100) | 3.8611E-02 (2002,357,0200) | 2.9211E-02 (2002,329,2300) | 2.1385E-02 (2002,329,2200) |
| 2205 | -322.498 | -275.421 | 4.0751E-02 (2002,357,0100) | 3.7473E-02 (2002,357,0200) | 2.9824E-02 (2002,329,2300) | 2.3133E-02 (2002,190,0700) |
| 2206 | -326.832 | -273.387 | 3.7555E-02 (2002,357,0200) | 3.5760E-02 (2002,357,0100) | 2.3768E-02 (2002,329,2300) | 2.3689E-02 (2002,329,2200) |
| 2207 | -325.362 | -273.448 | 3.8139E-02 (2002,357,0200) | 3.7661E-02 (2002,357,0100) | 2.6916E-02 (2002,329,2300) | 2.4481E-02 (2002,329,2200) |
| 2208 | -323.892 | -273.508 | 3.9350E-02 (2002,357,0100) | 3.7939E-02 (2002,357,0200) | 2.8302E-02 (2002,329,2300) | 2.5206E-02 (2002,190,0700) |
| 2209 | -322.422 | -273.569 | 4.0900E-02 (2002,357,0100) | 3.7194E-02 (2002,357,0200) | 2.9320E-02 (2002,329,2300) | 2.7543E-02 (2002,190,0700) |
| 2210 | -325.285 | -271.595 | 3.6710E-02 (2002,357,0200) | 3.6434E-02 (2002,357,0100) | 2.6626E-02 (2002,190,0700) | 2.6184E-02 (2002,329,2200) |
| 2211 | -323.816 | -271.656 | 3.8247E-02 (2002,357,0100) | 3.6790E-02 (2002,357,0200) | 2.9042E-02 (2002,190,0700) | 2.6359E-02 (2002,329,2300) |
| 2212 | -322.346 | -271.717 | 4.0331E-02 (2002,357,0100) | 3.6569E-02 (2002,357,0200) | 3.2263E-02 (2002,190,0700) | 2.8268E-02 (2002,329,2300) |

**********
CALPOST Version 5.6394 Level 070622
**********

8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 4.3254E-05 | 2101 | -315.890 | -294.242 | 5.5088E-05 |
| 1990 | -306.221 | -311.322 | 4.4839E-05 | 2102 | -314.417 | -294.301 | 7.4829E-05 |
| 1991 | -304.745 | -311.379 | 5.9196E-05 | 2103 | -312.943 | -294.359 | 7.1700E-05 |
| 1992 | -303.268 | -311.436 | 7.9989E-05 | 2104 | -311.470 | -294.418 | 7.8737E-05 |
| 1993 | -301.791 | -311.492 | 7.9354E-05 | 2105 | -309.996 | -294.476 | 8.0516E-05 |
| 1994 | -307.626 | -309.412 | 4.2531E-05 | 2106 | -308.522 | -294.534 | 8.3644E-05 |
| 1995 | -306.150 | -309.469 | 4.2321E-05 | 2107 | -307.049 | -294.591 | 8.6269E-05 |
| 1996 | -304.673 | -309.526 | 5.3422E-05 | 2108 | -305.575 | -294.648 | 8.3197E-05 |
| 1997 | -303.197 | -309.583 | 7.7437E-05 | 2109 | -304.101 | -294.705 | 8.6587E-05 |
| 1998 | -301.720 | -309.640 | 6.4135E-05 | 2110 | -302.627 | -294.762 | 9.4462E-05 |
| 1999 | -300.244 | -309.696 | 8.1558E-05 | 2111 | -301.154 | -294.819 | 9.6840E-05 |
| 2000 | -298.767 | -309.752 | 8.4073E-05 | 2112 | -318.763 | -292.271 | 6.9325E-05 |
| 2001 | -317.886 | -307.150 | 3.8414E-05 | 2113 | -317.289 | -292.330 | 6.7653E-05 |
| 2002 | -316.410 | -307.209 | 3.9009E-05 | 2114 | -315.816 | -292.389 | 7.2261E-05 |
| 2003 | -314.934 | -307.268 | 3.9125E-05 | 2115 | -314.343 | -292.448 | 7.4371E-05 |
| 2004 | -313.458 | -307.327 | 4.1674E-05 | 2116 | -312.870 | -292.507 | 7.4331E-05 |
| 2005 | -311.982 | -307.385 | 4.4354E-05 | 2117 | -311.396 | -292.565 | 7.8413E-05 |
| 2006 | -309.030 | -307.501 | 4.8678E-05 | 2118 | -309.923 | -292.623 | 7.9140E-05 |
| 2007 | -307.554 | -307.559 | 7.8850E-05 | 2119 | -308.450 | -292.681 | 8.3180E-05 |
| 2008 | -306.078 | -307.616 | 5.7135E-05 | 2120 | -306.976 | -292.739 | 8.3792E-05 |
| 2009 | -304.602 | -307.673 | 7.8036E-05 | 2121 | -305.503 | -292.796 | 6.6435E-05 |
| 2010 | -303.125 | -307.730 | 5.6293E-05 | 2122 | -304.030 | -292.853 | 6.7305E-05 |
| 2011 | -301.649 | -307.787 | 4.5922E-05 | 2123 | -302.556 | -292.910 | 6.5251E-05 |
| 2012 | -300.173 | -307.843 | 6.3872E-05 | 2124 | -301.083 | -292.966 | 7.2387E-05 |
| 2013 | -298.697 | -307.899 | 5.1940E-05 | 2125 | -318.688 | -290.418 | 7.0586E-05 |
| 2014 | -317.812 | -305.297 | 4.2289E-05 | 2126 | -317.215 | -290.478 | 7.1011E-05 |
| 2015 | -316.336 | -305.356 | 3.8228E-05 | 2127 | -315.742 | -290.537 | 7.2821E-05 |
| 2016 | -314.860 | -305.415 | 4.3662E-05 | 2128 | -314.269 | -290.596 | 7.4170E-05 |
| 2017 | -313.385 | -305.474 | 6.8843E-05 | 2129 | -312.796 | -290.654 | 7.5609E-05 |
| 2018 | -311.909 | -305.533 | 7.2348E-05 | 2130 | -311.323 | -290.713 | 7.5063E-05 |
| 2019 | -308.957 | -305.649 | 4.0999E-05 | 2131 | -309.850 | -290.771 | 7.9944E-05 |
| 2020 | -307.482 | -305.706 | 4.9485E-05 | 2132 | -308.377 | -290.829 | 8.2441E-05 |
| 2021 | -306.006 | -305.764 | 7.9244E-05 | 2133 | -306.904 | -290.886 | 8.4987E-05 |
| 2022 | -304.530 | -305.821 | 8.4561E-05 | 2134 | -305.431 | -290.943 | 5.7216E-05 |
| 2023 | -303.054 | -305.878 | 7.2733E-05 | 2135 | -303.958 | -291.000 | 9.0181E-05 |
| 2024 | -301.579 | -305.934 | 8.3953E-05 | 2136 | -302.485 | -291.057 | 9.3532E-05 |
| 2025 | -300.103 | -305.990 | 8.3333E-05 | 2137 | -301.012 | -291.114 | 9.6829E-05 |
| 2026 | -298.627 | -306.046 | 7.6468E-05 | 2138 | -318.613 | -288.566 | 7.0955E-05 |
| 2027 | -319.212 | -303.385 | 4.7562E-05 | 2139 | -317.140 | -288.625 | 7.1608E-05 |
| 2028 | -317.737 | -303.445 | 4.3518E-05 | 2140 | -315.668 | -288.684 | 7.2705E-05 |
| 2029 | -316.262 | -303.504 | 4.4698E-05 | 2141 | -314.195 | -288.743 | 7.3946E-05 |
| 2030 | -314.786 | -303.563 | 4.2988E-05 | 2142 | -312.722 | -288.802 | 7.5434E-05 |
| 2031 | -313.311 | -303.622 | 4.5796E-05 | 2143 | -311.250 | -288.860 | 7.7069E-05 |
| 2032 | -311.836 | -303.680 | 7.8860E-05 | 2144 | -309.777 | -288.918 | 7.9277E-05 |
| 2033 | -310.360 | -303.738 | 4.9139E-05 | 2145 | -308.305 | -288.976 | 8.1613E-05 |
| 2034 | -308.885 | -303.796 | 4.4117E-05 | 2146 | -306.832 | -289.034 | 8.2439E-05 |
| 2035 | -307.409 | -303.854 | 4.4418E-05 | 2147 | -305.359 | -289.091 | 8.5143E-05 |
| 2036 | -305.934 | -303.911 | 5.6124E-05 | 2148 | -303.887 | -289.148 | 8.6837E-05 |
| 2037 | -304.459 | -303.968 | 6.6785E-05 | 2149 | -302.414 | -289.205 | 9.3154E-05 |
| 2038 | -302.983 | -304.025 | 7.5450E-05 | 2150 | -300.941 | -289.261 | 9.6547E-05 |
| 2039 | -301.508 | -304.082 | 8.9362E-05 | 2151 | -320.010 | -286.654 | 7.0562E-05 |
| 2040 | -300.032 | -304.138 | 9.4231E-05 | 2152 | -318.538 | -286.714 | 7.1283E-05 |
| 2041 | -298.557 | -304.194 | 9.3238E-05 | 2153 | -317.066 | -286.773 | 7.1931E-05 |
| 2042 | -319.137 | -301.533 | 4.6050E-05 | 2154 | -315.593 | -286.832 | 7.2719E-05 |
| 2043 | -317.662 | -301.592 | 4.3998E-05 | 2155 | -314.121 | -286.891 | 7.3779E-05 |
| 2044 | -316.187 | -301.651 | 4.6388E-05 | 2156 | -312.649 | -286.950 | 7.5097E-05 |
| 2045 | -314.712 | -301.710 | 4.4684E-05 | 2157 | -311.177 | -287.008 | 7.6678E-05 |
| 2046 | -313.237 | -301.769 | 4.9213E-05 | 2158 | -309.704 | -287.066 | 7.8587E-05 |
| 2047 | -311.762 | -301.827 | 7.9016E-05 | 2159 | -308.232 | -287.124 | 7.6173E-05 |
| 2048 | -310.287 | -301.886 | 8.1213E-05 | 2160 | -306.760 | -287.181 | 8.3306E-05 |
| 2049 | -308.812 | -301.944 | 8.3386E-05 | 2161 | -305.288 | -287.239 | 8.3457E-05 |
| 2050 | -307.337 | -302.001 | 5.4254E-05 | 2162 | -303.815 | -287.296 | 7.2490E-05 |
| 2051 | -305.862 | -302.059 | 7.9059E-05 | 2163 | -302.343 | -287.352 | 9.2008E-05 |
| 2052 | -304.387 | -302.116 | 8.5206E-05 | 2164 | -300.871 | -287.409 | 9.4678E-05 |
| 2053 | -302.912 | -302.172 | 9.0721E-05 | 2165 | -325.822 | -284.560 | 5.5825E-05 |
| 2054 | -301.437 | -302.229 | 9.0074E-05 | 2166 | -324.350 | -284.621 | 6.0853E-05 |
| 2055 | -299.962 | -302.285 | 9.1725E-05 | 2167 | -322.878 | -284.681 | 6.9974E-05 |
| 2056 | -298.487 | -302.341 | 8.9721E-05 | 2168 | -321.407 | -284.742 | 7.1045E-05 |
| 2057 | -319.062 | -299.680 | 5.7062E-05 | 2169 | -319.935 | -284.802 | 6.9706E-05 |
| 2058 | -317.588 | -299.740 | 6.3114E-05 | 2170 | -318.463 | -284.861 | 7.1779E-05 |
| 2059 | -316.113 | -299.799 | 6.9900E-05 | 2171 | -314.047 | -285.039 | 7.3836E-05 |
| 2060 | -314.639 | -299.858 | 5.1664E-05 | 2172 | -312.575 | -285.097 | 7.4956E-05 |
| 2061 | -313.164 | -299.917 | 5.7489E-05 | 2173 | -311.103 | -285.156 | 7.6385E-05 |
| 2062 | -311.689 | -299.975 | 5.8289E-05 | 2174 | -309.632 | -285.214 | 7.8031E-05 |
| 2063 | -310.214 | -300.033 | 8.1205E-05 | 2175 | -327.217 | -282.647 | 7.1670E-05 |
| 2064 | -308.740 | -300.091 | 8.3791E-05 | 2176 | -325.745 | -282.708 | 6.0192E-05 |
| 2065 | -307.265 | -300.149 | 8.4870E-05 | 2177 | -324.274 | -282.769 | 7.0702E-05 |
| 2066 | -305.790 | -300.206 | 4.9170E-05 | 2178 | -322.802 | -282.829 | 7.2155E-05 |
| 2067 | -304.316 | -300.263 | 8.7818E-05 | 2179 | -321.331 | -282.889 | 7.0388E-05 |
| 2068 | -302.841 | -300.320 | 9.2861E-05 | 2180 | -319.859 | -282.949 | 7.1823E-05 |
| 2069 | -301.366 | -300.376 | 9.4557E-05 | 2181 | -318.388 | -283.009 | 7.2532E-05 |
| 2070 | -299.891 | -300.432 | 9.7139E-05 | 2182 | -309.559 | -283.361 | 7.6734E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | 9.7913E-05 | 2183 | -327.140 | -280.795 | 7.3026E-05 |
| 2072 | -318.988 | -297.828 | 4.2000E-05 | 2184 | -325.669 | -280.856 | 6.8485E-05 |
| 2073 | -317.513 | -297.887 | 5.1074E-05 | 2185 | -324.198 | -280.917 | 6.5807E-05 |
| 2074 | -316.039 | -297.946 | 5.1067E-05 | 2186 | -322.726 | -280.977 | 6.3246E-05 |
| 2075 | -314.565 | -298.005 | 7.4789E-05 | 2187 | -321.255 | -281.037 | 7.2831E-05 |
| 2076 | -313.090 | -298.064 | 7.1533E-05 | 2188 | -319.784 | -281.097 | 7.3352E-05 |
| 2077 | -311.616 | -298.122 | 7.9403E-05 | 2189 | -318.313 | -281.157 | 7.3504E-05 |
| 2078 | -310.142 | -298.181 | 8.1696E-05 | 2190 | -327.063 | -278.943 | 7.5339E-05 |
| 2079 | -308.667 | -298.238 | 8.3639E-05 | 2191 | -325.592 | -279.004 | 7.0181E-05 |
| 2080 | -307.193 | -298.296 | 8.4456E-05 | 2192 | -324.121 | -279.064 | 7.5175E-05 |
| 2081 | -305.719 | -298.353 | 7.9009E-05 | 2193 | -322.650 | -279.125 | 7.4680E-05 |
| 2082 | -304.244 | -298.410 | 8.9737E-05 | 2194 | -321.180 | -279.185 | 7.4464E-05 |
| 2083 | -302.770 | -298.467 | 9.2833E-05 | 2195 | -319.709 | -279.245 | 7.2808E-05 |
| 2084 | -301.295 | -298.524 | 9.5807E-05 | 2196 | -318.238 | -279.305 | 7.4104E-05 |
| 2085 | -299.821 | -298.580 | 9.8374E-05 | 2197 | -326.986 | -277.091 | 7.7605E-05 |
| 2086 | -318.913 | -295.975 | 4.8432E-05 | 2198 | -325.515 | -277.152 | 7.5211E-05 |
| 2087 | -317.439 | -296.035 | 5.5236E-05 | 2199 | -324.045 | -277.212 | 7.6590E-05 |
| 2088 | -315.965 | -296.094 | 4.6601E-05 | 2200 | -322.574 | -277.273 | 7.6654E-05 |
| 2089 | -314.491 | -296.153 | 5.4552E-05 | 2201 | -328.379 | -275.177 | 6.9135E-05 |
| 2090 | -313.017 | -296.212 | 5.2337E-05 | 2202 | -326.909 | -275.239 | 7.3011E-05 |
| 2091 | -311.543 | -296.270 | 6.2153E-05 | 2203 | -325.439 | -275.300 | 7.5247E-05 |
| 2092 | -310.069 | -296.328 | 8.1612E-05 | 2204 | -323.969 | -275.360 | 7.9029E-05 |
| 2093 | -308.595 | -296.386 | 8.2499E-05 | 2205 | -322.498 | -275.421 | 7.8759E-05 |
| 2094 | -307.121 | -296.444 | 8.6449E-05 | 2206 | -326.832 | -273.387 | 7.9955E-05 |
| 2095 | -305.647 | -296.501 | 8.5476E-05 | 2207 | -325.362 | -273.448 | 8.1572E-05 |
| 2096 | -304.173 | -296.558 | 8.7924E-05 | 2208 | -323.892 | -273.508 | 8.1468E-05 |
| 2097 | -302.699 | -296.615 | 8.1385E-05 | 2209 | -322.422 | -273.569 | 8.1188E-05 |
| 2098 | -301.225 | -296.671 | 9.6760E-05 | 2210 | -325.285 | -271.595 | 8.3663E-05 |
| 2099 | -318.838 | -294.123 | 6.4526E-05 | 2211 | -323.816 | -271.656 | 8.2556E-05 |
| 2100 | -317.364 | -294.182 | 7.0002E-05 | 2212 | -322.346 | -271.717 | 8.3719E-05 |

**********
CALPOST Version 5.6394 Level 070622
**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 2137 | -301.012 | -291.114 | DISCRETE | 5.3630E-02 (2002,330,0300) | RANK 1 | 1 | HOUR |
| 2111 | -301.154 | -294.819 | DISCRETE | 5.1229E-02 (2002,077,0900) | RANK 2 | 1 | HOUR |
| 2164 | -300.871 | -287.409 | DISCRETE | 4.0977E-02 (2002,077,0800) | RANK 3 | 1 | HOUR |
| 2049 | -308.812 | -301.944 | DISCRETE | 2.9784E-02 (2002,044,0500) | RANK 4 | 1 | HOUR |
| 2085 | -299.821 | -298.580 | DISCRETE | 9.8374E-05 | RANK 1 | 8759 | HOUR |

```
*************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Arches

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  115*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2003
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                           Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1


  Visibility Processing is NOT Selected



  Output options
                      Units requested for output:   (ug/m**3)
```

```
 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                   1-hr averages:     T
                                   3-hr averages:     F
                                  24-hr averages:     F
                                 NAVG-hr averages:     F
                          Length of run averages:     T

 Output components selected
                                            Top-50:     F
                     Top-N values at each receptor:     T
               Exceedance counts at each receptor:     F
       Output selected information for debugging:     F
                     Echo tables for selected days:     F
                     Time-series for selected days:     F
        Peak value Time-series for selected days:     F

 Top "n" table control
         Number of "top" values at each receptor:     4
         Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                               Plot files created:     T
                          Plot file format is DATA:  .DAT


 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2003 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8736

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1


 ------------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2003\POST_2003_NOX_AR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2003\SPC2003.CON


 ------------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2003\2003_ARCH_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_CR.DAT

*****************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                    2 RANK                    3 RANK                    4 RANK
      1       -9.046  -154.175   1.8476E-02 (2003,361,0200)  1.7985E-02 (2003,361,0100)  1.7838E-02 (2003,361,0300)  1.5045E-02 (2003,361,0400)
      2       -7.599  -154.176   1.8252E-02 (2003,361,0200)  1.7882E-02 (2003,361,0100)  1.7788E-02 (2003,361,0300)  1.5399E-02 (2003,361,0400)
      3       -6.152  -154.178   1.8041E-02 (2003,361,0200)  1.7810E-02 (2003,361,0100)  1.7746E-02 (2003,361,0300)  1.5618E-02 (2003,361,0400)
      4       -3.257  -154.179   1.4305E-02 (2003,361,0100)  1.2952E-02 (2003,138,0400)  1.2855E-02 (2003,361,0400)  1.2314E-02 (2003,138,0500)
      5      -10.491  -152.321   1.8557E-02 (2003,361,0200)  1.8383E-02 (2003,361,0100)  1.7153E-02 (2003,361,0300)  1.5845E-02 (2003,361,0000)
      6       -9.044  -152.322   1.8217E-02 (2003,361,0200)  1.8060E-02 (2003,361,0100)  1.7127E-02 (2003,361,0300)  1.5123E-02 (2003,361,0000)
      7       -7.597  -152.324   1.7913E-02 (2003,361,0200)  1.7784E-02 (2003,361,0100)  1.7100E-02 (2003,361,0300)  1.4411E-02 (2003,361,0000)
      8       -6.150  -152.325   1.5451E-02 (2003,361,0100)  1.3750E-02 (2003,361,0000)  1.3312E-02 (2003,361,0400)  1.2637E-02 (2003,138,0400)
      9       -4.703  -152.326   1.7592E-02 (2003,361,0100)  1.7442E-02 (2003,361,0200)  1.7043E-02 (2003,361,0300)  1.4643E-02 (2003,361,0400)
     10       -3.256  -152.327   1.7516E-02 (2003,361,0100)  1.7260E-02 (2003,361,0200)  1.7002E-02 (2003,361,0300)  1.4874E-02 (2003,361,0400)
     11       -1.809  -152.328   1.7414E-02 (2003,361,0100)  1.7083E-02 (2003,361,0200)  1.6935E-02 (2003,361,0300)  1.5073E-02 (2003,361,0400)
     12       -0.362  -152.328   1.4470E-02 (2003,361,0100)  1.2216E-02 (2003,138,0500)  1.1846E-02 (2003,138,0400)  1.1785E-02 (2003,361,0400)
     13      -11.936  -150.466   1.7987E-02 (2003,361,0200)  1.7731E-02 (2003,361,0100)  1.6267E-02 (2003,361,0000)  1.5981E-02 (2003,361,0300)
     14      -10.489  -150.468   1.5570E-02 (2003,361,0000)  1.4376E-02 (2003,361,0100)  1.1775E-02 (2003,138,0400)  1.1581E-02 (2003,361,0300)
     15       -9.042  -150.470   1.4955E-02 (2003,361,0000)  1.4645E-02 (2003,361,0100)  1.1857E-02 (2003,138,0400)  1.1712E-02 (2003,361,0400)
     16       -7.595  -150.472   1.4936E-02 (2003,361,0100)  1.4327E-02 (2003,361,0000)  1.1900E-02 (2003,361,0400)  1.1891E-02 (2003,138,0400)
     17       -6.149  -150.473   1.5152E-02 (2003,361,0100)  1.3716E-02 (2003,361,0000)  1.2055E-02 (2003,361,0400)  1.1871E-02 (2003,138,0400)
     18       -4.702  -150.474   1.7244E-02 (2003,361,0100)  1.6836E-02 (2003,361,0200)  1.6167E-02 (2003,361,0300)  1.3364E-02 (2003,361,0400)
     19       -3.255  -150.475   1.7343E-02 (2003,361,0100)  1.6776E-02 (2003,361,0200)  1.6193E-02 (2003,361,0300)  1.3635E-02 (2003,361,0400)
     20       -1.808  -150.475   1.7518E-02 (2003,361,0100)  1.6830E-02 (2003,361,0200)  1.6241E-02 (2003,361,0300)  1.3891E-02 (2003,361,0400)
     21        1.085  -150.475   1.6703E-02 (2003,361,0100)  1.6097E-02 (2003,361,0200)  1.5969E-02 (2003,361,0300)  1.4293E-02 (2003,361,0400)
     22      -11.933  -148.614   1.5711E-02 (2003,361,0000)  1.3402E-02 (2003,361,0100)  1.1298E-02 (2003,045,1100)  1.1078E-02 (2003,015,1100)
     23      -10.486  -148.616   1.6746E-02 (2003,361,0200)  1.6735E-02 (2003,361,0100)  1.5197E-02 (2003,361,0000)  1.4777E-02 (2003,361,0300)
     24       -9.040  -148.618   1.6746E-02 (2003,361,0100)  1.6559E-02 (2003,361,0200)  1.4900E-02 (2003,361,0300)  1.4654E-02 (2003,361,0000)
     25       -7.594  -148.619   1.6571E-02 (2003,361,0100)  1.6307E-02 (2003,361,0200)  1.4955E-02 (2003,361,0300)  1.4011E-02 (2003,361,0000)
     26       -6.147  -148.621   1.6519E-02 (2003,361,0100)  1.6106E-02 (2003,361,0200)  1.5014E-02 (2003,361,0300)  1.3438E-02 (2003,361,0000)
     27       -4.701  -148.622   1.6602E-02 (2003,361,0100)  1.5970E-02 (2003,361,0200)  1.5061E-02 (2003,361,0300)  1.2922E-02 (2003,361,0000)
     28       -3.254  -148.622   1.6711E-02 (2003,361,0100)  1.5930E-02 (2003,361,0200)  1.5120E-02 (2003,361,0300)  1.2418E-02 (2003,361,0000)
     29       -1.808  -148.623   1.6873E-02 (2003,361,0100)  1.5972E-02 (2003,361,0200)  1.5194E-02 (2003,361,0300)  1.2592E-02 (2003,361,0400)
     30       -0.362  -148.623   1.6339E-02 (2003,361,0100)  1.5480E-02 (2003,361,0200)  1.5048E-02 (2003,361,0300)  1.2817E-02 (2003,361,0400)
     31      -11.930  -146.762   1.5641E-02 (2003,361,0200)  1.5558E-02 (2003,361,0100)  1.4958E-02 (2003,361,0000)  1.3199E-02 (2003,361,0300)
     32      -10.484  -146.764   1.5610E-02 (2003,361,0100)  1.5493E-02 (2003,361,0200)  1.4470E-02 (2003,361,0000)  1.3361E-02 (2003,361,0300)
     33       -9.038  -146.765   1.5699E-02 (2003,361,0100)  1.5357E-02 (2003,361,0200)  1.3986E-02 (2003,361,0000)  1.3514E-02 (2003,361,0300)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 34 | -7.592 | -146.767 | 1.5599E-02 (2003,361,0100) | 1.5159E-02 (2003,361,0200) | 1.3607E-02 (2003,361,0300) | 1.3418E-02 (2003,361,0000) |
| 35 | -6.146 | -146.768 | 1.5627E-02 (2003,361,0100) | 1.4994E-02 (2003,361,0200) | 1.3712E-02 (2003,361,0300) | 1.2902E-02 (2003,361,0000) |
| 36 | -4.700 | -146.769 | 1.5798E-02 (2003,361,0100) | 1.4953E-02 (2003,361,0200) | 1.3817E-02 (2003,361,0300) | 1.2439E-02 (2003,361,0000) |
| 37 | -3.254 | -146.770 | 1.5966E-02 (2003,361,0100) | 1.4975E-02 (2003,361,0200) | 1.3931E-02 (2003,361,0300) | 1.1985E-02 (2003,361,0000) |
| 38 | -1.808 | -146.770 | 1.5960E-02 (2003,361,0100) | 1.4903E-02 (2003,361,0200) | 1.3974E-02 (2003,361,0300) | 1.1508E-02 (2003,361,0000) |
| 39 | -0.362 | -146.771 | 1.4385E-02 (2003,361,0100) | 1.1042E-02 (2003,138,0500) | 1.0938E-02 (2003,361,0000) | 9.9508E-03 (2003,361,0400) |
| 40 | -10.481 | -144.911 | 1.4268E-02 (2003,361,0100) | 1.4056E-02 (2003,361,0200) | 1.3488E-02 (2003,361,0000) | 1.1849E-02 (2003,361,0300) |
| 41 | -9.036 | -144.913 | 1.4358E-02 (2003,361,0100) | 1.3955E-02 (2003,361,0200) | 1.3042E-02 (2003,361,0000) | 1.2016E-02 (2003,361,0300) |
| 42 | -7.590 | -144.915 | 1.4492E-02 (2003,361,0100) | 1.3877E-02 (2003,361,0200) | 1.2602E-02 (2003,361,0000) | 1.2181E-02 (2003,361,0300) |
| 43 | -6.144 | -144.916 | 1.4538E-02 (2003,361,0100) | 1.3752E-02 (2003,361,0200) | 1.2316E-02 (2003,361,0300) | 1.2144E-02 (2003,361,0000) |
| 44 | -4.699 | -144.917 | 1.4640E-02 (2003,361,0100) | 1.3696E-02 (2003,361,0200) | 1.2430E-02 (2003,361,0300) | 1.1695E-02 (2003,361,0000) |
| 45 | -3.253 | -144.918 | 1.4721E-02 (2003,361,0100) | 1.3663E-02 (2003,361,0200) | 1.2537E-02 (2003,361,0300) | 1.1275E-02 (2003,361,0000) |
| 46 | -1.807 | -144.918 | 1.4398E-02 (2003,361,0100) | 1.3341E-02 (2003,361,0200) | 1.2500E-02 (2003,361,0300) | 1.0785E-02 (2003,361,0000) |
| 47 | -10.479 | -143.059 | 1.2753E-02 (2003,361,0100) | 1.2500E-02 (2003,361,0200) | 1.2291E-02 (2003,361,0000) | 1.1350E-02 (2003,015,1100) |
| 48 | -9.033 | -143.061 | 1.2928E-02 (2003,361,0100) | 1.2469E-02 (2003,361,0200) | 1.1935E-02 (2003,361,0000) | 1.1124E-02 (2003,045,1100) |
| 49 | -7.588 | -143.062 | 1.2990E-02 (2003,361,0100) | 1.2356E-02 (2003,361,0200) | 1.1525E-02 (2003,361,0000) | 1.0905E-02 (2003,045,1100) |
| 50 | -6.143 | -143.064 | 1.2945E-02 (2003,361,0100) | 1.2203E-02 (2003,361,0200) | 1.1098E-02 (2003,361,0000) | 1.0786E-02 (2003,361,0300) |
| 51 | -4.697 | -143.065 | 1.3008E-02 (2003,361,0100) | 1.2129E-02 (2003,361,0200) | 1.0917E-02 (2003,361,0300) | 1.0709E-02 (2003,361,0000) |
| 52 | -3.252 | -143.065 | 1.3035E-02 (2003,361,0100) | 1.2047E-02 (2003,361,0200) | 1.1000E-02 (2003,361,0300) | 1.0331E-02 (2003,361,0000) |
| 53 | -1.807 | -143.066 | 1.2910E-02 (2003,361,0100) | 1.1872E-02 (2003,361,0200) | 1.1059E-02 (2003,361,0300) | 9.9453E-03 (2003,361,0000) |
| 54 | -10.476 | -141.207 | 1.1495E-02 (2003,015,1100) | 1.1235E-02 (2003,045,1100) | 1.1196E-02 (2003,361,0100) | 1.1109E-02 (2003,045,1000) |
| 55 | -9.031 | -141.209 | 1.1289E-02 (2003,361,0100) | 1.1191E-02 (2003,015,1100) | 1.1029E-02 (2003,045,1100) | 1.0867E-02 (2003,361,0200) |
| 56 | -7.586 | -141.210 | 1.1186E-02 (2003,361,0100) | 1.0859E-02 (2003,015,1100) | 1.0686E-02 (2003,361,0200) | 1.0517E-02 (2003,045,1100) |
| 57 | -6.141 | -141.211 | 1.1278E-02 (2003,361,0100) | 1.0634E-02 (2003,361,0200) | 1.0523E-02 (2003,015,1100) | 1.0296E-02 (2003,045,1100) |
| 58 | -4.696 | -141.212 | 1.1319E-02 (2003,361,0100) | 1.0559E-02 (2003,361,0200) | 1.0184E-02 (2003,015,1100) | 1.0046E-02 (2003,045,1100) |
| 59 | -3.251 | -141.213 | 1.1390E-02 (2003,361,0100) | 1.0486E-02 (2003,361,0200) | 9.8246E-03 (2003,015,1100) | 9.8067E-03 (2003,045,1100) |
| 60 | -1.806 | -141.214 | 1.1465E-02 (2003,361,0100) | 1.0461E-02 (2003,361,0200) | 9.6203E-03 (2003,361,0300) | 9.5682E-03 (2003,045,1100) |
| 61 | -0.361 | -141.214 | 1.1522E-02 (2003,361,0100) | 1.0451E-02 (2003,361,0200) | 9.7015E-03 (2003,361,0300) | 9.3275E-03 (2003,045,1100) |
| 62 | -14.808 | -139.347 | 1.2951E-02 (2003,015,1000) | 1.2359E-02 (2003,015,1100) | 1.2243E-02 (2003,045,1000) | 1.1594E-02 (2003,045,0900) |
| 63 | -13.363 | -139.350 | 1.2338E-02 (2003,015,1000) | 1.2132E-02 (2003,015,1100) | 1.1887E-02 (2003,045,1000) | 1.1326E-02 (2003,045,1100) |
| 64 | -11.918 | -139.352 | 1.1886E-02 (2003,015,1100) | 1.1747E-02 (2003,015,1000) | 1.1537E-02 (2003,045,1000) | 1.1263E-02 (2003,045,1100) |
| 65 | -10.474 | -139.354 | 1.1622E-02 (2003,015,1100) | 1.1168E-02 (2003,045,1000) | 1.1167E-02 (2003,015,1000) | 1.1018E-02 (2003,045,1100) |
| 66 | -9.029 | -139.356 | 1.1320E-02 (2003,015,1100) | 1.0611E-02 (2003,045,1100) | 1.0602E-02 (2003,015,1000) | 1.0220E-02 (2003,045,1000) |
| 67 | -7.584 | -139.358 | 1.1018E-02 (2003,015,1100) | 1.0402E-02 (2003,045,1100) | 1.0042E-02 (2003,015,1000) | 9.8774E-03 (2003,045,1000) |
| 68 | -6.140 | -139.359 | 1.0702E-02 (2003,015,1100) | 1.0324E-02 (2003,045,1100) | 1.0094E-02 (2003,045,1000) | 9.7752E-03 (2003,361,0100) |
| 69 | -4.695 | -139.360 | 1.0359E-02 (2003,015,1100) | 1.0205E-02 (2003,045,1100) | 9.9415E-03 (2003,361,0100) | 9.7451E-03 (2003,045,1000) |
| 70 | -3.250 | -139.361 | 1.0023E-02 (2003,015,1100) | 9.9280E-03 (2003,361,0100) | 9.7381E-03 (2003,045,1100) | 9.0808E-03 (2003,361,0200) |
| 71 | -1.806 | -139.361 | 1.0036E-02 (2003,361,0100) | 9.6835E-03 (2003,015,1100) | 9.5032E-03 (2003,045,1100) | 9.0871E-03 (2003,361,0200) |
| 72 | -0.361 | -139.361 | 1.0160E-02 (2003,361,0100) | 9.3870E-03 (2003,045,1100) | 9.3281E-03 (2003,015,1100) | 9.1341E-03 (2003,361,0200) |
| 73 | 1.083 | -139.361 | 1.0186E-02 (2003,361,0100) | 9.1341E-03 (2003,361,0200) | 9.0254E-03 (2003,045,1100) | 8.9786E-03 (2003,015,1100) |
| 74 | -14.804 | -137.495 | 1.3380E-02 (2003,015,1000) | 1.2357E-02 (2003,015,1100) | 1.2287E-02 (2003,045,1000) | 1.1803E-02 (2003,045,0900) |
| 75 | -13.360 | -137.498 | 1.2781E-02 (2003,015,1000) | 1.2169E-02 (2003,015,1100) | 1.1932E-02 (2003,045,1000) | 1.1360E-02 (2003,045,0900) |
| 76 | -11.915 | -137.500 | 1.2181E-02 (2003,015,1000) | 1.1953E-02 (2003,015,1100) | 1.1570E-02 (2003,045,1000) | 1.0978E-02 (2003,045,1100) |
| 77 | -10.471 | -137.502 | 1.1693E-02 (2003,015,1100) | 1.1604E-02 (2003,015,1000) | 1.1206E-02 (2003,045,1000) | 1.0792E-02 (2003,045,1100) |
| 78 | -9.027 | -137.504 | 1.1431E-02 (2003,015,1100) | 1.1024E-02 (2003,015,1000) | 1.0851E-02 (2003,045,1000) | 1.0676E-02 (2003,045,1100) |
| 79 | -7.583 | -137.506 | 1.1146E-02 (2003,015,1100) | 1.0590E-02 (2003,045,1100) | 1.0499E-02 (2003,045,1000) | 1.0474E-02 (2003,015,1000) |
| 80 | -6.138 | -137.507 | 1.1822E-02 (2003,308,0400) | 1.1289E-02 (2003,308,0500) | 1.1286E-02 (2003,308,0300) | 1.0831E-02 (2003,015,1100) |
| 81 | -4.694 | -137.508 | 1.0518E-02 (2003,015,1100) | 1.0030E-02 (2003,045,1100) | 9.7876E-03 (2003,045,1000) | 9.3997E-03 (2003,015,1000) |
| 82 | -3.250 | -137.509 | 1.0194E-02 (2003,015,1100) | 9.7392E-03 (2003,045,1100) | 9.4386E-03 (2003,045,1000) | 8.8956E-03 (2003,015,1000) |
| 83 | -1.805 | -137.509 | 9.8550E-03 (2003,015,1100) | 9.3834E-03 (2003,045,1100) | 8.6015E-03 (2003,045,1000) | 8.5461E-03 (2003,361,0100) |
| 84 | -16.245 | -135.640 | 1.4384E-02 (2003,015,1000) | 1.2629E-02 (2003,045,1000) | 1.2459E-02 (2003,015,1100) | 1.2411E-02 (2003,045,0900) |
| 85 | -14.801 | -135.643 | 1.3778E-02 (2003,015,1000) | 1.2332E-02 (2003,015,1100) | 1.2286E-02 (2003,045,1000) | 1.1965E-02 (2003,045,0900) |
| 86 | -13.357 | -135.645 | 1.3176E-02 (2003,015,1000) | 1.2164E-02 (2003,015,1100) | 1.1932E-02 (2003,045,1000) | 1.1508E-02 (2003,045,0900) |
| 87 | -11.913 | -135.648 | 1.2592E-02 (2003,015,1000) | 1.1964E-02 (2003,015,1100) | 1.1573E-02 (2003,045,1000) | 1.1072E-02 (2003,045,0900) |
| 88 | -10.469 | -135.650 | 1.1998E-02 (2003,015,1000) | 1.1747E-02 (2003,015,1100) | 1.1220E-02 (2003,045,1000) | 1.0673E-02 (2003,045,1100) |
| 89 | -9.025 | -135.652 | 1.1496E-02 (2003,015,1100) | 1.1433E-02 (2003,015,1000) | 1.0866E-02 (2003,045,1000) | 1.0590E-02 (2003,045,1100) |
| 90 | -7.581 | -135.653 | 1.2196E-02 (2003,308,0400) | 1.2059E-02 (2003,308,0300) | 1.1405E-02 (2003,308,0500) | 1.1224E-02 (2003,015,1100) |
| 91 | -6.137 | -135.655 | 1.0941E-02 (2003,015,1100) | 1.0312E-02 (2003,015,1000) | 1.0153E-02 (2003,045,1000) | 1.0071E-02 (2003,045,1100) |
| 92 | -4.693 | -135.656 | 1.0639E-02 (2003,015,1100) | 9.7915E-03 (2003,015,1000) | 9.6905E-03 (2003,045,1100) | 9.4553E-03 (2003,045,1000) |
| 93 | -3.249 | -135.656 | 1.0323E-02 (2003,015,1100) | 9.4669E-03 (2003,045,1100) | 9.2725E-03 (2003,015,1000) | 8.9618E-03 (2003,045,1000) |
| 94 | -1.805 | -135.657 | 1.0002E-02 (2003,015,1100) | 9.2284E-03 (2003,045,1100) | 8.7685E-03 (2003,015,1000) | 8.6166E-03 (2003,045,1000) |
| 95 | -16.241 | -133.788 | 1.4726E-02 (2003,015,1000) | 1.3595E-02 (2003,308,0300) | 1.3095E-02 (2003,308,0200) | 1.2673E-02 (2003,308,0400) |
| 96 | -14.797 | -133.791 | 1.4135E-02 (2003,015,1000) | 1.2251E-02 (2003,015,1100) | 1.2248E-02 (2003,045,1000) | 1.2097E-02 (2003,045,0900) |
| 97 | -13.353 | -133.793 | 1.3540E-02 (2003,015,1000) | 1.2119E-02 (2003,015,1100) | 1.1896E-02 (2003,045,1000) | 1.1640E-02 (2003,045,0900) |
| 98 | -11.910 | -133.796 | 1.2951E-02 (2003,015,1000) | 1.1947E-02 (2003,015,1100) | 1.1551E-02 (2003,045,1000) | 1.1205E-02 (2003,045,0900) |
| 99 | -10.466 | -133.798 | 1.4661E-02 (2003,308,0300) | 1.4268E-02 (2003,308,0400) | 1.3671E-02 (2003,308,0200) | 1.2856E-02 (2003,308,0500) |
| 100 | -9.023 | -133.799 | 1.2735E-02 (2003,308,0300) | 1.2491E-02 (2003,308,0400) | 1.1886E-02 (2003,308,0200) | 1.1799E-02 (2003,015,1000) |
| 101 | -7.579 | -133.801 | 1.1275E-02 (2003,015,1100) | 1.1228E-02 (2003,015,1000) | 1.0492E-02 (2003,045,1000) | 1.0080E-02 (2003,045,1100) |
| 102 | -4.692 | -133.803 | 1.0719E-02 (2003,015,1100) | 1.0143E-02 (2003,015,1000) | 9.5058E-03 (2003,045,1100) | 9.2886E-03 (2003,045,1000) |
| 103 | -3.248 | -133.804 | 1.0426E-02 (2003,015,1100) | 9.6208E-03 (2003,015,1000) | 9.2874E-03 (2003,045,1100) | 8.9556E-03 (2003,045,1000) |
| 104 | -14.793 | -131.938 | 1.4438E-02 (2003,015,1000) | 1.2196E-02 (2003,045,0900) | 1.2169E-02 (2003,045,1000) | 1.2142E-02 (2003,015,1100) |
| 105 | -13.350 | -131.941 | 1.3858E-02 (2003,015,1000) | 1.3175E-02 (2003,308,0300) | 1.3076E-02 (2003,308,0200) | 1.2334E-02 (2003,308,0100) |
| 106 | -11.907 | -131.943 | 1.6242E-02 (2003,308,0300) | 1.5829E-02 (2003,308,0200) | 1.5331E-02 (2003,308,0400) | 1.4766E-02 (2003,308,0100) |
| 107 | -10.464 | -131.945 | 1.2702E-02 (2003,015,1000) | 1.1710E-02 (2003,015,1100) | 1.1140E-02 (2003,045,1000) | 1.0851E-02 (2003,045,0900) |
| 108 | -9.020 | -131.947 | 1.2125E-02 (2003,015,1000) | 1.1509E-02 (2003,015,1100) | 1.0792E-02 (2003,045,1000) | 1.0411E-02 (2003,045,0900) |
| 109 | -16.233 | -130.083 | 1.5259E-02 (2003,015,1000) | 1.4092E-02 (2003,308,0000) | 1.3999E-02 (2003,308,0200) | 1.3873E-02 (2003,307,2300) |
| 110 | -14.790 | -130.086 | 1.4700E-02 (2003,015,1000) | 1.3951E-02 (2003,308,0000) | 1.3848E-02 (2003,308,0200) | 1.3542E-02 (2003,308,0100) |
| 111 | -13.347 | -130.089 | 1.4123E-02 (2003,015,1000) | 1.3113E-02 (2003,308,0000) | 1.2980E-02 (2003,308,0200) | 1.2799E-02 (2003,308,0100) |
| 112 | -11.904 | -130.091 | 1.3557E-02 (2003,015,1000) | 1.1788E-02 (2003,015,1100) | 1.1389E-02 (2003,045,1000) | 1.1352E-02 (2003,045,0900) |
| 113 | -17.671 | -128.228 | 1.9018E-02 (2003,307,2300) | 1.8299E-02 (2003,308,0000) | 1.7392E-02 (2003,308,0200) | 1.7328E-02 (2003,308,0100) |
| 114 | -16.229 | -128.231 | 1.5445E-02 (2003,015,1000) | 1.4387E-02 (2003,307,2300) | 1.3936E-02 (2003,308,0000) | 1.2990E-02 (2003,308,0100) |
| 115 | -14.786 | -128.234 | 1.4895E-02 (2003,015,1000) | 1.2275E-02 (2003,045,0900) | 1.1909E-02 (2003,307,2300) | 1.1907E-02 (2003,045,1000) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1 | -9.046 | -154.175 | 9.0032E-05 | 58 | -4.696 | -141.212 | 7.9564E-05 |
| 2 | -7.599 | -154.176 | 8.8777E-05 | 59 | -3.251 | -141.213 | 7.6994E-05 |
| 3 | -6.152 | -154.178 | 8.7307E-05 | 60 | -1.806 | -141.214 | 7.5172E-05 |
| 4 | -3.257 | -154.179 | 7.5232E-05 | 61 | -0.361 | -141.214 | 7.3432E-05 |
| 5 | -10.491 | -152.321 | 9.6331E-05 | 62 | -14.808 | -139.347 | 9.8411E-05 |
| 6 | -9.044 | -152.322 | 9.2090E-05 | 63 | -13.363 | -139.350 | 9.6134E-05 |
| 7 | -7.597 | -152.324 | 8.7824E-05 | 64 | -11.918 | -139.352 | 9.6155E-05 |
| 8 | -6.150 | -152.325 | 8.1986E-05 | 65 | -10.474 | -139.354 | 9.2274E-05 |
| 9 | -4.703 | -152.326 | 8.4203E-05 | 66 | -9.029 | -139.356 | 8.6491E-05 |
| 10 | -3.256 | -152.327 | 8.2719E-05 | 67 | -7.584 | -139.358 | 8.4181E-05 |
| 11 | -1.809 | -152.328 | 8.1089E-05 | 68 | -6.140 | -139.359 | 8.4195E-05 |
| 12 | -0.362 | -152.328 | 7.1354E-05 | 69 | -4.695 | -139.360 | 8.3481E-05 |
| 13 | -11.936 | -150.466 | 9.5440E-05 | 70 | -3.250 | -139.361 | 7.8027E-05 |
| 14 | -10.489 | -150.468 | 8.8151E-05 | 71 | -1.806 | -139.361 | 7.6173E-05 |
| 15 | -9.042 | -150.470 | 8.5843E-05 | 72 | -0.361 | -139.361 | 7.5758E-05 |
| 16 | -7.595 | -150.472 | 8.3964E-05 | 73 | 1.083 | -139.361 | 7.2968E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | -6.149 | -150.473 | 8.1576E-05 | 74 | -14.804 | -137.495 | 1.0114E-04 |
| 18 | -4.702 | -150.474 | 8.4071E-05 | 75 | -13.360 | -137.498 | 9.8529E-05 |
| 19 | -3.255 | -150.475 | 8.4329E-05 | 76 | -11.915 | -137.500 | 9.3144E-05 |
| 20 | -1.808 | -150.475 | 8.5323E-05 | 77 | -10.471 | -137.502 | 9.0454E-05 |
| 21 | 1.085 | -150.475 | 7.5560E-05 | 78 | -9.027 | -137.504 | 8.9460E-05 |
| 22 | -11.933 | -148.614 | 8.9751E-05 | 79 | -7.583 | -137.506 | 8.9540E-05 |
| 23 | -10.486 | -148.616 | 9.2101E-05 | 80 | -6.138 | -137.507 | 8.8859E-05 |
| 24 | -9.040 | -148.618 | 9.0850E-05 | 81 | -4.694 | -137.508 | 8.2288E-05 |
| 25 | -7.594 | -148.619 | 8.6750E-05 | 82 | -3.250 | -137.509 | 7.8748E-05 |
| 26 | -6.147 | -148.621 | 8.4606E-05 | 83 | -1.805 | -137.509 | 7.5135E-05 |
| 27 | -4.701 | -148.622 | 8.4239E-05 | 84 | -16.245 | -135.640 | 1.0191E-04 |
| 28 | -3.254 | -148.622 | 8.4529E-05 | 85 | -14.801 | -135.643 | 1.0103E-04 |
| 29 | -1.808 | -148.623 | 8.5312E-05 | 86 | -13.357 | -135.645 | 9.6751E-05 |
| 30 | -0.362 | -148.623 | 7.7923E-05 | 87 | -11.913 | -135.648 | 9.3726E-05 |
| 31 | -11.930 | -146.762 | 9.2754E-05 | 88 | -10.469 | -135.650 | 9.1278E-05 |
| 32 | -10.484 | -146.764 | 9.1991E-05 | 89 | -9.025 | -135.652 | 9.1068E-05 |
| 33 | -9.038 | -146.765 | 9.1420E-05 | 90 | -7.581 | -135.653 | 9.0888E-05 |
| 34 | -7.592 | -146.767 | 8.7753E-05 | 91 | -6.137 | -135.655 | 8.3353E-05 |
| 35 | -6.146 | -146.768 | 8.6033E-05 | 92 | -4.693 | -135.656 | 7.9583E-05 |
| 36 | -4.700 | -146.769 | 8.6539E-05 | 93 | -3.249 | -135.656 | 7.6444E-05 |
| 37 | -3.254 | -146.770 | 8.7122E-05 | 94 | -1.805 | -135.657 | 7.2633E-05 |
| 38 | -1.808 | -146.770 | 8.5720E-05 | 95 | -16.241 | -133.788 | 1.0687E-04 |
| 39 | -0.362 | -146.771 | 7.2631E-05 | 96 | -14.797 | -133.791 | 1.0032E-04 |
| 40 | -10.481 | -144.911 | 9.2231E-05 | 97 | -13.353 | -133.793 | 9.6812E-05 |
| 41 | -9.036 | -144.913 | 9.1276E-05 | 98 | -11.910 | -133.796 | 9.5334E-05 |
| 42 | -7.590 | -144.915 | 9.0468E-05 | 99 | -10.466 | -133.798 | 9.7599E-05 |
| 43 | -6.144 | -144.916 | 8.8606E-05 | 100 | -9.023 | -133.799 | 9.3158E-05 |
| 44 | -4.699 | -144.917 | 8.7581E-05 | 101 | -7.579 | -133.801 | 8.5563E-05 |
| 45 | -3.253 | -144.918 | 8.6666E-05 | 102 | -4.692 | -133.803 | 7.7697E-05 |
| 46 | -1.807 | -144.918 | 7.9594E-05 | 103 | -3.248 | -133.804 | 7.4372E-05 |
| 47 | -10.479 | -143.059 | 9.2825E-05 | 104 | -14.793 | -131.938 | 9.9987E-05 |
| 48 | -9.033 | -143.061 | 9.2510E-05 | 105 | -13.350 | -131.941 | 1.0067E-04 |
| 49 | -7.588 | -143.062 | 9.0029E-05 | 106 | -11.907 | -131.943 | 1.0152E-04 |
| 50 | -6.143 | -143.064 | 8.5946E-05 | 107 | -10.464 | -131.945 | 9.1956E-05 |
| 51 | -4.697 | -143.065 | 8.3873E-05 | 108 | -9.020 | -131.947 | 8.6226E-05 |
| 52 | -3.252 | -143.065 | 8.1451E-05 | 109 | -16.233 | -130.083 | 1.0633E-04 |
| 53 | -1.807 | -143.066 | 7.6155E-05 | 110 | -14.790 | -130.086 | 1.0346E-04 |
| 54 | -10.476 | -141.207 | 9.4476E-05 | 111 | -13.347 | -130.089 | 9.9799E-05 |
| 55 | -9.031 | -141.209 | 9.2051E-05 | 112 | -11.904 | -130.091 | 9.2357E-05 |
| 56 | -7.586 | -141.210 | 8.4999E-05 | 113 | -17.671 | -128.228 | 1.1289E-04 |
| 57 | -6.141 | -141.211 | 8.2828E-05 | 114 | -16.229 | -128.231 | 1.0435E-04 |
| | | | | 115 | -14.786 | -128.234 | 9.8572E-05 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 113 | -17.671 | -128.228 | DISCRETE | 1.9018E-02 (2003,307,2300) | RANK 1 | 1 | HOUR |
| 5 | -10.491 | -152.321 | DISCRETE | 1.8383E-02 (2003,361,0100) | RANK 2 | 1 | HOUR |
| 1 | -9.046 | -154.175 | DISCRETE | 1.7838E-02 (2003,361,0300) | RANK 3 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 1.7328E-02 (2003,308,0100) | RANK 4 | 1 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 1.1289E-04 | RANK 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Bryce Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*0, 213*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************




  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1
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1 1 1 1 1 1 1 1

  Visibility Processing is NOT Selected
```

```
 Output options
                    Units requested for output:   (ug/m**3)

 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                  1-hr averages:     T
                                  3-hr averages:     F
                                 24-hr averages:     F
                               NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                         Top-50:     F
                  Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                  Echo tables for selected days:     F
                  Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                               Plot files created:     T
                        Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2003 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8736

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




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          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2003\POST_2003_NOX_BR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2003\SPC2003.CON


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          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2003\2003_BRYCE_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_BR.DAT

*************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
    116     -243.891  -280.107   5.6464E-02 (2003,036,0000)  5.3358E-02 (2003,300,0100)  4.5879E-02 (2003,256,0400)  4.4357E-02 (2003,300,0200)
    117     -243.156  -280.129   5.3269E-02 (2003,300,0100)  5.2925E-02 (2003,036,0000)  4.3138E-02 (2003,256,0400)  4.3055E-02 (2003,300,0200)
    118     -242.420  -280.152   5.2973E-02 (2003,300,0100)  4.9378E-02 (2003,036,0000)  4.1673E-02 (2003,350,0300)  4.1610E-02 (2003,300,0200)
    119     -241.685  -280.175   5.2541E-02 (2003,300,0100)  4.5854E-02 (2003,036,0000)  4.2596E-02 (2003,350,0300)  4.0051E-02 (2003,300,0200)
    120     -243.862  -279.180   5.6503E-02 (2003,036,0000)  5.3395E-02 (2003,300,0100)  4.6171E-02 (2003,256,0400)  4.4183E-02 (2003,300,0200)
    121     -243.127  -279.203   5.3168E-02 (2003,300,0100)  5.2930E-02 (2003,036,0000)  4.3502E-02 (2003,256,0400)  4.2756E-02 (2003,300,0200)
    122     -242.392  -279.226   5.2730E-02 (2003,300,0100)  4.9324E-02 (2003,036,0000)  4.3452E-02 (2003,350,0300)  4.1229E-02 (2003,300,0200)
    123     -241.656  -279.248   5.2162E-02 (2003,300,0100)  4.5739E-02 (2003,036,0000)  4.4315E-02 (2003,350,0300)  3.9628E-02 (2003,300,0200)
    124     -240.921  -279.271   5.1430E-02 (2003,300,0100)  4.5160E-02 (2003,350,0300)  4.2244E-02 (2003,036,0000)  3.9510E-02 (2003,300,0000)
    125     -243.834  -278.254   5.6344E-02 (2003,036,0000)  5.3286E-02 (2003,300,0100)  4.6422E-02 (2003,256,0400)  4.4012E-02 (2003,300,0200)
    126     -243.098  -278.277   5.2911E-02 (2003,300,0100)  5.2725E-02 (2003,036,0000)  4.4234E-02 (2003,350,0300)  4.3811E-02 (2003,256,0400)
    127     -242.363  -278.299   5.2382E-02 (2003,300,0100)  4.9073E-02 (2003,036,0000)  4.5130E-02 (2003,350,0300)  4.1056E-02 (2003,256,0400)
    128     -241.628  -278.322   5.1683E-02 (2003,300,0100)  4.5962E-02 (2003,350,0300)  4.5489E-02 (2003,036,0000)  4.1110E-02 (2003,300,0000)
    129     -240.892  -278.345   5.0817E-02 (2003,300,0100)  4.6779E-02 (2003,350,0300)  4.1988E-02 (2003,036,0000)  4.1201E-02 (2003,300,0000)
    130     -240.157  -278.367   4.9804E-02 (2003,300,0100)  4.7540E-02 (2003,350,0300)  4.1097E-02 (2003,300,0000)  3.9245E-02 (2003,298,2300)
    131     -243.805  -277.328   5.6002E-02 (2003,036,0000)  5.2965E-02 (2003,300,0100)  4.6621E-02 (2003,256,0400)  4.4869E-02 (2003,350,0300)
    132     -243.070  -277.350   5.2464E-02 (2003,300,0100)  5.2352E-02 (2003,036,0000)  4.5826E-02 (2003,350,0300)  4.4127E-02 (2003,256,0400)
    133     -242.335  -277.373   5.1838E-02 (2003,300,0100)  4.8714E-02 (2003,036,0000)  4.6719E-02 (2003,350,0300)  4.2467E-02 (2003,300,0000)
    134     -241.599  -277.396   5.1013E-02 (2003,300,0100)  4.7544E-02 (2003,350,0300)  4.5101E-02 (2003,036,0000)  4.2747E-02 (2003,300,0000)
    135     -240.864  -277.418   5.0023E-02 (2003,300,0100)  4.8263E-02 (2003,350,0300)  4.2836E-02 (2003,300,0000)  4.1593E-02 (2003,036,0000)
    136     -240.129  -277.441   4.9012E-02 (2003,350,0300)  4.8948E-02 (2003,300,0100)  4.2744E-02 (2003,300,0000)  3.9845E-02 (2003,298,2300)
    137     -243.776  -276.401   5.5480E-02 (2003,036,0000)  5.2532E-02 (2003,300,0100)  4.6772E-02 (2003,256,0400)  4.6291E-02 (2003,350,0300)
    138     -243.041  -276.424   5.1886E-02 (2003,300,0100)  5.1820E-02 (2003,036,0000)  4.7242E-02 (2003,350,0300)  4.4392E-02 (2003,256,0400)
    139     -242.306  -276.447   5.1114E-02 (2003,300,0100)  4.8162E-02 (2003,036,0000)  4.8125E-02 (2003,350,0300)  4.4022E-02 (2003,300,0000)
    140     -241.571  -276.469   5.0171E-02 (2003,300,0100)  4.8935E-02 (2003,350,0300)  4.4545E-02 (2003,036,0000)  4.4286E-02 (2003,300,0000)
    141     -240.836  -276.492   4.9668E-02 (2003,350,0300)  4.9095E-02 (2003,300,0100)  4.4360E-02 (2003,300,0000)  4.1030E-02 (2003,036,0000)
    142     -240.101  -276.514   5.0321E-02 (2003,350,0300)  4.7914E-02 (2003,300,0100)  4.4237E-02 (2003,300,0000)  4.0312E-02 (2003,298,2300)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 143 | -243.747 | -275.475 | 5.4911E-02 (2003,036,0000) | 5.1926E-02 (2003,300,0100) | 4.7600E-02 (2003,350,0300) | 4.6921E-02 (2003,256,0400) |
| 144 | -243.012 | -275.498 | 5.1209E-02 (2003,036,0000) | 5.1203E-02 (2003,300,0100) | 4.8534E-02 (2003,350,0300) | 4.5088E-02 (2003,300,0000) |
| 145 | -242.277 | -275.520 | 5.0287E-02 (2003,300,0100) | 4.9394E-02 (2003,350,0300) | 4.7495E-02 (2003,036,0000) | 4.5528E-02 (2003,300,0000) |
| 146 | -241.542 | -275.543 | 5.0139E-02 (2003,350,0300) | 4.9227E-02 (2003,300,0100) | 4.5772E-02 (2003,300,0000) | 4.3850E-02 (2003,036,0000) |
| 147 | -240.807 | -275.565 | 5.0842E-02 (2003,350,0300) | 4.8013E-02 (2003,300,0100) | 4.5780E-02 (2003,300,0000) | 4.0332E-02 (2003,036,0000) |
| 148 | -240.072 | -275.588 | 5.1460E-02 (2003,350,0300) | 4.6729E-02 (2003,300,0100) | 4.5611E-02 (2003,300,0000) | 4.0689E-02 (2003,298,2300) |
| 149 | -244.454 | -274.526 | 5.7830E-02 (2003,036,0000) | 5.1966E-02 (2003,300,0100) | 4.8871E-02 (2003,256,0400) | 4.7646E-02 (2003,350,0300) |
| 150 | -243.719 | -274.548 | 5.4148E-02 (2003,036,0000) | 5.1231E-02 (2003,300,0100) | 4.8711E-02 (2003,350,0300) | 4.7006E-02 (2003,256,0400) |
| 151 | -242.984 | -274.571 | 5.0434E-02 (2003,036,0000) | 5.0378E-02 (2003,300,0100) | 4.9645E-02 (2003,350,0300) | 4.6559E-02 (2003,300,0000) |
| 152 | -244.425 | -273.599 | 5.6973E-02 (2003,036,0000) | 5.1280E-02 (2003,300,0100) | 4.8863E-02 (2003,256,0400) | 4.8644E-02 (2003,350,0300) |
| 153 | -243.690 | -273.622 | 5.3284E-02 (2003,036,0000) | 5.0411E-02 (2003,300,0100) | 4.9588E-02 (2003,350,0300) | 4.7318E-02 (2003,300,0000) |
| 154 | -242.955 | -273.645 | 5.0489E-02 (2003,350,0300) | 4.9578E-02 (2003,036,0000) | 4.9406E-02 (2003,300,0100) | 4.7898E-02 (2003,300,0000) |
| 155 | -244.396 | -272.673 | 5.6009E-02 (2003,036,0000) | 5.0447E-02 (2003,300,0100) | 4.9407E-02 (2003,350,0300) | 4.8767E-02 (2003,256,0400) |
| 156 | -243.661 | -272.696 | 5.2330E-02 (2003,036,0000) | 5.0295E-02 (2003,350,0300) | 4.9493E-02 (2003,300,0100) | 4.8555E-02 (2003,300,0000) |
| 157 | -242.927 | -272.719 | 5.1143E-02 (2003,350,0300) | 4.9102E-02 (2003,300,0000) | 4.8600E-02 (2003,036,0000) | 4.8351E-02 (2003,300,0100) |
| 158 | -244.367 | -271.747 | 5.5074E-02 (2003,036,0000) | 5.0332E-02 (2003,035,2300) | 4.9955E-02 (2003,350,0300) | 4.9549E-02 (2003,300,0100) |
| 159 | -243.633 | -271.769 | 5.1368E-02 (2003,036,0000) | 5.0789E-02 (2003,350,0300) | 4.9721E-02 (2003,300,0000) | 4.9265E-02 (2003,035,2300) |
| 160 | -242.898 | -271.792 | 5.1527E-02 (2003,350,0300) | 5.0166E-02 (2003,300,0000) | 4.7863E-02 (2003,035,2300) | 4.7586E-02 (2003,036,0000) |
| 161 | -244.339 | -270.820 | 5.4135E-02 (2003,035,2300) | 5.4059E-02 (2003,036,0000) | 5.0314E-02 (2003,350,0300) | 5.0162E-02 (2003,300,0000) |
| 162 | -243.604 | -270.843 | 5.2949E-02 (2003,035,2300) | 5.1084E-02 (2003,350,0300) | 5.0715E-02 (2003,300,0000) | 5.0314E-02 (2003,036,0000) |
| 163 | -242.869 | -270.866 | 5.1715E-02 (2003,350,0300) | 5.1393E-02 (2003,035,2300) | 5.1135E-02 (2003,300,0000) | 4.6580E-02 (2003,036,0000) |
| 164 | -242.135 | -270.889 | 5.2281E-02 (2003,350,0300) | 5.1336E-02 (2003,300,0000) | 4.9535E-02 (2003,035,2300) | 4.4497E-02 (2003,300,0100) |
| 165 | -244.310 | -269.894 | 5.7890E-02 (2003,035,2300) | 5.2981E-02 (2003,036,0000) | 5.1109E-02 (2003,300,0000) | 5.0410E-02 (2003,350,0300) |
| 166 | -243.575 | -269.917 | 5.6596E-02 (2003,035,2300) | 5.1667E-02 (2003,300,0000) | 5.1107E-02 (2003,350,0300) | 4.9232E-02 (2003,036,0000) |
| 167 | -242.841 | -269.940 | 5.4950E-02 (2003,035,2300) | 5.2004E-02 (2003,300,0000) | 5.1698E-02 (2003,350,0300) | 4.5721E-02 (2003,256,0400) |
| 168 | -242.106 | -269.962 | 5.2972E-02 (2003,035,2300) | 5.2178E-02 (2003,350,0300) | 5.2073E-02 (2003,300,0000) | 4.3999E-02 (2003,256,0400) |
| 169 | -242.812 | -269.013 | 5.8449E-02 (2003,035,2300) | 5.2649E-02 (2003,300,0000) | 5.1402E-02 (2003,350,0300) | 4.6817E-02 (2003,256,0000) |
| 170 | -242.078 | -269.036 | 5.6314E-02 (2003,035,2300) | 5.2659E-02 (2003,300,0000) | 5.1790E-02 (2003,350,0300) | 4.5274E-02 (2003,256,0000) |
| 171 | -241.343 | -269.059 | 5.3879E-02 (2003,035,2300) | 5.2428E-02 (2003,300,0000) | 5.2061E-02 (2003,350,0300) | 4.3729E-02 (2003,256,0000) |
| 172 | -240.609 | -269.081 | 5.2213E-02 (2003,350,0300) | 5.1950E-02 (2003,300,0000) | 5.1203E-02 (2003,035,2300) | 4.2358E-02 (2003,256,0000) |
| 173 | -239.874 | -269.104 | 5.2309E-02 (2003,350,0300) | 5.1209E-02 (2003,300,0000) | 4.8344E-02 (2003,035,2300) | 4.1040E-02 (2003,256,0000) |
| 174 | -242.049 | -268.110 | 5.9587E-02 (2003,035,2300) | 5.3024E-02 (2003,300,0000) | 5.1146E-02 (2003,350,0300) | 4.7064E-02 (2003,256,0000) |
| 175 | -241.315 | -268.132 | 5.6999E-02 (2003,035,2300) | 5.2690E-02 (2003,300,0000) | 5.1312E-02 (2003,350,0300) | 4.5430E-02 (2003,256,0000) |
| 176 | -240.580 | -268.155 | 5.4144E-02 (2003,035,2300) | 5.2124E-02 (2003,300,0000) | 5.1358E-02 (2003,350,0300) | 4.3893E-02 (2003,256,0000) |
| 177 | -239.846 | -268.177 | 5.1330E-02 (2003,300,0000) | 5.1282E-02 (2003,350,0300) | 5.1108E-02 (2003,035,2300) | 4.2472E-02 (2003,256,0000) |
| 178 | -239.112 | -268.200 | 5.1133E-02 (2003,350,0300) | 5.0272E-02 (2003,300,0000) | 4.7929E-02 (2003,035,2300) | 4.2168E-02 (2003,298,2300) |
| 179 | -242.020 | -267.183 | 6.2778E-02 (2003,035,2300) | 5.3211E-02 (2003,300,0000) | 5.0305E-02 (2003,350,0300) | 4.8796E-02 (2003,256,0000) |
| 180 | -241.286 | -267.206 | 6.0023E-02 (2003,035,2300) | 5.2760E-02 (2003,300,0000) | 5.0356E-02 (2003,350,0300) | 4.7095E-02 (2003,256,0000) |
| 181 | -240.552 | -267.228 | 5.6979E-02 (2003,035,2300) | 5.2080E-02 (2003,300,0000) | 5.0282E-02 (2003,350,0300) | 4.5480E-02 (2003,256,0000) |
| 182 | -239.818 | -267.251 | 5.3756E-02 (2003,035,2300) | 5.1170E-02 (2003,300,0000) | 5.0049E-02 (2003,350,0300) | 4.3913E-02 (2003,256,0000) |
| 183 | -239.083 | -267.273 | 5.0388E-02 (2003,035,2300) | 5.0052E-02 (2003,300,0000) | 4.9743E-02 (2003,350,0300) | 4.2524E-02 (2003,256,0000) |
| 184 | -241.258 | -266.280 | 6.2940E-02 (2003,035,2300) | 5.2623E-02 (2003,300,0000) | 4.9135E-02 (2003,350,0300) | 4.8623E-02 (2003,256,0000) |
| 185 | -240.524 | -266.302 | 5.9682E-02 (2003,035,2300) | 5.1824E-02 (2003,300,0000) | 4.8949E-02 (2003,350,0300) | 4.6898E-02 (2003,256,0000) |
| 186 | -239.789 | -266.325 | 5.6273E-02 (2003,035,2300) | 5.0807E-02 (2003,300,0000) | 4.8644E-02 (2003,350,0300) | 4.5267E-02 (2003,256,0000) |
| 187 | -239.055 | -266.347 | 5.2727E-02 (2003,035,2300) | 4.9583E-02 (2003,300,0000) | 4.8222E-02 (2003,350,0300) | 4.3804E-02 (2003,256,0000) |
| 188 | -238.321 | -266.369 | 4.9093E-02 (2003,035,2300) | 4.8166E-02 (2003,300,0000) | 4.7687E-02 (2003,350,0300) | 4.4509E-02 (2003,350,0200) |
| 189 | -237.587 | -266.392 | 4.7086E-02 (2003,350,0300) | 4.6602E-02 (2003,350,0200) | 4.6543E-02 (2003,300,0000) | 4.5474E-02 (2003,035,2300) |
| 190 | -236.853 | -266.414 | 4.8583E-02 (2003,350,0200) | 4.8133E-02 (2003,297,0000) | 4.6602E-02 (2003,298,2300) | 4.6403E-02 (2003,350,0300) |
| 191 | -236.118 | -266.436 | 5.4446E-02 (2003,297,0000) | 5.0506E-02 (2003,350,0200) | 4.7784E-02 (2003,298,2300) | 4.5618E-02 (2003,350,0300) |
| 192 | -235.384 | -266.458 | 6.0791E-02 (2003,297,0000) | 5.2396E-02 (2003,350,0200) | 4.8681E-02 (2003,298,2300) | 4.4742E-02 (2003,350,0300) |
| 193 | -234.650 | -266.480 | 6.6958E-02 (2003,297,0000) | 5.4201E-02 (2003,350,0200) | 4.9298E-02 (2003,298,2300) | 4.5296E-02 (2003,208,0600) |
| 194 | -233.916 | -266.502 | 7.2812E-02 (2003,297,0000) | 5.5961E-02 (2003,350,0200) | 4.9571E-02 (2003,298,2300) | 4.7711E-02 (2003,208,0600) |
| 195 | -233.181 | -266.524 | 7.8125E-02 (2003,297,0000) | 5.7670E-02 (2003,350,0200) | 5.0045E-02 (2003,208,0600) | 4.9520E-02 (2003,298,2300) |
| 196 | -232.447 | -266.545 | 8.2742E-02 (2003,297,0000) | 5.9220E-02 (2003,350,0200) | 5.2317E-02 (2003,208,0600) | 4.9608E-02 (2003,296,2200) |
| 197 | -231.713 | -266.567 | 8.6514E-02 (2003,297,0000) | 6.0666E-02 (2003,350,0200) | 5.4539E-02 (2003,208,0600) | 5.3364E-02 (2003,296,2200) |
| 198 | -241.229 | -265.353 | 6.5737E-02 (2003,035,2300) | 5.2338E-02 (2003,300,0000) | 5.0108E-02 (2003,256,0000) | 4.7722E-02 (2003,350,0300) |
| 199 | -240.495 | -265.376 | 6.2336E-02 (2003,035,2300) | 5.1363E-02 (2003,300,0000) | 4.8215E-02 (2003,256,0000) | 4.7418E-02 (2003,350,0300) |
| 200 | -239.761 | -265.398 | 5.8710E-02 (2003,035,2300) | 5.0230E-02 (2003,300,0000) | 4.6995E-02 (2003,350,0300) | 4.6521E-02 (2003,256,0000) |
| 201 | -239.027 | -265.421 | 5.4899E-02 (2003,035,2300) | 4.8893E-02 (2003,300,0000) | 4.6455E-02 (2003,350,0300) | 4.4966E-02 (2003,256,0000) |
| 202 | -238.293 | -265.443 | 5.1095E-02 (2003,035,2300) | 4.7380E-02 (2003,300,0000) | 4.6446E-02 (2003,350,0200) | 4.5804E-02 (2003,350,0300) |
| 203 | -237.559 | -265.465 | 4.8552E-02 (2003,350,0200) | 4.7301E-02 (2003,035,2300) | 4.5702E-02 (2003,300,0000) | 4.5051E-02 (2003,350,0300) |
| 204 | -236.825 | -265.487 | 5.0604E-02 (2003,350,0200) | 4.8721E-02 (2003,297,0000) | 4.6302E-02 (2003,298,2300) | 4.4246E-02 (2003,350,0300) |
| 205 | -236.090 | -265.509 | 5.5162E-02 (2003,297,0000) | 5.2532E-02 (2003,350,0200) | 4.7510E-02 (2003,298,2300) | 4.4437E-02 (2003,208,0700) |
| 206 | -235.356 | -265.532 | 6.1617E-02 (2003,297,0000) | 5.4446E-02 (2003,350,0200) | 4.8425E-02 (2003,298,2300) | 4.5457E-02 (2003,208,0700) |
| 207 | -234.622 | -265.553 | 6.7941E-02 (2003,297,0000) | 5.6248E-02 (2003,350,0200) | 4.9030E-02 (2003,298,2300) | 4.6688E-02 (2003,208,0600) |
| 208 | -233.888 | -265.575 | 7.3917E-02 (2003,297,0000) | 5.8063E-02 (2003,350,0200) | 4.9310E-02 (2003,298,2300) | 4.9149E-02 (2003,208,0600) |
| 209 | -233.154 | -265.597 | 7.9367E-02 (2003,297,0000) | 5.9743E-02 (2003,350,0200) | 5.1478E-02 (2003,208,0600) | 4.9259E-02 (2003,298,2300) |
| 210 | -232.420 | -265.619 | 8.4055E-02 (2003,297,0000) | 6.1306E-02 (2003,350,0200) | 5.3736E-02 (2003,208,0600) | 4.9599E-02 (2003,296,2200) |
| 211 | -231.686 | -265.641 | 8.7884E-02 (2003,297,0000) | 6.2691E-02 (2003,350,0200) | 5.5904E-02 (2003,208,0600) | 5.3492E-02 (2003,296,2200) |
| 212 | -240.467 | -264.449 | 6.4773E-02 (2003,035,2300) | 5.0803E-02 (2003,300,0000) | 4.9605E-02 (2003,256,0000) | 4.5787E-02 (2003,350,0300) |
| 213 | -239.733 | -264.472 | 6.0973E-02 (2003,035,2300) | 4.9450E-02 (2003,300,0000) | 4.7730E-02 (2003,256,0000) | 4.5169E-02 (2003,350,0300) |
| 214 | -238.999 | -264.494 | 5.7026E-02 (2003,035,2300) | 4.8010E-02 (2003,300,0000) | 4.6171E-02 (2003,350,0200) | 4.6067E-02 (2003,256,0000) |
| 215 | -238.265 | -264.517 | 5.3030E-02 (2003,035,2300) | 4.8283E-02 (2003,350,0200) | 4.6399E-02 (2003,300,0000) | 4.4573E-02 (2003,256,0000) |
| 216 | -237.531 | -264.539 | 5.0392E-02 (2003,350,0200) | 4.8956E-02 (2003,035,2300) | 4.4639E-02 (2003,300,0000) | 4.4617E-02 (2003,208,0700) |
| 217 | -236.797 | -264.561 | 5.2462E-02 (2003,350,0200) | 4.9139E-02 (2003,297,0000) | 4.5999E-02 (2003,298,2300) | 4.5942E-02 (2003,208,0700) |
| 218 | -236.063 | -264.583 | 5.5796E-02 (2003,297,0000) | 5.4408E-02 (2003,350,0200) | 4.7222E-02 (2003,298,2300) | 4.7117E-02 (2003,208,0700) |
| 219 | -235.329 | -264.605 | 6.2469E-02 (2003,297,0000) | 5.6285E-02 (2003,350,0200) | 4.8147E-02 (2003,298,2300) | 4.8118E-02 (2003,208,0700) |
| 220 | -234.595 | -264.627 | 6.8932E-02 (2003,297,0000) | 5.8118E-02 (2003,350,0200) | 4.8946E-02 (2003,208,0700) | 4.8756E-02 (2003,298,2300) |
| 221 | -233.860 | -264.649 | 7.5058E-02 (2003,297,0000) | 5.9929E-02 (2003,350,0200) | 5.0660E-02 (2003,208,0600) | 4.9591E-02 (2003,208,0700) |
| 222 | -233.126 | -264.671 | 8.0619E-02 (2003,297,0000) | 6.1596E-02 (2003,350,0200) | 5.2975E-02 (2003,208,0600) | 5.0049E-02 (2003,208,0700) |
| 223 | -232.392 | -264.693 | 8.5415E-02 (2003,297,0000) | 6.3109E-02 (2003,350,0200) | 5.5206E-02 (2003,208,0600) | 5.0317E-02 (2003,208,0700) |
| 224 | -231.658 | -264.714 | 8.9279E-02 (2003,297,0000) | 6.4507E-02 (2003,350,0200) | 5.7361E-02 (2003,208,0600) | 5.3620E-02 (2003,296,2200) |
| 225 | -238.971 | -263.568 | 5.8897E-02 (2003,035,2300) | 4.7835E-02 (2003,350,0200) | 4.7146E-02 (2003,256,0000) | 4.6969E-02 (2003,300,0000) |
| 226 | -238.237 | -263.590 | 5.4737E-02 (2003,035,2300) | 4.9950E-02 (2003,350,0200) | 4.5981E-02 (2003,208,0700) | 4.5449E-02 (2003,256,0000) |
| 227 | -237.503 | -263.613 | 5.2106E-02 (2003,350,0200) | 5.0565E-02 (2003,035,2300) | 4.7500E-02 (2003,208,0700) | 4.4167E-02 (2003,298,2300) |
| 228 | -236.769 | -263.635 | 5.4193E-02 (2003,350,0200) | 4.9652E-02 (2003,297,0000) | 4.8869E-02 (2003,208,0700) | 4.6489E-02 (2003,035,2300) |
| 229 | -236.035 | -263.657 | 5.6424E-02 (2003,297,0000) | 5.6182E-02 (2003,350,0200) | 5.0060E-02 (2003,208,0700) | 4.6899E-02 (2003,298,2300) |
| 230 | -235.301 | -263.679 | 6.3217E-02 (2003,297,0000) | 5.8054E-02 (2003,350,0200) | 5.1069E-02 (2003,208,0700) | 4.7830E-02 (2003,298,2300) |
| 231 | -234.567 | -263.701 | 6.9818E-02 (2003,297,0000) | 5.9865E-02 (2003,350,0200) | 5.1904E-02 (2003,208,0700) | 5.0366E-02 (2003,208,0600) |
| 232 | -233.833 | -263.723 | 7.6070E-02 (2003,297,0000) | 6.1613E-02 (2003,350,0200) | 5.2762E-02 (2003,208,0600) | 5.2519E-02 (2003,208,0700) |
| 233 | -233.099 | -263.745 | 8.1721E-02 (2003,297,0000) | 6.3146E-02 (2003,350,0200) | 5.5076E-02 (2003,208,0600) | 5.2931E-02 (2003,208,0700) |
| 234 | -232.365 | -263.766 | 8.6576E-02 (2003,297,0000) | 6.4694E-02 (2003,350,0200) | 5.7281E-02 (2003,208,0600) | 5.3135E-02 (2003,208,0700) |
| 235 | -231.631 | -263.788 | 9.0479E-02 (2003,297,0000) | 6.6011E-02 (2003,350,0200) | 5.9371E-02 (2003,208,0600) | 5.3511E-02 (2003,296,2200) |
| 236 | -238.208 | -262.664 | 5.6181E-02 (2003,035,2300) | 5.1440E-02 (2003,350,0200) | 4.9171E-02 (2003,208,0700) | 4.6361E-02 (2003,256,0000) |
| 237 | -237.475 | -262.686 | 5.3588E-02 (2003,350,0200) | 5.1890E-02 (2003,035,2300) | 5.0723E-02 (2003,208,0700) | 4.4840E-02 (2003,256,0000) |
| 238 | -236.741 | -262.708 | 5.5700E-02 (2003,350,0200) | 5.2128E-02 (2003,208,0700) | 5.0017E-02 (2003,297,0000) | 4.7713E-02 (2003,035,2300) |
| 239 | -236.007 | -262.731 | 5.7645E-02 (2003,350,0200) | 5.6905E-02 (2003,297,0000) | 5.3328E-02 (2003,208,0700) | 4.7533E-02 (2003,208,0600) |
| 240 | -235.273 | -262.753 | 6.3824E-02 (2003,297,0000) | 5.9528E-02 (2003,350,0200) | 5.4329E-02 (2003,208,0700) | 5.0079E-02 (2003,208,0600) |
| 241 | -234.539 | -262.775 | 7.0593E-02 (2003,297,0000) | 6.1274E-02 (2003,350,0200) | 5.5158E-02 (2003,208,0700) | 5.2563E-02 (2003,208,0600) |
| 242 | -233.805 | -262.796 | 7.6955E-02 (2003,297,0000) | 6.3018E-02 (2003,350,0200) | 5.5734E-02 (2003,208,0700) | 5.4982E-02 (2003,208,0600) |
| 243 | -233.071 | -262.818 | 8.2708E-02 (2003,297,0000) | 6.4537E-02 (2003,350,0200) | 5.7302E-02 (2003,208,0600) | 5.6086E-02 (2003,208,0700) |
| 244 | -232.338 | -262.840 | 8.7638E-02 (2003,297,0000) | 6.5975E-02 (2003,350,0200) | 5.9485E-02 (2003,208,0600) | 5.6213E-02 (2003,208,0700) |
| 245 | -238.180 | -261.738 | 5.7417E-02 (2003,035,2300) | 5.2901E-02 (2003,208,0700) | 5.2743E-02 (2003,350,0200) | 4.7140E-02 (2003,256,0000) |
| 246 | -237.447 | -261.760 | 5.4889E-02 (2003,350,0200) | 5.4460E-02 (2003,208,0700) | 5.2993E-02 (2003,035,2300) | 4.5505E-02 (2003,256,0000) |
| 247 | -236.713 | -261.782 | 5.6926E-02 (2003,350,0200) | 5.5839E-02 (2003,208,0700) | 5.0210E-02 (2003,297,0000) | 4.8660E-02 (2003,035,2300) |
| 248 | -235.979 | -261.804 | 5.8878E-02 (2003,350,0200) | 5.7258E-02 (2003,297,0000) | 5.7026E-02 (2003,208,0700) | 5.0113E-02 (2003,208,0600) |
| 249 | -235.245 | -261.826 | 6.4319E-02 (2003,297,0000) | 6.0748E-02 (2003,350,0200) | 5.7990E-02 (2003,208,0700) | 5.2723E-02 (2003,208,0600) |
| 250 | -234.511 | -261.848 | 7.1209E-02 (2003,297,0000) | 6.2451E-02 (2003,350,0200) | 5.8731E-02 (2003,208,0700) | 5.5295E-02 (2003,208,0600) |
| 251 | -233.778 | -261.870 | 7.7684E-02 (2003,297,0000) | 6.4142E-02 (2003,350,0200) | 5.9240E-02 (2003,208,0700) | 5.7724E-02 (2003,208,0600) |
| 252 | -233.044 | -261.892 | 8.3583E-02 (2003,297,0000) | 6.5612E-02 (2003,350,0200) | 6.0032E-02 (2003,208,0600) | 5.9540E-02 (2003,208,0700) |
| 253 | -232.310 | -261.914 | 8.8614E-02 (2003,297,0000) | 6.6963E-02 (2003,350,0200) | 6.2192E-02 (2003,208,0600) | 5.9583E-02 (2003,208,0700) |
| 254 | -235.951 | -260.878 | 6.1299E-02 (2003,208,0700) | 5.9918E-02 (2003,350,0200) | 5.7489E-02 (2003,297,0000) | 5.3066E-02 (2003,208,0600) |
| 255 | -235.217 | -260.900 | 6.4710E-02 (2003,297,0000) | 6.2184E-02 (2003,208,0700) | 6.1688E-02 (2003,350,0200) | 5.5794E-02 (2003,208,0600) |
| 256 | -234.484 | -260.922 | 7.1744E-02 (2003,297,0000) | 6.3389E-02 (2003,350,0200) | 6.2832E-02 (2003,208,0700) | 5.8379E-02 (2003,208,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 257 | -233.750 | -260.944 | 7.8424E-02 (2003,297,0000) | 6.4916E-02 (2003,350,0200) | 6.3235E-02 (2003,208,0700) | 6.0838E-02 (2003,208,0600) |
| 258 | -233.016 | -260.966 | 8.4429E-02 (2003,297,0000) | 6.6384E-02 (2003,350,0200) | 6.3390E-02 (2003,208,0700) | 6.3152E-02 (2003,208,0600) |
| 259 | -232.283 | -260.987 | 8.9586E-02 (2003,297,0000) | 6.7635E-02 (2003,350,0200) | 6.5301E-02 (2003,208,0600) | 6.3285E-02 (2003,208,0700) |
| 260 | -231.549 | -261.009 | 9.3689E-02 (2003,297,0000) | 6.8772E-02 (2003,350,0200) | 6.7262E-02 (2003,208,0600) | 6.2934E-02 (2003,208,0700) |
| 261 | -230.815 | -261.031 | 9.6534E-02 (2003,297,0000) | 6.9706E-02 (2003,350,0200) | 6.9009E-02 (2003,208,0600) | 6.2332E-02 (2003,208,0700) |
| 262 | -235.923 | -259.952 | 6.6469E-02 (2003,208,0700) | 6.0706E-02 (2003,350,0200) | 5.7723E-02 (2003,297,0000) | 5.6386E-02 (2003,208,0600) |
| 263 | -235.190 | -259.974 | 6.7181E-02 (2003,208,0700) | 6.5083E-02 (2003,297,0000) | 6.2424E-02 (2003,350,0200) | 5.9162E-02 (2003,208,0600) |
| 264 | -234.456 | -259.996 | 7.2268E-02 (2003,297,0000) | 6.7666E-02 (2003,208,0700) | 6.4010E-02 (2003,350,0200) | 6.1811E-02 (2003,208,0600) |
| 265 | -233.723 | -260.018 | 7.9034E-02 (2003,297,0000) | 6.7878E-02 (2003,208,0700) | 6.5417E-02 (2003,350,0200) | 6.4365E-02 (2003,208,0600) |
| 266 | -232.989 | -260.039 | 8.5161E-02 (2003,297,0000) | 6.7819E-02 (2003,208,0700) | 6.6852E-02 (2003,350,0200) | 6.6698E-02 (2003,208,0600) |
| 267 | -232.255 | -260.061 | 9.0387E-02 (2003,297,0000) | 6.8834E-02 (2003,208,0600) | 6.8036E-02 (2003,350,0200) | 6.7538E-02 (2003,208,0700) |
| 268 | -231.522 | -260.083 | 9.4552E-02 (2003,297,0000) | 7.0749E-02 (2003,208,0600) | 6.9024E-02 (2003,350,0200) | 6.6976E-02 (2003,208,0700) |
| 269 | -230.788 | -260.104 | 9.7439E-02 (2003,297,0000) | 7.2426E-02 (2003,208,0600) | 6.9859E-02 (2003,350,0200) | 6.6165E-02 (2003,208,0700) |
| 270 | -230.054 | -260.126 | 9.8946E-02 (2003,297,0000) | 7.3843E-02 (2003,208,0600) | 7.0485E-02 (2003,350,0200) | 6.5110E-02 (2003,208,0700) |
| 271 | -235.895 | -259.025 | 7.2854E-02 (2003,208,0700) | 6.1148E-02 (2003,350,0200) | 6.0122E-02 (2003,208,0600) | 5.7798E-02 (2003,297,0000) |
| 272 | -235.162 | -259.047 | 7.3348E-02 (2003,208,0700) | 6.5260E-02 (2003,297,0000) | 6.3055E-02 (2003,208,0600) | 6.2851E-02 (2003,350,0200) |
| 273 | -234.428 | -259.069 | 7.3565E-02 (2003,208,0700) | 7.2578E-02 (2003,297,0000) | 6.5794E-02 (2003,208,0600) | 6.4359E-02 (2003,350,0200) |
| 274 | -233.695 | -259.091 | 7.9498E-02 (2003,297,0000) | 7.3504E-02 (2003,208,0700) | 6.8354E-02 (2003,208,0600) | 6.5715E-02 (2003,350,0200) |
| 275 | -232.961 | -259.113 | 8.5753E-02 (2003,297,0000) | 7.3162E-02 (2003,208,0700) | 7.0710E-02 (2003,208,0600) | 6.6987E-02 (2003,350,0200) |
| 276 | -232.228 | -259.135 | 9.1089E-02 (2003,297,0000) | 7.2840E-02 (2003,208,0600) | 7.2558E-02 (2003,208,0700) | 6.8075E-02 (2003,350,0200) |
| 277 | -231.494 | -259.156 | 9.5327E-02 (2003,297,0000) | 7.4716E-02 (2003,208,0600) | 7.1710E-02 (2003,208,0700) | 6.8933E-02 (2003,350,0200) |
| 278 | -230.761 | -259.178 | 9.8253E-02 (2003,297,0000) | 7.6324E-02 (2003,208,0600) | 7.0595E-02 (2003,208,0700) | 6.9658E-02 (2003,350,0200) |
| 279 | -230.027 | -259.200 | 9.9759E-02 (2003,297,0000) | 7.7644E-02 (2003,208,0600) | 7.0168E-02 (2003,350,0200) | 6.9237E-02 (2003,208,0700) |
| 280 | -229.294 | -259.221 | 9.9784E-02 (2003,297,0000) | 7.8657E-02 (2003,208,0600) | 7.0538E-02 (2003,350,0200) | 6.7643E-02 (2003,208,0700) |
| 281 | -235.134 | -258.121 | 8.0795E-02 (2003,208,0700) | 6.7345E-02 (2003,208,0600) | 6.5292E-02 (2003,297,0000) | 6.2990E-02 (2003,350,0200) |
| 282 | -234.401 | -258.143 | 8.0752E-02 (2003,208,0700) | 7.2742E-02 (2003,297,0000) | 7.0235E-02 (2003,208,0600) | 6.4409E-02 (2003,350,0200) |
| 283 | -233.667 | -258.165 | 8.0397E-02 (2003,208,0700) | 7.9789E-02 (2003,297,0000) | 7.2872E-02 (2003,208,0600) | 6.5665E-02 (2003,350,0200) |
| 284 | -232.934 | -258.187 | 8.6180E-02 (2003,297,0000) | 7.9711E-02 (2003,208,0700) | 7.5317E-02 (2003,208,0600) | 6.6817E-02 (2003,350,0200) |
| 285 | -232.200 | -258.208 | 9.1664E-02 (2003,297,0000) | 7.8726E-02 (2003,208,0700) | 7.7448E-02 (2003,208,0600) | 6.7730E-02 (2003,350,0200) |
| 286 | -231.467 | -258.230 | 9.5981E-02 (2003,297,0000) | 7.9293E-02 (2003,208,0600) | 7.7463E-02 (2003,208,0700) | 6.8457E-02 (2003,350,0200) |
| 287 | -230.734 | -258.252 | 9.8967E-02 (2003,297,0000) | 8.0828E-02 (2003,208,0600) | 7.5933E-02 (2003,208,0700) | 6.9058E-02 (2003,350,0200) |
| 288 | -230.000 | -258.273 | 1.0050E-01 (2003,297,0000) | 8.2037E-02 (2003,208,0600) | 7.4154E-02 (2003,208,0700) | 6.9449E-02 (2003,350,0200) |
| 289 | -229.267 | -258.295 | 1.0052E-01 (2003,297,0000) | 8.2903E-02 (2003,208,0600) | 7.2161E-02 (2003,208,0700) | 6.9632E-02 (2003,350,0200) |
| 290 | -234.373 | -257.217 | 8.9065E-02 (2003,208,0700) | 7.5133E-02 (2003,208,0600) | 7.2811E-02 (2003,297,0000) | 6.4245E-02 (2003,350,0200) |
| 291 | -233.640 | -257.239 | 8.8531E-02 (2003,208,0700) | 7.9987E-02 (2003,297,0000) | 7.7863E-02 (2003,208,0600) | 6.5383E-02 (2003,350,0200) |
| 292 | -232.906 | -257.260 | 8.7530E-02 (2003,208,0700) | 8.6524E-02 (2003,297,0000) | 8.0320E-02 (2003,208,0600) | 6.6305E-02 (2003,350,0200) |
| 293 | -232.173 | -257.282 | 9.2129E-02 (2003,297,0000) | 8.6150E-02 (2003,208,0700) | 8.2477E-02 (2003,208,0600) | 6.7150E-02 (2003,350,0200) |
| 294 | -231.440 | -257.304 | 9.6598E-02 (2003,297,0000) | 8.4440E-02 (2003,208,0700) | 8.4304E-02 (2003,208,0600) | 6.7741E-02 (2003,350,0200) |
| 295 | -230.706 | -257.326 | 9.9686E-02 (2003,297,0000) | 8.5777E-02 (2003,208,0600) | 8.2441E-02 (2003,208,0700) | 6.8139E-02 (2003,350,0200) |
| 296 | -229.973 | -257.347 | 1.0129E-01 (2003,297,0000) | 8.6880E-02 (2003,208,0600) | 8.0178E-02 (2003,208,0700) | 6.8335E-02 (2003,350,0200) |
| 297 | -229.240 | -257.369 | 1.0136E-01 (2003,297,0000) | 8.7602E-02 (2003,208,0600) | 7.7694E-02 (2003,208,0700) | 6.8418E-02 (2003,350,0200) |
| 298 | -232.879 | -256.334 | 9.5398E-02 (2003,208,0700) | 8.6815E-02 (2003,297,0000) | 8.5791E-02 (2003,208,0600) | 6.5567E-02 (2003,350,0200) |
| 299 | -232.146 | -256.356 | 9.4167E-02 (2003,208,0700) | 9.2552E-02 (2003,297,0000) | 8.7973E-02 (2003,208,0600) | 6.6265E-02 (2003,350,0200) |
| 300 | -231.412 | -256.378 | 9.7098E-02 (2003,297,0000) | 9.2301E-02 (2003,208,0700) | 8.9787E-02 (2003,208,0600) | 6.6711E-02 (2003,350,0200) |
| 301 | -230.679 | -256.399 | 1.0028E-01 (2003,297,0000) | 9.1191E-02 (2003,208,0600) | 8.9948E-02 (2003,208,0700) | 6.6923E-02 (2003,350,0200) |
| 302 | -229.946 | -256.421 | 1.0194E-01 (2003,297,0000) | 9.2183E-02 (2003,208,0600) | 8.7215E-02 (2003,208,0700) | 6.6983E-02 (2003,350,0200) |
| 303 | -229.213 | -256.442 | 1.0200E-01 (2003,297,0000) | 9.2746E-02 (2003,208,0600) | 8.4192E-02 (2003,208,0700) | 6.6852E-02 (2003,350,0200) |
| 304 | -232.118 | -255.430 | 9.8133E-02 (2003,208,0700) | 9.3980E-02 (2003,208,0600) | 9.2725E-02 (2003,297,0000) | 6.4995E-02 (2003,350,0200) |
| 305 | -231.385 | -255.451 | 9.7686E-02 (2003,208,0700) | 9.7402E-02 (2003,297,0000) | 9.5835E-02 (2003,208,0600) | 6.5358E-02 (2003,350,0200) |
| 306 | -230.652 | -255.473 | 1.0071E-01 (2003,297,0000) | 9.7185E-02 (2003,208,0600) | 9.6204E-02 (2003,208,0700) | 6.5465E-02 (2003,350,0200) |
| 307 | -229.919 | -255.494 | 1.0246E-01 (2003,297,0000) | 9.8066E-02 (2003,208,0600) | 9.3854E-02 (2003,208,0700) | 6.5374E-02 (2003,350,0200) |
| 308 | -229.185 | -255.516 | 1.0258E-01 (2003,297,0000) | 9.8472E-02 (2003,208,0600) | 9.0835E-02 (2003,208,0700) | 6.5087E-02 (2003,350,0200) |
| 309 | -228.452 | -255.537 | 1.0109E-01 (2003,297,0000) | 9.8399E-02 (2003,208,0600) | 8.7321E-02 (2003,208,0700) | 6.6218E-02 (2003,296,2200) |
| 310 | -227.719 | -255.559 | 9.8049E-02 (2003,297,0000) | 9.7862E-02 (2003,208,0600) | 8.3466E-02 (2003,208,0700) | 7.0621E-02 (2003,296,2200) |
| 311 | -232.091 | -254.503 | 1.0048E-01 (2003,208,0600) | 9.5080E-02 (2003,208,0700) | 9.2715E-02 (2003,297,0000) | 6.3581E-02 (2003,350,0200) |
| 312 | -231.358 | -254.525 | 1.0230E-01 (2003,208,0600) | 9.7551E-02 (2003,297,0000) | 9.6564E-02 (2003,208,0700) | 6.3769E-02 (2003,350,0200) |
| 313 | -230.625 | -254.547 | 1.0364E-01 (2003,208,0600) | 1.0100E-01 (2003,297,0000) | 9.6335E-02 (2003,208,0700) | 6.3704E-02 (2003,350,0200) |
| 314 | -229.891 | -254.568 | 1.0443E-01 (2003,208,0600) | 1.0286E-01 (2003,297,0000) | 9.4905E-02 (2003,208,0700) | 6.3458E-02 (2003,350,0200) |
| 315 | -229.158 | -254.590 | 1.0468E-01 (2003,208,0600) | 1.0308E-01 (2003,297,0000) | 9.2767E-02 (2003,208,0700) | 6.3016E-02 (2003,350,0200) |
| 316 | -228.425 | -254.611 | 1.0440E-01 (2003,208,0600) | 1.0166E-01 (2003,297,0000) | 9.0067E-02 (2003,208,0700) | 6.5338E-02 (2003,296,2200) |
| 317 | -227.692 | -254.632 | 1.0356E-01 (2003,208,0600) | 9.8651E-02 (2003,297,0000) | 8.6798E-02 (2003,208,0700) | 7.0055E-02 (2003,296,2200) |
| 318 | -232.063 | -253.577 | 1.0737E-01 (2003,208,0600) | 9.2557E-02 (2003,297,0000) | 8.6245E-02 (2003,208,0700) | 6.3278E-02 (2003,139,0600) |
| 319 | -231.330 | -253.599 | 1.0921E-01 (2003,208,0600) | 9.7545E-02 (2003,297,0000) | 8.7118E-02 (2003,208,0700) | 6.2657E-02 (2003,139,0600) |
| 320 | -230.597 | -253.620 | 1.1049E-01 (2003,208,0600) | 1.0120E-01 (2003,297,0000) | 8.8073E-02 (2003,208,0700) | 6.1793E-02 (2003,350,0200) |
| 321 | -229.864 | -253.642 | 1.1118E-01 (2003,208,0600) | 1.0322E-01 (2003,297,0000) | 8.9335E-02 (2003,208,0700) | 6.1349E-02 (2003,350,0200) |
| 322 | -229.131 | -253.663 | 1.1128E-01 (2003,208,0600) | 1.0357E-01 (2003,297,0000) | 8.9636E-02 (2003,208,0700) | 6.0753E-02 (2003,350,0200) |
| 323 | -228.398 | -253.685 | 1.1078E-01 (2003,208,0600) | 1.0225E-01 (2003,297,0000) | 8.8276E-02 (2003,208,0700) | 6.4349E-02 (2003,296,2200) |
| 324 | -227.665 | -253.706 | 1.0970E-01 (2003,208,0600) | 9.9321E-02 (2003,297,0000) | 8.5607E-02 (2003,208,0700) | 6.9317E-02 (2003,296,2200) |
| 325 | -229.837 | -252.716 | 1.1835E-01 (2003,208,0600) | 1.0352E-01 (2003,297,0000) | 8.2633E-02 (2003,208,0700) | 6.1794E-02 (2003,139,0600) |
| 326 | -229.104 | -252.737 | 1.1829E-01 (2003,208,0600) | 1.0401E-01 (2003,297,0000) | 8.1927E-02 (2003,208,0700) | 5.9837E-02 (2003,139,0600) |
| 327 | -228.371 | -252.759 | 1.1758E-01 (2003,208,0600) | 1.0279E-01 (2003,297,0000) | 8.1361E-02 (2003,208,0700) | 6.4603E-02 (2003,296,2300) |
| 328 | -227.638 | -252.780 | 1.1623E-01 (2003,208,0600) | 9.9938E-02 (2003,297,0000) | 8.0802E-02 (2003,208,0700) | 7.0734E-02 (2003,296,2300) |

**********
CALPOST Version 5.6394 Level 070622
**********

8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 116 | -243.891 | -280.107 | 3.0596E-04 | 222 | -233.126 | -264.671 | 4.3753E-04 |
| 117 | -243.156 | -280.129 | 3.0948E-04 | 223 | -232.392 | -264.693 | 4.4371E-04 |
| 118 | -242.420 | -280.152 | 3.1238E-04 | 224 | -231.658 | -264.714 | 4.4802E-04 |
| 119 | -241.685 | -280.175 | 3.1626E-04 | 225 | -238.971 | -263.568 | 3.9940E-04 |
| 120 | -243.862 | -279.180 | 3.0893E-04 | 226 | -238.237 | -263.590 | 4.0445E-04 |
| 121 | -243.127 | -279.203 | 3.1190E-04 | 227 | -237.503 | -263.613 | 4.1027E-04 |
| 122 | -242.392 | -279.226 | 3.1531E-04 | 228 | -236.769 | -263.635 | 4.1603E-04 |
| 123 | -241.656 | -279.248 | 3.1893E-04 | 229 | -236.035 | -263.657 | 4.2197E-04 |
| 124 | -240.921 | -279.271 | 3.2294E-04 | 230 | -235.301 | -263.679 | 4.2764E-04 |
| 125 | -243.834 | -278.254 | 3.1212E-04 | 231 | -234.567 | -263.701 | 4.3378E-04 |
| 126 | -243.098 | -278.277 | 3.1572E-04 | 232 | -233.833 | -263.723 | 4.3973E-04 |
| 127 | -242.363 | -278.299 | 3.1933E-04 | 233 | -233.099 | -263.745 | 4.4383E-04 |
| 128 | -241.628 | -278.322 | 3.2262E-04 | 234 | -232.365 | -263.766 | 4.4899E-04 |
| 129 | -240.892 | -278.345 | 3.2674E-04 | 235 | -231.631 | -263.788 | 4.5365E-04 |
| 130 | -240.157 | -278.367 | 3.3153E-04 | 236 | -238.208 | -262.664 | 4.0935E-04 |
| 131 | -243.805 | -277.328 | 3.1532E-04 | 237 | -237.475 | -262.686 | 4.1511E-04 |
| 132 | -243.070 | -277.350 | 3.1897E-04 | 238 | -236.741 | -262.708 | 4.2057E-04 |
| 133 | -242.335 | -277.373 | 3.2282E-04 | 239 | -236.007 | -262.731 | 4.2670E-04 |
| 134 | -241.599 | -277.396 | 3.2678E-04 | 240 | -235.273 | -262.753 | 4.3271E-04 |
| 135 | -240.864 | -277.418 | 3.3097E-04 | 241 | -234.539 | -262.775 | 4.3900E-04 |
| 136 | -240.129 | -277.441 | 3.3531E-04 | 242 | -233.805 | -262.796 | 4.4504E-04 |
| 137 | -243.776 | -276.401 | 3.1852E-04 | 243 | -233.071 | -262.818 | 4.5024E-04 |
| 138 | -243.041 | -276.424 | 3.2219E-04 | 244 | -232.338 | -262.840 | 4.5473E-04 |
| 139 | -242.306 | -276.447 | 3.2604E-04 | 245 | -238.180 | -261.738 | 4.1429E-04 |
| 140 | -241.571 | -276.469 | 3.3020E-04 | 246 | -237.447 | -261.760 | 4.2001E-04 |
| 141 | -240.836 | -276.492 | 3.3448E-04 | 247 | -236.713 | -261.782 | 4.2572E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 142 | -240.101 | -276.514 | 3.3850E-04 | 248 | -235.979 | -261.804 | 4.3166E-04 |
| 143 | -243.747 | -275.475 | 3.2183E-04 | 249 | -235.245 | -261.826 | 4.3798E-04 |
| 144 | -243.012 | -275.498 | 3.2556E-04 | 250 | -234.511 | -261.848 | 4.4286E-04 |
| 145 | -242.277 | -275.520 | 3.2950E-04 | 251 | -233.778 | -261.870 | 4.4860E-04 |
| 146 | -241.542 | -275.543 | 3.3298E-04 | 252 | -233.044 | -261.892 | 4.5501E-04 |
| 147 | -240.807 | -275.565 | 3.3759E-04 | 253 | -232.310 | -261.914 | 4.6037E-04 |
| 148 | -240.072 | -275.588 | 3.4219E-04 | 254 | -235.951 | -260.878 | 4.3703E-04 |
| 149 | -244.454 | -274.526 | 3.2170E-04 | 255 | -235.217 | -260.900 | 4.4311E-04 |
| 150 | -243.719 | -274.548 | 3.2519E-04 | 256 | -234.484 | -260.922 | 4.4843E-04 |
| 151 | -242.984 | -274.571 | 3.2893E-04 | 257 | -233.750 | -260.944 | 4.5369E-04 |
| 152 | -244.425 | -273.599 | 3.2510E-04 | 258 | -233.016 | -260.966 | 4.5928E-04 |
| 153 | -243.690 | -273.622 | 3.2866E-04 | 259 | -232.283 | -260.987 | 4.6525E-04 |
| 154 | -242.955 | -273.645 | 3.3211E-04 | 260 | -231.549 | -261.009 | 4.7129E-04 |
| 155 | -244.396 | -272.673 | 3.2867E-04 | 261 | -230.815 | -261.031 | 4.7586E-04 |
| 156 | -243.661 | -272.696 | 3.3217E-04 | 262 | -235.923 | -259.952 | 4.4274E-04 |
| 157 | -242.927 | -272.719 | 3.3590E-04 | 263 | -235.190 | -259.974 | 4.4881E-04 |
| 158 | -244.367 | -271.747 | 3.3223E-04 | 264 | -234.456 | -259.996 | 4.5470E-04 |
| 159 | -243.633 | -271.769 | 3.3573E-04 | 265 | -233.723 | -260.018 | 4.6000E-04 |
| 160 | -242.898 | -271.792 | 3.3913E-04 | 266 | -232.989 | -260.039 | 4.6596E-04 |
| 161 | -244.339 | -270.820 | 3.3598E-04 | 267 | -232.255 | -260.061 | 4.7166E-04 |
| 162 | -243.604 | -270.843 | 3.3949E-04 | 268 | -231.522 | -260.083 | 4.7698E-04 |
| 163 | -242.869 | -270.866 | 3.4272E-04 | 269 | -230.788 | -260.104 | 4.8205E-04 |
| 164 | -242.135 | -270.889 | 3.4625E-04 | 270 | -230.054 | -260.126 | 4.8690E-04 |
| 165 | -244.310 | -269.894 | 3.3993E-04 | 271 | -235.895 | -259.025 | 4.4887E-04 |
| 166 | -243.575 | -269.917 | 3.4344E-04 | 272 | -235.162 | -259.047 | 4.5493E-04 |
| 167 | -242.841 | -269.940 | 3.4718E-04 | 273 | -234.428 | -259.069 | 4.6105E-04 |
| 168 | -242.106 | -269.962 | 3.5106E-04 | 274 | -233.695 | -259.091 | 4.6624E-04 |
| 169 | -242.812 | -269.013 | 3.5117E-04 | 275 | -232.961 | -259.113 | 4.7211E-04 |
| 170 | -242.078 | -269.036 | 3.5513E-04 | 276 | -232.228 | -259.135 | 4.7803E-04 |
| 171 | -241.343 | -269.059 | 3.5898E-04 | 277 | -231.494 | -259.156 | 4.8336E-04 |
| 172 | -240.609 | -269.081 | 3.6306E-04 | 278 | -230.761 | -259.178 | 4.8840E-04 |
| 173 | -239.874 | -269.104 | 3.6779E-04 | 279 | -230.027 | -259.200 | 4.9416E-04 |
| 174 | -242.049 | -268.110 | 3.5920E-04 | 280 | -229.294 | -259.221 | 4.9854E-04 |
| 175 | -241.315 | -268.132 | 3.6348E-04 | 281 | -235.134 | -258.121 | 4.6150E-04 |
| 176 | -240.580 | -268.155 | 3.6784E-04 | 282 | -234.401 | -258.143 | 4.6778E-04 |
| 177 | -239.846 | -268.177 | 3.7187E-04 | 283 | -233.667 | -258.165 | 4.7383E-04 |
| 178 | -239.112 | -268.200 | 3.7631E-04 | 284 | -232.934 | -258.187 | 4.7977E-04 |
| 179 | -242.020 | -267.183 | 3.6336E-04 | 285 | -232.200 | -258.208 | 4.8462E-04 |
| 180 | -241.286 | -267.206 | 3.6772E-04 | 286 | -231.467 | -258.230 | 4.9058E-04 |
| 181 | -240.552 | -267.228 | 3.7228E-04 | 287 | -230.734 | -258.252 | 4.9577E-04 |
| 182 | -239.818 | -267.251 | 3.7630E-04 | 288 | -230.000 | -258.273 | 5.0156E-04 |
| 183 | -239.083 | -267.273 | 3.8025E-04 | 289 | -229.267 | -258.295 | 5.0601E-04 |
| 184 | -241.258 | -266.280 | 3.7187E-04 | 290 | -234.373 | -257.217 | 4.7418E-04 |
| 185 | -240.524 | -266.302 | 3.7657E-04 | 291 | -233.640 | -257.239 | 4.8039E-04 |
| 186 | -239.789 | -266.325 | 3.8078E-04 | 292 | -232.906 | -257.260 | 4.8629E-04 |
| 187 | -239.055 | -266.347 | 3.8566E-04 | 293 | -232.173 | -257.282 | 4.9189E-04 |
| 188 | -238.321 | -266.369 | 3.9009E-04 | 294 | -231.440 | -257.304 | 4.9805E-04 |
| 189 | -237.587 | -266.392 | 3.9509E-04 | 295 | -230.706 | -257.326 | 5.0314E-04 |
| 190 | -236.853 | -266.414 | 4.0014E-04 | 296 | -229.973 | -257.347 | 5.0803E-04 |
| 191 | -236.118 | -266.436 | 4.0609E-04 | 297 | -229.240 | -257.369 | 5.1266E-04 |
| 192 | -235.384 | -266.458 | 4.1162E-04 | 298 | -232.879 | -256.334 | 4.9362E-04 |
| 193 | -234.650 | -266.480 | 4.1710E-04 | 299 | -232.146 | -256.356 | 4.9937E-04 |
| 194 | -233.916 | -266.502 | 4.2201E-04 | 300 | -231.412 | -256.378 | 5.0472E-04 |
| 195 | -233.181 | -266.524 | 4.2771E-04 | 301 | -230.679 | -256.399 | 5.1017E-04 |
| 196 | -232.447 | -266.545 | 4.3260E-04 | 302 | -229.946 | -256.421 | 5.1482E-04 |
| 197 | -231.713 | -266.567 | 4.3782E-04 | 303 | -229.213 | -256.442 | 5.1922E-04 |
| 198 | -241.229 | -265.353 | 3.7610E-04 | 304 | -232.118 | -255.430 | 5.0626E-04 |
| 199 | -240.495 | -265.376 | 3.8061E-04 | 305 | -231.385 | -255.451 | 5.1188E-04 |
| 200 | -239.761 | -265.398 | 3.8545E-04 | 306 | -230.652 | -255.473 | 5.1740E-04 |
| 201 | -239.027 | -265.421 | 3.8945E-04 | 307 | -229.919 | -255.494 | 5.2236E-04 |
| 202 | -238.293 | -265.443 | 3.9469E-04 | 308 | -229.185 | -255.516 | 5.2749E-04 |
| 203 | -237.559 | -265.465 | 4.0013E-04 | 309 | -228.452 | -255.537 | 5.3206E-04 |
| 204 | -236.825 | -265.487 | 4.0509E-04 | 310 | -227.719 | -255.559 | 5.3567E-04 |
| 205 | -236.090 | -265.509 | 4.1191E-04 | 311 | -232.091 | -254.503 | 5.1213E-04 |
| 206 | -235.356 | -265.532 | 4.1776E-04 | 312 | -231.358 | -254.525 | 5.1825E-04 |
| 207 | -234.622 | -265.553 | 4.2222E-04 | 313 | -230.625 | -254.547 | 5.2421E-04 |
| 208 | -233.888 | -265.575 | 4.2690E-04 | 314 | -229.891 | -254.568 | 5.2970E-04 |
| 209 | -233.154 | -265.597 | 4.3299E-04 | 315 | -229.158 | -254.590 | 5.3545E-04 |
| 210 | -232.420 | -265.619 | 4.3777E-04 | 316 | -228.425 | -254.611 | 5.3972E-04 |
| 211 | -231.686 | -265.641 | 4.4310E-04 | 317 | -227.692 | -254.632 | 5.4376E-04 |
| 212 | -240.467 | -264.449 | 3.8507E-04 | 318 | -232.063 | -253.577 | 5.1743E-04 |
| 213 | -239.733 | -264.472 | 3.8981E-04 | 319 | -231.330 | -253.599 | 5.2420E-04 |
| 214 | -238.999 | -264.494 | 3.9468E-04 | 320 | -230.597 | -253.620 | 5.3088E-04 |
| 215 | -238.265 | -264.517 | 4.0035E-04 | 321 | -229.864 | -253.642 | 5.3645E-04 |
| 216 | -237.531 | -264.539 | 4.0554E-04 | 322 | -229.131 | -253.663 | 5.4250E-04 |
| 217 | -236.797 | -264.561 | 4.1136E-04 | 323 | -228.398 | -253.685 | 5.4793E-04 |
| 218 | -236.063 | -264.583 | 4.1730E-04 | 324 | -227.665 | -253.706 | 5.5224E-04 |
| 219 | -235.329 | -264.605 | 4.2266E-04 | 325 | -229.837 | -252.716 | 5.4327E-04 |
| 220 | -234.595 | -264.627 | 4.2670E-04 | 326 | -229.104 | -252.737 | 5.4916E-04 |
| 221 | -233.860 | -264.649 | 4.3274E-04 | 327 | -228.371 | -252.759 | 5.5498E-04 |
| | | | | 328 | -227.638 | -252.780 | 5.6017E-04 |

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CALPOST Version 5.6394 Level 070622

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SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 325 | -229.837 | -252.716 | DISCRETE | 1.1835E-01 (2003,208,0600) | RANK | 1 | 1 | HOUR |
| 326 | -229.104 | -252.737 | DISCRETE | 1.0401E-01 (2003,297,0000) | RANK | 2 | 1 | HOUR |
| 312 | -231.358 | -254.525 | DISCRETE | 9.6564E-02 (2003,208,0700) | RANK | 3 | 1 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 7.0734E-02 (2003,296,2300) | RANK | 4 | 1 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 5.6017E-04 | RANK | 1 | 8736 | HOUR |

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*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Canyonlands

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  328*0, 506*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
```

```
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 344 | -22.263 | -220.844 | 2.1948E-02 (2003,286,0500) | 2.0526E-02 (2003,361,0900) | 1.3856E-02 (2003,114,0400) | 1.3809E-02 (2003,064,0700) |
| 345 | -20.803 | -220.848 | 2.1536E-02 (2003,286,0500) | 1.9434E-02 (2003,361,0900) | 1.3546E-02 (2003,064,0700) | 1.3027E-02 (2003,114,0400) |
| 346 | -19.344 | -220.851 | 2.1052E-02 (2003,286,0500) | 1.8359E-02 (2003,361,0900) | 1.3239E-02 (2003,064,0700) | 1.2564E-02 (2003,064,0600) |
| 347 | -17.884 | -220.855 | 2.0516E-02 (2003,286,0500) | 1.7327E-02 (2003,361,0900) | 1.2955E-02 (2003,064,0700) | 1.2103E-02 (2003,064,0600) |
| 348 | -16.424 | -220.858 | 1.9916E-02 (2003,286,0500) | 1.6310E-02 (2003,361,0900) | 1.2628E-02 (2003,064,0700) | 1.1787E-02 (2003,286,0600) |
| 349 | -14.964 | -220.861 | 1.9266E-02 (2003,286,0500) | 1.5380E-02 (2003,361,0900) | 1.2317E-02 (2003,064,0700) | 1.2286E-02 (2003,286,0600) |
| 350 | -25.177 | -218.982 | 2.2776E-02 (2003,286,0500) | 2.1386E-02 (2003,361,0900) | 1.5102E-02 (2003,114,0400) | 1.4447E-02 (2003,064,0600) |
| 351 | -23.718 | -218.986 | 2.2532E-02 (2003,286,0500) | 2.0365E-02 (2003,361,0900) | 1.4293E-02 (2003,114,0400) | 1.4008E-02 (2003,064,0600) |
| 352 | -22.258 | -218.991 | 2.2215E-02 (2003,286,0500) | 1.9331E-02 (2003,361,0900) | 1.3528E-02 (2003,064,0600) | 1.3510E-02 (2003,064,0700) |
| 353 | -20.799 | -218.995 | 2.1816E-02 (2003,286,0500) | 1.8305E-02 (2003,361,0900) | 1.3248E-02 (2003,064,0700) | 1.3074E-02 (2003,064,0600) |
| 354 | -19.339 | -218.998 | 2.1343E-02 (2003,286,0500) | 1.7322E-02 (2003,361,0900) | 1.2967E-02 (2003,064,0700) | 1.2619E-02 (2003,064,0600) |
| 355 | -17.879 | -219.002 | 2.0806E-02 (2003,286,0500) | 1.6359E-02 (2003,361,0900) | 1.2669E-02 (2003,064,0700) | 1.2136E-02 (2003,064,0600) |
| 356 | -16.420 | -219.005 | 2.0216E-02 (2003,286,0500) | 1.5433E-02 (2003,361,0900) | 1.2385E-02 (2003,064,0700) | 1.1696E-02 (2003,064,0600) |
| 357 | -26.630 | -217.124 | 2.2944E-02 (2003,286,0500) | 2.0650E-02 (2003,361,0900) | 1.5413E-02 (2003,114,0400) | 1.4874E-02 (2003,064,0600) |
| 358 | -25.171 | -217.129 | 2.2811E-02 (2003,286,0500) | 1.9729E-02 (2003,361,0900) | 1.4526E-02 (2003,114,0400) | 1.4406E-02 (2003,064,0600) |
| 359 | -23.712 | -217.133 | 2.2591E-02 (2003,286,0500) | 1.8793E-02 (2003,361,0900) | 1.3963E-02 (2003,064,0600) | 1.3604E-02 (2003,114,0400) |
| 360 | -22.253 | -217.138 | 2.2288E-02 (2003,286,0500) | 1.7867E-02 (2003,361,0900) | 1.3500E-02 (2003,064,0600) | 1.3119E-02 (2003,064,0700) |
| 361 | -20.794 | -217.142 | 2.1902E-02 (2003,286,0500) | 1.6942E-02 (2003,361,0900) | 1.3030E-02 (2003,064,0600) | 1.2858E-02 (2003,064,0700) |
| 362 | -19.334 | -217.145 | 2.1450E-02 (2003,286,0500) | 1.6048E-02 (2003,361,0900) | 1.2604E-02 (2003,064,0700) | 1.2581E-02 (2003,064,0600) |
| 363 | -17.875 | -217.149 | 2.0927E-02 (2003,286,0500) | 1.5187E-02 (2003,361,0900) | 1.2325E-02 (2003,064,0700) | 1.2107E-02 (2003,064,0600) |
| 364 | -16.416 | -217.152 | 2.0344E-02 (2003,286,0500) | 1.4345E-02 (2003,361,0900) | 1.2046E-02 (2003,064,0700) | 1.1651E-02 (2003,064,0600) |
| 365 | -47.048 | -215.175 | 2.8911E-02 (2003,361,0800) | 2.4988E-02 (2003,253,0700) | 2.3426E-02 (2003,286,0400) | 2.3139E-02 (2003,361,0900) |
| 366 | -45.589 | -215.183 | 2.8802E-02 (2003,361,0800) | 2.4915E-02 (2003,253,0700) | 2.3484E-02 (2003,361,0900) | 2.2918E-02 (2003,286,0400) |
| 367 | -44.130 | -215.192 | 2.7276E-02 (2003,361,0800) | 2.4703E-02 (2003,253,0700) | 2.3637E-02 (2003,361,0900) | 2.2330E-02 (2003,286,0400) |
| 368 | -42.671 | -215.200 | 2.5735E-02 (2003,361,0800) | 2.4383E-02 (2003,253,0700) | 2.3701E-02 (2003,361,0900) | 2.1685E-02 (2003,286,0400) |
| 369 | -41.212 | -215.208 | 2.4219E-02 (2003,361,0800) | 2.3942E-02 (2003,253,0700) | 2.3677E-02 (2003,361,0900) | 2.0974E-02 (2003,286,0400) |
| 370 | -39.754 | -215.215 | 2.3548E-02 (2003,361,0900) | 2.3409E-02 (2003,253,0700) | 2.2752E-02 (2003,361,0800) | 2.0210E-02 (2003,286,0400) |
| 371 | -38.295 | -215.223 | 2.3325E-02 (2003,361,0900) | 2.2776E-02 (2003,253,0700) | 2.1337E-02 (2003,361,0800) | 2.0425E-02 (2003,286,0500) |
| 372 | -36.836 | -215.230 | 2.3014E-02 (2003,361,0900) | 2.2080E-02 (2003,253,0700) | 2.0994E-02 (2003,286,0500) | 2.0001E-02 (2003,361,0800) |
| 373 | -35.377 | -215.236 | 2.2617E-02 (2003,361,0900) | 2.1498E-02 (2003,286,0500) | 2.1306E-02 (2003,253,0700) | 1.8808E-02 (2003,114,0400) |
| 374 | -33.918 | -215.243 | 2.2101E-02 (2003,361,0900) | 2.1928E-02 (2003,286,0500) | 2.0492E-02 (2003,253,0700) | 1.8350E-02 (2003,114,0400) |
| 375 | -32.459 | -215.249 | 2.2273E-02 (2003,286,0500) | 2.1540E-02 (2003,361,0900) | 1.9619E-02 (2003,253,0700) | 1.7751E-02 (2003,114,0400) |
| 376 | -31.001 | -215.255 | 2.2530E-02 (2003,286,0500) | 2.0889E-02 (2003,361,0900) | 1.8729E-02 (2003,253,0700) | 1.7093E-02 (2003,114,0400) |
| 377 | -29.542 | -215.261 | 2.2697E-02 (2003,286,0500) | 2.0178E-02 (2003,361,0900) | 1.7816E-02 (2003,253,0700) | 1.6394E-02 (2003,114,0400) |
| 378 | -28.083 | -215.266 | 2.2772E-02 (2003,286,0500) | 1.9441E-02 (2003,361,0900) | 1.6879E-02 (2003,253,0700) | 1.5698E-02 (2003,114,0400) |
| 379 | -26.624 | -215.271 | 2.2752E-02 (2003,286,0500) | 1.8648E-02 (2003,361,0900) | 1.5950E-02 (2003,253,0700) | 1.4756E-02 (2003,114,0400) |
| 380 | -25.165 | -215.276 | 2.2642E-02 (2003,286,0500) | 1.7830E-02 (2003,361,0900) | 1.5020E-02 (2003,253,0700) | 1.4254E-02 (2003,064,0600) |
| 381 | -23.706 | -215.280 | 2.2447E-02 (2003,286,0500) | 1.7010E-02 (2003,361,0900) | 1.4097E-02 (2003,253,0700) | 1.3792E-02 (2003,064,0600) |
| 382 | -22.247 | -215.285 | 2.2168E-02 (2003,286,0500) | 1.6205E-02 (2003,361,0900) | 1.3364E-02 (2003,064,0600) | 1.3187E-02 (2003,253,0700) |
| 383 | -20.789 | -215.289 | 2.1805E-02 (2003,286,0500) | 1.5378E-02 (2003,361,0900) | 1.2887E-02 (2003,064,0600) | 1.2389E-02 (2003,064,0700) |
| 384 | -19.330 | -215.293 | 2.1369E-02 (2003,286,0500) | 1.4601E-02 (2003,361,0900) | 1.2428E-02 (2003,064,0600) | 1.2147E-02 (2003,064,0700) |
| 385 | -17.871 | -215.296 | 2.0867E-02 (2003,286,0500) | 1.3843E-02 (2003,361,0900) | 1.1990E-02 (2003,064,0600) | 1.1899E-02 (2003,064,0700) |
| 386 | -16.412 | -215.299 | 2.0303E-02 (2003,286,0500) | 1.3101E-02 (2003,361,0900) | 1.1607E-02 (2003,064,0700) | 1.1518E-02 (2003,064,0600) |
| 387 | -51.412 | -213.294 | 3.1436E-02 (2003,361,0800) | 2.6099E-02 (2003,286,0400) | 2.4990E-02 (2003,253,0700) | 2.3548E-02 (2003,253,0600) |
| 388 | -49.953 | -213.304 | 3.0187E-02 (2003,361,0800) | 2.5897E-02 (2003,286,0400) | 2.5490E-02 (2003,253,0700) | 2.2141E-02 (2003,253,0600) |
| 389 | -48.495 | -213.313 | 2.7950E-02 (2003,361,0800) | 2.5827E-02 (2003,253,0700) | 2.5587E-02 (2003,286,0400) | 2.0731E-02 (2003,253,0600) |
| 390 | -47.037 | -213.322 | 2.6012E-02 (2003,253,0700) | 2.5177E-02 (2003,286,0400) | 1.9352E-02 (2003,253,0600) | 1.8976E-02 (2003,114,0300) |
| 391 | -45.578 | -213.330 | 2.6039E-02 (2003,253,0700) | 2.5553E-02 (2003,361,0800) | 2.4669E-02 (2003,286,0400) | 2.0472E-02 (2003,361,0900) |
| 392 | -44.120 | -213.339 | 2.5933E-02 (2003,253,0700) | 2.4748E-02 (2003,361,0800) | 2.4065E-02 (2003,286,0400) | 2.0631E-02 (2003,361,0900) |
| 393 | -42.661 | -213.347 | 2.5684E-02 (2003,253,0700) | 2.3392E-02 (2003,286,0400) | 2.1868E-02 (2003,361,0800) | 2.0577E-02 (2003,361,0900) |
| 394 | -41.203 | -213.355 | 2.5318E-02 (2003,253,0700) | 2.2641E-02 (2003,286,0400) | 2.1996E-02 (2003,361,0800) | 2.0701E-02 (2003,361,0900) |
| 395 | -39.744 | -213.362 | 2.4820E-02 (2003,253,0700) | 2.1842E-02 (2003,286,0400) | 2.0696E-02 (2003,361,0800) | 2.0615E-02 (2003,361,0900) |
| 396 | -38.286 | -213.370 | 2.4241E-02 (2003,253,0700) | 2.0967E-02 (2003,286,0400) | 2.0429E-02 (2003,361,0900) | 1.9835E-02 (2003,286,0500) |
| 397 | -36.827 | -213.377 | 2.3557E-02 (2003,253,0700) | 2.0438E-02 (2003,286,0500) | 2.0184E-02 (2003,361,0900) | 2.0075E-02 (2003,286,0400) |
| 398 | -35.369 | -213.383 | 2.2805E-02 (2003,253,0700) | 2.0968E-02 (2003,286,0500) | 1.9837E-02 (2003,361,0900) | 1.9126E-02 (2003,286,0400) |
| 399 | -33.910 | -213.390 | 2.1979E-02 (2003,253,0700) | 2.1418E-02 (2003,286,0500) | 1.9422E-02 (2003,361,0900) | 1.8180E-02 (2003,286,0400) |
| 400 | -32.452 | -213.396 | 2.1785E-02 (2003,286,0500) | 2.1101E-02 (2003,253,0700) | 1.8946E-02 (2003,361,0900) | 1.7198E-02 (2003,286,0400) |
| 401 | -30.993 | -213.402 | 2.2065E-02 (2003,286,0500) | 2.0182E-02 (2003,253,0700) | 1.8401E-02 (2003,361,0900) | 1.6553E-02 (2003,114,0400) |
| 402 | -29.535 | -213.408 | 2.2257E-02 (2003,286,0500) | 1.9235E-02 (2003,253,0700) | 1.7797E-02 (2003,361,0900) | 1.5624E-02 (2003,114,0400) |
| 403 | -28.076 | -213.413 | 2.2353E-02 (2003,286,0500) | 1.8269E-02 (2003,253,0700) | 1.7165E-02 (2003,361,0900) | 1.4878E-02 (2003,114,0400) |
| 404 | -26.618 | -213.418 | 2.2363E-02 (2003,286,0500) | 1.7291E-02 (2003,253,0700) | 1.6491E-02 (2003,361,0900) | 1.4415E-02 (2003,064,0600) |
| 405 | -25.159 | -213.423 | 2.2281E-02 (2003,286,0500) | 1.6317E-02 (2003,253,0700) | 1.5793E-02 (2003,361,0900) | 1.3994E-02 (2003,064,0600) |
| 406 | -23.701 | -213.428 | 2.2108E-02 (2003,286,0500) | 1.5336E-02 (2003,253,0700) | 1.5099E-02 (2003,361,0900) | 1.3543E-02 (2003,064,0600) |
| 407 | -22.242 | -213.432 | 2.1853E-02 (2003,286,0500) | 1.4400E-02 (2003,361,0900) | 1.4369E-02 (2003,253,0700) | 1.3086E-02 (2003,064,0600) |
| 408 | -20.784 | -213.436 | 2.1518E-02 (2003,286,0500) | 1.3697E-02 (2003,361,0900) | 1.3422E-02 (2003,253,0700) | 1.2658E-02 (2003,064,0600) |
| 409 | -19.325 | -213.440 | 2.1104E-02 (2003,286,0500) | 1.3033E-02 (2003,361,0900) | 1.2493E-02 (2003,253,0700) | 1.2202E-02 (2003,064,0600) |
| 410 | -17.867 | -213.443 | 2.0628E-02 (2003,286,0500) | 1.2374E-02 (2003,361,0900) | 1.1780E-02 (2003,064,0600) | 1.1592E-02 (2003,253,0700) |
| 411 | -16.408 | -213.446 | 2.0091E-02 (2003,286,0500) | 1.1755E-02 (2003,361,0900) | 1.1321E-02 (2003,064,0600) | 1.1128E-02 (2003,064,0700) |
| 412 | -51.400 | -211.441 | 2.7746E-02 (2003,361,0800) | 2.7615E-02 (2003,286,0400) | 2.6035E-02 (2003,253,0600) | 2.5456E-02 (2003,253,0700) |
| 413 | -49.942 | -211.451 | 2.7456E-02 (2003,286,0400) | 2.6667E-02 (2003,361,0800) | 2.6086E-02 (2003,253,0700) | 2.4545E-02 (2003,253,0600) |
| 414 | -48.483 | -211.460 | 2.7181E-02 (2003,286,0400) | 2.6558E-02 (2003,253,0700) | 2.5552E-02 (2003,361,0800) | 2.3031E-02 (2003,253,0600) |
| 415 | -47.025 | -211.469 | 2.6853E-02 (2003,253,0700) | 2.6797E-02 (2003,286,0400) | 2.4350E-02 (2003,361,0800) | 2.1544E-02 (2003,253,0600) |
| 416 | -45.567 | -211.478 | 2.7010E-02 (2003,253,0700) | 2.6292E-02 (2003,286,0400) | 2.0059E-02 (2003,253,0600) | 1.9315E-02 (2003,114,0400) |
| 417 | -44.109 | -211.486 | 2.6992E-02 (2003,253,0700) | 2.5683E-02 (2003,286,0400) | 2.0675E-02 (2003,361,0800) | 1.9570E-02 (2003,114,0400) |
| 418 | -42.651 | -211.494 | 2.6846E-02 (2003,253,0700) | 2.4995E-02 (2003,286,0400) | 1.9019E-02 (2003,114,0400) | 1.8286E-02 (2003,114,0300) |
| 419 | -41.193 | -211.502 | 2.6543E-02 (2003,253,0700) | 2.4219E-02 (2003,286,0400) | 1.9540E-02 (2003,361,0800) | 1.9387E-02 (2003,114,0400) |
| 420 | -39.735 | -211.510 | 2.6115E-02 (2003,253,0700) | 2.3378E-02 (2003,286,0400) | 1.8994E-02 (2003,114,0400) | 1.8434E-02 (2003,286,0500) |
| 421 | -38.277 | -211.517 | 2.5576E-02 (2003,253,0700) | 2.2457E-02 (2003,286,0400) | 1.9111E-02 (2003,286,0500) | 1.8628E-02 (2003,114,0400) |
| 422 | -36.818 | -211.524 | 2.4930E-02 (2003,253,0700) | 2.1509E-02 (2003,286,0400) | 1.9724E-02 (2003,286,0500) | 1.8255E-02 (2003,114,0400) |
| 423 | -35.360 | -211.531 | 2.4196E-02 (2003,253,0700) | 2.0502E-02 (2003,286,0400) | 2.0266E-02 (2003,286,0500) | 1.7706E-02 (2003,114,0400) |
| 424 | -33.902 | -211.537 | 2.3378E-02 (2003,253,0700) | 2.0731E-02 (2003,286,0500) | 1.9492E-02 (2003,286,0400) | 1.7032E-02 (2003,114,0400) |
| 425 | -32.444 | -211.543 | 2.2499E-02 (2003,253,0700) | 2.1116E-02 (2003,286,0500) | 1.8447E-02 (2003,286,0400) | 1.6376E-02 (2003,114,0400) |
| 426 | -30.986 | -211.549 | 2.1573E-02 (2003,253,0700) | 2.1416E-02 (2003,286,0500) | 1.7412E-02 (2003,286,0400) | 1.5828E-02 (2003,361,0900) |
| 427 | -29.528 | -211.555 | 2.1629E-02 (2003,286,0500) | 2.0601E-02 (2003,253,0700) | 1.6361E-02 (2003,286,0400) | 1.5351E-02 (2003,361,0900) |
| 428 | -28.070 | -211.560 | 2.1749E-02 (2003,286,0500) | 1.9605E-02 (2003,253,0700) | 1.5346E-02 (2003,286,0400) | 1.4823E-02 (2003,361,0900) |
| 429 | -26.611 | -211.565 | 2.1781E-02 (2003,286,0500) | 1.8592E-02 (2003,253,0700) | 1.4332E-02 (2003,286,0400) | 1.4274E-02 (2003,361,0900) |
| 430 | -25.153 | -211.570 | 2.1723E-02 (2003,286,0500) | 1.7568E-02 (2003,253,0700) | 1.3698E-02 (2003,361,0900) | 1.3602E-02 (2003,064,0600) |
| 431 | -23.695 | -211.575 | 2.1579E-02 (2003,286,0500) | 1.6539E-02 (2003,253,0700) | 1.3192E-02 (2003,064,0600) | 1.3123E-02 (2003,361,0900) |
| 432 | -22.237 | -211.579 | 2.1346E-02 (2003,286,0500) | 1.5519E-02 (2003,253,0700) | 1.2754E-02 (2003,064,0600) | 1.2564E-02 (2003,253,0800) |
| 433 | -20.779 | -211.583 | 2.1043E-02 (2003,286,0500) | 1.4511E-02 (2003,253,0700) | 1.2325E-02 (2003,064,0600) | 1.2185E-02 (2003,253,0800) |
| 434 | -19.321 | -211.587 | 2.0666E-02 (2003,286,0500) | 1.3533E-02 (2003,253,0700) | 1.1899E-02 (2003,064,0600) | 1.1765E-02 (2003,253,0800) |
| 435 | -17.862 | -211.590 | 2.0219E-02 (2003,286,0500) | 1.2570E-02 (2003,253,0700) | 1.1457E-02 (2003,064,0600) | 1.1299E-02 (2003,253,0800) |
| 436 | -16.404 | -211.594 | 1.9710E-02 (2003,286,0500) | 1.1645E-02 (2003,253,0700) | 1.1037E-02 (2003,064,0600) | 1.0814E-02 (2003,253,0800) |
| 437 | -48.472 | -209.607 | 2.8583E-02 (2003,286,0400) | 2.7088E-02 (2003,253,0700) | 2.5316E-02 (2003,253,0600) | 2.1295E-02 (2003,361,0800) |
| 438 | -47.014 | -209.616 | 2.8223E-02 (2003,286,0400) | 2.7518E-02 (2003,253,0700) | 2.3722E-02 (2003,253,0600) | 2.0170E-02 (2003,361,0800) |
| 439 | -45.556 | -209.625 | 2.7786E-02 (2003,253,0700) | 2.7729E-02 (2003,286,0400) | 2.2134E-02 (2003,253,0600) | 1.9858E-02 (2003,114,0400) |
| 440 | -44.099 | -209.633 | 2.7882E-02 (2003,253,0700) | 2.7139E-02 (2003,286,0400) | 2.0571E-02 (2003,253,0600) | 1.9288E-02 (2003,114,0400) |
| 441 | -42.641 | -209.641 | 2.7825E-02 (2003,253,0700) | 2.6439E-02 (2003,286,0400) | 1.9208E-02 (2003,114,0400) | 1.9057E-02 (2003,253,0600) |
| 442 | -41.183 | -209.649 | 2.7598E-02 (2003,253,0700) | 2.5646E-02 (2003,286,0400) | 1.8376E-02 (2003,114,0400) | 1.7578E-02 (2003,253,0600) |
| 443 | -39.725 | -209.657 | 2.7254E-02 (2003,253,0700) | 2.4766E-02 (2003,286,0400) | 1.8085E-02 (2003,114,0400) | 1.7570E-02 (2003,286,0500) |
| 444 | -38.267 | -209.664 | 2.6760E-02 (2003,253,0700) | 2.3818E-02 (2003,286,0400) | 1.8246E-02 (2003,286,0500) | 1.7913E-02 (2003,114,0400) |
| 445 | -36.810 | -209.671 | 2.6169E-02 (2003,253,0700) | 2.2814E-02 (2003,286,0400) | 1.8861E-02 (2003,286,0500) | 1.7213E-02 (2003,114,0400) |
| 446 | -35.352 | -209.678 | 2.5455E-02 (2003,253,0700) | 2.1770E-02 (2003,286,0400) | 1.9409E-02 (2003,286,0500) | 1.6851E-02 (2003,114,0400) |
| 447 | -33.894 | -209.684 | 2.4665E-02 (2003,253,0700) | 2.0693E-02 (2003,286,0400) | 1.9883E-02 (2003,286,0500) | 1.6087E-02 (2003,114,0400) |
| 448 | -32.436 | -209.690 | 2.3793E-02 (2003,253,0700) | 2.0280E-02 (2003,286,0500) | 1.9602E-02 (2003,286,0400) | 1.5352E-02 (2003,114,0400) |
| 449 | -30.978 | -209.696 | 2.2864E-02 (2003,253,0700) | 2.0596E-02 (2003,286,0500) | 1.8490E-02 (2003,286,0400) | 1.4644E-02 (2003,064,0600) |
| 450 | -29.521 | -209.702 | 2.1883E-02 (2003,253,0700) | 2.0823E-02 (2003,286,0500) | 1.7394E-02 (2003,286,0400) | 1.4285E-02 (2003,064,0600) |
| 451 | -28.063 | -209.707 | 2.0965E-02 (2003,286,0500) | 2.0863E-02 (2003,253,0700) | 1.6304E-02 (2003,286,0400) | 1.4191E-02 (2003,253,0800) |
| 452 | -26.605 | -209.713 | 2.1003E-02 (2003,286,0500) | 1.9819E-02 (2003,253,0700) | 1.5240E-02 (2003,286,0400) | 1.4086E-02 (2003,253,0800) |
| 453 | -25.147 | -209.717 | 2.0981E-02 (2003,286,0500) | 1.8754E-02 (2003,253,0700) | 1.4188E-02 (2003,286,0400) | 1.3929E-02 (2003,253,0800) |
| 454 | -23.689 | -209.722 | 2.0869E-02 (2003,286,0500) | 1.7689E-02 (2003,253,0700) | 1.3667E-02 (2003,253,0800) | 1.3440E-02 (2003,342,0500) |
| 455 | -22.232 | -209.726 | 2.0676E-02 (2003,286,0500) | 1.6617E-02 (2003,253,0700) | 1.3330E-02 (2003,253,0800) | 1.3200E-02 (2003,342,0500) |
| 456 | -20.774 | -209.730 | 2.0404E-02 (2003,286,0500) | 1.5564E-02 (2003,253,0700) | 1.2931E-02 (2003,342,0500) | 1.2925E-02 (2003,253,0800) |
| 457 | -19.316 | -209.734 | 2.0059E-02 (2003,286,0500) | 1.4529E-02 (2003,253,0700) | 1.2656E-02 (2003,342,0500) | 1.2456E-02 (2003,253,0800) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 458 | -17.858 | -209.737 | 1.9645E-02 (2003,286,0500) | 1.3515E-02 (2003,253,0700) | 1.2372E-02 (2003,342,0500) | 1.1948E-02 (2003,253,0800) |
| 459 | -16.400 | -209.741 | 1.9166E-02 (2003,286,0500) | 1.2536E-02 (2003,253,0700) | 1.2137E-02 (2003,342,0400) | 1.2092E-02 (2003,342,0500) |
| 460 | -48.460 | -207.754 | 2.9733E-02 (2003,286,0400) | 2.7526E-02 (2003,253,0600) | 2.7428E-02 (2003,253,0700) | 2.0516E-02 (2003,114,0300) |
| 461 | -47.003 | -207.763 | 2.9415E-02 (2003,286,0400) | 2.7981E-02 (2003,253,0700) | 2.5849E-02 (2003,253,0600) | 2.0115E-02 (2003,114,0300) |
| 462 | -45.546 | -207.772 | 2.8956E-02 (2003,286,0400) | 2.8366E-02 (2003,253,0700) | 2.4162E-02 (2003,253,0600) | 1.9632E-02 (2003,114,0400) |
| 463 | -44.088 | -207.780 | 2.8567E-02 (2003,253,0700) | 2.8381E-02 (2003,286,0400) | 2.2496E-02 (2003,253,0600) | 1.9295E-02 (2003,114,0400) |
| 464 | -42.631 | -207.789 | 2.8605E-02 (2003,253,0700) | 2.7679E-02 (2003,286,0400) | 2.0874E-02 (2003,253,0600) | 1.8986E-02 (2003,114,0400) |
| 465 | -41.173 | -207.796 | 2.8479E-02 (2003,253,0700) | 2.6882E-02 (2003,286,0400) | 1.9281E-02 (2003,253,0600) | 1.8281E-02 (2003,114,0400) |
| 466 | -39.716 | -207.804 | 2.8203E-02 (2003,253,0700) | 2.5972E-02 (2003,286,0400) | 1.7746E-02 (2003,253,0600) | 1.7285E-02 (2003,114,0400) |
| 467 | -38.258 | -207.811 | 2.7782E-02 (2003,253,0700) | 2.5010E-02 (2003,286,0400) | 1.7259E-02 (2003,286,0500) | 1.6799E-02 (2003,114,0400) |
| 468 | -36.801 | -207.818 | 2.7237E-02 (2003,253,0700) | 2.3962E-02 (2003,286,0400) | 1.7870E-02 (2003,286,0500) | 1.6326E-02 (2003,114,0400) |
| 469 | -35.343 | -207.825 | 2.6574E-02 (2003,253,0700) | 2.2878E-02 (2003,286,0400) | 1.8417E-02 (2003,286,0500) | 1.5907E-02 (2003,342,0500) |
| 470 | -33.886 | -207.831 | 2.5809E-02 (2003,253,0700) | 2.1760E-02 (2003,286,0400) | 1.8892E-02 (2003,286,0500) | 1.6822E-02 (2003,342,0500) |
| 471 | -32.429 | -207.838 | 2.4960E-02 (2003,253,0700) | 2.0620E-02 (2003,286,0400) | 1.9296E-02 (2003,286,0500) | 1.6946E-02 (2003,342,0500) |
| 472 | -30.971 | -207.844 | 2.4031E-02 (2003,253,0700) | 1.9616E-02 (2003,286,0500) | 1.9469E-02 (2003,286,0400) | 1.6976E-02 (2003,342,0500) |
| 473 | -29.514 | -207.849 | 2.3051E-02 (2003,253,0700) | 1.9850E-02 (2003,286,0500) | 1.8320E-02 (2003,286,0400) | 1.6883E-02 (2003,342,0500) |
| 474 | -28.056 | -207.855 | 2.2017E-02 (2003,253,0700) | 2.0012E-02 (2003,286,0500) | 1.7178E-02 (2003,286,0400) | 1.6749E-02 (2003,342,0500) |
| 475 | -26.599 | -207.860 | 2.0950E-02 (2003,253,0700) | 2.0097E-02 (2003,286,0500) | 1.6553E-02 (2003,342,0500) | 1.6045E-02 (2003,286,0400) |
| 476 | -25.141 | -207.865 | 2.0098E-02 (2003,286,0500) | 1.9858E-02 (2003,253,0700) | 1.6289E-02 (2003,342,0500) | 1.4952E-02 (2003,286,0400) |
| 477 | -23.684 | -207.869 | 2.0014E-02 (2003,286,0500) | 1.8755E-02 (2003,253,0700) | 1.5746E-02 (2003,342,0500) | 1.4428E-02 (2003,253,0800) |
| 478 | -22.226 | -207.873 | 1.9851E-02 (2003,286,0500) | 1.7649E-02 (2003,253,0700) | 1.5435E-02 (2003,342,0500) | 1.4064E-02 (2003,253,0800) |
| 479 | -20.769 | -207.877 | 1.9608E-02 (2003,286,0500) | 1.6555E-02 (2003,253,0700) | 1.5268E-02 (2003,342,0500) | 1.3619E-02 (2003,253,0800) |
| 480 | -19.311 | -207.881 | 1.9291E-02 (2003,286,0500) | 1.5471E-02 (2003,253,0700) | 1.4891E-02 (2003,342,0500) | 1.3108E-02 (2003,253,0800) |
| 481 | -48.449 | -205.902 | 3.0591E-02 (2003,286,0400) | 2.9631E-02 (2003,253,0600) | 2.7560E-02 (2003,253,0700) | 2.1507E-02 (2003,286,0300) |
| 482 | -46.992 | -205.911 | 3.0329E-02 (2003,286,0400) | 2.8231E-02 (2003,253,0700) | 2.7877E-02 (2003,253,0600) | 2.0276E-02 (2003,286,0300) |
| 483 | -45.535 | -205.919 | 2.9908E-02 (2003,286,0400) | 2.8726E-02 (2003,253,0700) | 2.6104E-02 (2003,253,0600) | 1.9180E-02 (2003,114,0400) |
| 484 | -44.078 | -205.928 | 2.9347E-02 (2003,286,0400) | 2.9040E-02 (2003,253,0700) | 2.4354E-02 (2003,253,0600) | 1.8647E-02 (2003,114,0400) |
| 485 | -42.621 | -205.936 | 2.9178E-02 (2003,253,0700) | 2.8672E-02 (2003,286,0400) | 2.2624E-02 (2003,253,0600) | 1.8171E-02 (2003,114,0400) |
| 486 | -41.163 | -205.944 | 2.9147E-02 (2003,253,0700) | 2.7870E-02 (2003,286,0400) | 2.0937E-02 (2003,253,0600) | 1.8164E-02 (2003,342,0500) |
| 487 | -39.706 | -205.951 | 2.8959E-02 (2003,253,0700) | 2.6969E-02 (2003,286,0400) | 1.9294E-02 (2003,253,0600) | 1.8740E-02 (2003,342,0500) |
| 488 | -38.249 | -205.958 | 2.8613E-02 (2003,253,0700) | 2.5982E-02 (2003,286,0400) | 1.8274E-02 (2003,342,0500) | 1.7715E-02 (2003,253,0600) |
| 489 | -36.792 | -205.965 | 2.8134E-02 (2003,253,0700) | 2.4928E-02 (2003,286,0400) | 1.8808E-02 (2003,342,0500) | 1.6768E-02 (2003,286,0500) |
| 490 | -35.335 | -205.972 | 2.7515E-02 (2003,253,0700) | 2.3819E-02 (2003,286,0400) | 1.9081E-02 (2003,342,0500) | 1.7305E-02 (2003,286,0500) |
| 491 | -33.878 | -205.979 | 2.6796E-02 (2003,253,0700) | 2.2661E-02 (2003,286,0400) | 1.9335E-02 (2003,342,0500) | 1.7779E-02 (2003,286,0500) |
| 492 | -32.421 | -205.985 | 2.5964E-02 (2003,253,0700) | 2.1485E-02 (2003,286,0400) | 2.0164E-02 (2003,342,0500) | 1.8179E-02 (2003,286,0500) |
| 493 | -30.964 | -205.991 | 2.5059E-02 (2003,253,0700) | 2.0305E-02 (2003,286,0400) | 2.0130E-02 (2003,342,0500) | 1.8504E-02 (2003,286,0500) |
| 494 | -29.507 | -205.996 | 2.4078E-02 (2003,253,0700) | 2.0004E-02 (2003,342,0500) | 1.9103E-02 (2003,286,0400) | 1.8765E-02 (2003,286,0500) |
| 495 | -28.049 | -206.002 | 2.3041E-02 (2003,253,0700) | 1.9777E-02 (2003,342,0500) | 1.8948E-02 (2003,286,0500) | 1.7929E-02 (2003,286,0400) |
| 496 | -26.592 | -206.007 | 2.1962E-02 (2003,253,0700) | 1.9484E-02 (2003,342,0500) | 1.9052E-02 (2003,286,0500) | 1.6752E-02 (2003,286,0400) |
| 497 | -25.135 | -206.012 | 2.0852E-02 (2003,253,0700) | 1.9072E-02 (2003,286,0500) | 1.8793E-02 (2003,342,0500) | 1.5615E-02 (2003,286,0400) |
| 498 | -23.678 | -206.016 | 1.9722E-02 (2003,253,0700) | 1.9010E-02 (2003,286,0500) | 1.8416E-02 (2003,342,0500) | 1.5135E-02 (2003,253,0800) |
| 499 | -22.221 | -206.021 | 1.8863E-02 (2003,286,0500) | 1.8587E-02 (2003,253,0700) | 1.7995E-02 (2003,342,0500) | 1.4745E-02 (2003,253,0800) |
| 500 | -20.764 | -206.025 | 1.8663E-02 (2003,286,0500) | 1.7748E-02 (2003,342,0500) | 1.7459E-02 (2003,253,0700) | 1.4402E-02 (2003,342,0600) |
| 501 | -19.307 | -206.028 | 1.8392E-02 (2003,286,0500) | 1.7239E-02 (2003,342,0500) | 1.6331E-02 (2003,253,0700) | 1.4928E-02 (2003,342,0600) |
| 502 | -46.981 | -204.058 | 3.0900E-02 (2003,286,0400) | 2.9769E-02 (2003,253,0600) | 2.8269E-02 (2003,253,0700) | 2.2107E-02 (2003,286,0300) |
| 503 | -45.524 | -204.066 | 3.0540E-02 (2003,286,0400) | 2.8870E-02 (2003,253,0700) | 2.7929E-02 (2003,253,0600) | 2.0753E-02 (2003,286,0300) |
| 504 | -44.067 | -204.075 | 3.0020E-02 (2003,286,0400) | 2.9298E-02 (2003,253,0700) | 2.6099E-02 (2003,253,0600) | 1.9900E-02 (2003,342,0500) |
| 505 | -42.610 | -204.083 | 2.9538E-02 (2003,253,0700) | 2.9368E-02 (2003,286,0400) | 2.4281E-02 (2003,253,0600) | 2.0764E-02 (2003,342,0500) |
| 506 | -41.154 | -204.091 | 2.9610E-02 (2003,253,0700) | 2.8593E-02 (2003,286,0400) | 2.2505E-02 (2003,253,0600) | 2.1566E-02 (2003,342,0500) |
| 507 | -39.697 | -204.098 | 2.9503E-02 (2003,253,0700) | 2.7694E-02 (2003,286,0400) | 2.2193E-02 (2003,342,0500) | 2.0760E-02 (2003,253,0600) |
| 508 | -38.240 | -204.106 | 2.9241E-02 (2003,253,0700) | 2.6711E-02 (2003,286,0400) | 1.9091E-02 (2003,253,0600) | 1.5287E-02 (2003,342,0500) |
| 509 | -36.783 | -204.113 | 2.8817E-02 (2003,253,0700) | 2.5654E-02 (2003,286,0400) | 1.7464E-02 (2003,253,0600) | 1.5583E-02 (2003,286,0500) |
| 510 | -35.327 | -204.119 | 2.8267E-02 (2003,253,0700) | 2.4525E-02 (2003,286,0400) | 2.2495E-02 (2003,342,0500) | 1.6193E-02 (2003,342,0400) |
| 511 | -33.870 | -204.126 | 2.7582E-02 (2003,253,0700) | 2.3374E-02 (2003,286,0400) | 2.2706E-02 (2003,342,0500) | 1.6569E-02 (2003,286,0500) |
| 512 | -32.413 | -204.132 | 2.6798E-02 (2003,253,0700) | 2.3574E-02 (2003,342,0500) | 2.2177E-02 (2003,286,0400) | 1.6977E-02 (2003,286,0500) |
| 513 | -30.956 | -204.138 | 2.5911E-02 (2003,253,0700) | 2.3158E-02 (2003,342,0500) | 2.0956E-02 (2003,286,0400) | 1.7312E-02 (2003,286,0500) |
| 514 | -29.500 | -204.144 | 2.4947E-02 (2003,253,0700) | 2.2701E-02 (2003,342,0500) | 1.9743E-02 (2003,286,0400) | 1.7579E-02 (2003,286,0500) |
| 515 | -28.043 | -204.149 | 2.3914E-02 (2003,253,0700) | 2.2451E-02 (2003,342,0500) | 1.8526E-02 (2003,286,0400) | 1.7769E-02 (2003,286,0500) |
| 516 | -26.586 | -204.154 | 2.2833E-02 (2003,253,0700) | 2.2105E-02 (2003,342,0500) | 1.7882E-02 (2003,286,0500) | 1.7321E-02 (2003,286,0400) |
| 517 | -25.129 | -204.159 | 2.1716E-02 (2003,253,0700) | 2.1681E-02 (2003,342,0500) | 1.7912E-02 (2003,286,0500) | 1.6159E-02 (2003,286,0400) |
| 518 | -23.673 | -204.164 | 2.1188E-02 (2003,342,0500) | 2.0571E-02 (2003,253,0700) | 1.7886E-02 (2003,286,0500) | 1.5772E-02 (2003,253,0800) |
| 519 | -22.216 | -204.168 | 2.0633E-02 (2003,342,0500) | 1.9415E-02 (2003,253,0700) | 1.7788E-02 (2003,286,0500) | 1.5430E-02 (2003,342,0400) |
| 520 | -20.759 | -204.172 | 2.0064E-02 (2003,342,0500) | 1.8261E-02 (2003,253,0700) | 1.7619E-02 (2003,286,0500) | 1.5824E-02 (2003,342,0600) |
| 521 | -19.302 | -204.176 | 1.9650E-02 (2003,342,0500) | 1.7393E-02 (2003,342,0600) | 1.7383E-02 (2003,286,0500) | 1.7101E-02 (2003,253,0700) |
| 522 | -46.969 | -202.205 | 3.1464E-02 (2003,253,0600) | 3.1116E-02 (2003,286,0400) | 2.8101E-02 (2003,253,0700) | 2.3810E-02 (2003,286,0300) |
| 523 | -45.513 | -202.214 | 3.0809E-02 (2003,286,0400) | 2.9583E-02 (2003,253,0600) | 2.8803E-02 (2003,253,0700) | 2.2925E-02 (2003,342,0400) |
| 524 | -44.057 | -202.222 | 3.0353E-02 (2003,286,0400) | 2.9333E-02 (2003,253,0700) | 2.7679E-02 (2003,253,0600) | 2.3140E-02 (2003,342,0500) |
| 525 | -42.600 | -202.230 | 2.9741E-02 (2003,286,0400) | 2.9673E-02 (2003,253,0700) | 2.5802E-02 (2003,253,0600) | 2.4184E-02 (2003,342,0500) |
| 526 | -41.144 | -202.238 | 2.9837E-02 (2003,253,0700) | 2.8986E-02 (2003,286,0400) | 2.5045E-02 (2003,342,0500) | 2.3937E-02 (2003,253,0600) |
| 527 | -39.687 | -202.246 | 2.9820E-02 (2003,253,0700) | 2.8138E-02 (2003,286,0400) | 2.5734E-02 (2003,342,0500) | 2.2121E-02 (2003,253,0600) |
| 528 | -38.231 | -202.253 | 2.9632E-02 (2003,253,0700) | 2.7169E-02 (2003,286,0400) | 2.6290E-02 (2003,342,0500) | 2.0357E-02 (2003,253,0600) |
| 529 | -36.775 | -202.260 | 2.9289E-02 (2003,253,0700) | 2.6115E-02 (2003,286,0400) | 2.5645E-02 (2003,342,0500) | 1.8933E-02 (2003,342,0400) |
| 530 | -35.318 | -202.267 | 2.8796E-02 (2003,253,0700) | 2.5014E-02 (2003,286,0400) | 1.7043E-02 (2003,253,0600) | 1.4849E-02 (2003,286,0500) |
| 531 | -33.862 | -202.273 | 2.8171E-02 (2003,253,0700) | 2.5224E-02 (2003,342,0500) | 2.3852E-02 (2003,286,0400) | 1.7846E-02 (2003,342,0400) |
| 532 | -32.405 | -202.279 | 2.7428E-02 (2003,253,0700) | 2.6260E-02 (2003,342,0500) | 2.2655E-02 (2003,286,0400) | 1.7506E-02 (2003,342,0400) |
| 533 | -30.949 | -202.285 | 2.6577E-02 (2003,253,0700) | 2.6167E-02 (2003,342,0500) | 2.1428E-02 (2003,286,0400) | 1.7120E-02 (2003,342,0400) |
| 534 | -29.493 | -202.291 | 2.5942E-02 (2003,342,0500) | 2.5636E-02 (2003,253,0700) | 2.0194E-02 (2003,286,0400) | 1.6891E-02 (2003,342,0400) |
| 535 | -28.036 | -202.296 | 2.5540E-02 (2003,342,0500) | 2.4624E-02 (2003,253,0700) | 1.8964E-02 (2003,286,0400) | 1.6724E-02 (2003,342,0400) |
| 536 | -26.580 | -202.301 | 2.5117E-02 (2003,342,0500) | 2.3547E-02 (2003,253,0700) | 1.7751E-02 (2003,286,0400) | 1.6767E-02 (2003,253,0800) |
| 537 | -25.123 | -202.306 | 2.4597E-02 (2003,342,0500) | 2.2435E-02 (2003,253,0700) | 1.6696E-02 (2003,286,0500) | 1.6632E-02 (2003,342,0400) |
| 538 | -23.667 | -202.311 | 2.3952E-02 (2003,342,0500) | 2.1277E-02 (2003,253,0700) | 1.6727E-02 (2003,342,0400) | 1.6692E-02 (2003,286,0500) |
| 539 | -22.210 | -202.315 | 2.3278E-02 (2003,342,0500) | 2.0113E-02 (2003,253,0700) | 1.7378E-02 (2003,342,0600) | 1.6906E-02 (2003,342,0400) |
| 540 | -46.958 | -200.352 | 3.2933E-02 (2003,253,0600) | 3.0938E-02 (2003,286,0400) | 2.7722E-02 (2003,253,0700) | 2.7314E-02 (2003,342,0400) |
| 541 | -45.502 | -200.361 | 3.1023E-02 (2003,253,0600) | 3.0714E-02 (2003,286,0400) | 2.8519E-02 (2003,253,0700) | 2.6137E-02 (2003,342,0400) |
| 542 | -44.046 | -200.369 | 3.0315E-02 (2003,286,0400) | 2.9142E-02 (2003,253,0700) | 2.9069E-02 (2003,253,0600) | 2.6398E-02 (2003,342,0500) |
| 543 | -42.590 | -200.377 | 2.9751E-02 (2003,286,0400) | 2.9577E-02 (2003,253,0700) | 2.7499E-02 (2003,342,0500) | 2.7142E-02 (2003,253,0600) |
| 544 | -41.134 | -200.385 | 2.9833E-02 (2003,253,0700) | 2.9072E-02 (2003,286,0400) | 2.8454E-02 (2003,342,0500) | 2.5209E-02 (2003,253,0600) |
| 545 | -39.678 | -200.393 | 2.9898E-02 (2003,253,0700) | 2.8248E-02 (2003,286,0400) | 2.7799E-02 (2003,342,0500) | 2.3335E-02 (2003,253,0600) |
| 546 | -38.222 | -200.400 | 2.9801E-02 (2003,253,0700) | 2.8424E-02 (2003,342,0500) | 2.7318E-02 (2003,286,0400) | 2.2043E-02 (2003,342,0400) |
| 547 | -36.766 | -200.407 | 2.9527E-02 (2003,253,0700) | 2.9021E-02 (2003,342,0500) | 2.6317E-02 (2003,286,0400) | 2.1276E-02 (2003,342,0400) |
| 548 | -35.310 | -200.414 | 2.9109E-02 (2003,253,0700) | 2.5232E-02 (2003,286,0400) | 1.8023E-02 (2003,253,0600) | 1.4093E-02 (2003,342,0500) |
| 549 | -33.854 | -200.420 | 2.9501E-02 (2003,342,0500) | 2.8541E-02 (2003,253,0700) | 2.4096E-02 (2003,286,0400) | 1.9896E-02 (2003,342,0400) |
| 550 | -32.398 | -200.427 | 2.8471E-02 (2003,342,0500) | 2.7849E-02 (2003,253,0700) | 2.2908E-02 (2003,286,0400) | 1.9312E-02 (2003,342,0400) |
| 551 | -30.942 | -200.432 | 2.9440E-02 (2003,342,0500) | 2.7042E-02 (2003,253,0700) | 2.1682E-02 (2003,286,0400) | 1.8922E-02 (2003,342,0400) |
| 552 | -29.486 | -200.438 | 2.9120E-02 (2003,342,0500) | 2.6136E-02 (2003,253,0700) | 2.0463E-02 (2003,286,0400) | 1.8531E-02 (2003,342,0400) |
| 553 | -28.030 | -200.444 | 2.7866E-02 (2003,342,0500) | 2.5143E-02 (2003,253,0700) | 1.9234E-02 (2003,286,0400) | 1.8270E-02 (2003,342,0400) |
| 554 | -26.573 | -200.449 | 2.8051E-02 (2003,342,0500) | 2.4091E-02 (2003,253,0700) | 1.8152E-02 (2003,342,0400) | 1.8015E-02 (2003,286,0400) |
| 555 | -25.117 | -200.453 | 2.6903E-02 (2003,342,0500) | 2.2972E-02 (2003,253,0700) | 1.8053E-02 (2003,342,0400) | 1.7065E-02 (2003,253,0800) |
| 556 | -23.661 | -200.458 | 2.6646E-02 (2003,342,0500) | 2.1833E-02 (2003,253,0700) | 1.8719E-02 (2003,342,0600) | 1.8120E-02 (2003,342,0400) |
| 557 | -46.947 | -198.500 | 3.4143E-02 (2003,253,0600) | 3.1229E-02 (2003,342,0400) | 3.0381E-02 (2003,286,0400) | 2.7143E-02 (2003,253,0700) |
| 558 | -45.491 | -198.508 | 3.2204E-02 (2003,253,0600) | 3.0228E-02 (2003,286,0400) | 3.0040E-02 (2003,342,0400) | 2.8164E-02 (2003,342,0500) |
| 559 | -44.036 | -198.517 | 3.0237E-02 (2003,253,0600) | 2.9901E-02 (2003,286,0400) | 2.8729E-02 (2003,253,0700) | 2.8671E-02 (2003,342,0400) |
| 560 | -42.580 | -198.525 | 2.9418E-02 (2003,286,0400) | 2.9247E-02 (2003,253,0700) | 2.8939E-02 (2003,342,0500) | 2.8264E-02 (2003,253,0600) |
| 561 | -41.124 | -198.533 | 3.0107E-02 (2003,342,0500) | 2.9588E-02 (2003,253,0700) | 2.8794E-02 (2003,286,0400) | 2.6554E-02 (2003,342,0400) |
| 562 | -39.669 | -198.540 | 3.1042E-02 (2003,342,0500) | 2.9748E-02 (2003,253,0700) | 2.8032E-02 (2003,286,0400) | 2.5481E-02 (2003,342,0400) |
| 563 | -38.213 | -198.547 | 3.1648E-02 (2003,342,0500) | 2.9726E-02 (2003,253,0700) | 2.7179E-02 (2003,286,0400) | 2.4441E-02 (2003,342,0400) |
| 564 | -36.757 | -198.554 | 2.9537E-02 (2003,253,0700) | 2.6213E-02 (2003,286,0400) | 2.0963E-02 (2003,342,0500) | 2.0628E-02 (2003,253,0600) |
| 565 | -35.301 | -198.561 | 2.9187E-02 (2003,253,0700) | 2.5181E-02 (2003,286,0400) | 2.3522E-02 (2003,342,0500) | 1.8872E-02 (2003,253,0600) |
| 566 | -33.846 | -198.568 | 3.1660E-02 (2003,342,0500) | 2.8687E-02 (2003,253,0700) | 2.4071E-02 (2003,286,0400) | 2.1706E-02 (2003,342,0400) |
| 567 | -32.390 | -198.574 | 3.2731E-02 (2003,342,0500) | 2.8051E-02 (2003,253,0700) | 2.2913E-02 (2003,286,0400) | 2.1114E-02 (2003,342,0400) |
| 568 | -30.934 | -198.580 | 2.7292E-02 (2003,253,0700) | 2.1724E-02 (2003,286,0400) | 1.6728E-02 (2003,342,0300) | 1.6420E-02 (2003,253,0800) |
| 569 | -29.479 | -198.585 | 2.6425E-02 (2003,253,0700) | 2.0515E-02 (2003,286,0400) | 1.7151E-02 (2003,342,0300) | 1.7073E-02 (2003,253,0800) |
| 570 | -28.023 | -198.591 | 2.5470E-02 (2003,253,0700) | 2.4399E-02 (2003,342,0500) | 1.9312E-02 (2003,286,0400) | 1.8302E-02 (2003,342,0400) |
| 571 | -26.567 | -198.596 | 3.0808E-02 (2003,342,0500) | 2.4435E-02 (2003,253,0700) | 1.9494E-02 (2003,342,0400) | 1.8587E-02 (2003,342,0300) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 572 | -46.936 | -196.647 | 3.5047E-02 (2003,253,0600) | 3.4729E-02 (2003,342,0400) | 2.9434E-02 (2003,286,0400) | 2.9208E-02 (2003,342,0500) |
| 573 | -45.481 | -196.656 | 3.3549E-02 (2003,342,0400) | 3.3116E-02 (2003,253,0600) | 3.0926E-02 (2003,342,0500) | 2.9370E-02 (2003,286,0400) |
| 574 | -44.025 | -196.664 | 3.1792E-02 (2003,342,0400) | 3.1141E-02 (2003,253,0600) | 3.0251E-02 (2003,342,0500) | 2.9125E-02 (2003,286,0400) |
| 575 | -42.570 | -196.672 | 3.0182E-02 (2003,342,0400) | 2.9819E-02 (2003,342,0500) | 2.9149E-02 (2003,253,0600) | 2.8721E-02 (2003,286,0400) |
| 576 | -41.115 | -196.680 | 3.2797E-02 (2003,342,0500) | 2.9180E-02 (2003,342,0400) | 2.9126E-02 (2003,253,0700) | 2.8177E-02 (2003,286,0400) |
| 577 | -39.659 | -196.687 | 3.2255E-02 (2003,342,0500) | 2.9366E-02 (2003,253,0700) | 2.7695E-02 (2003,342,0400) | 2.7510E-02 (2003,286,0400) |
| 578 | -38.204 | -196.695 | 3.4550E-02 (2003,342,0500) | 2.9427E-02 (2003,253,0700) | 2.6713E-02 (2003,286,0400) | 2.6654E-02 (2003,342,0400) |
| 579 | -36.748 | -196.702 | 3.3811E-02 (2003,342,0500) | 2.9314E-02 (2003,253,0700) | 2.5814E-02 (2003,286,0400) | 2.5393E-02 (2003,342,0400) |
| 580 | -35.293 | -196.708 | 2.9038E-02 (2003,253,0700) | 2.4839E-02 (2003,286,0400) | 1.9563E-02 (2003,253,0600) | 1.7379E-02 (2003,342,0300) |
| 581 | -33.838 | -196.715 | 2.8602E-02 (2003,253,0700) | 2.3784E-02 (2003,286,0400) | 1.7863E-02 (2003,342,0300) | 1.7827E-02 (2003,253,0600) |
| 582 | -32.382 | -196.721 | 3.5463E-02 (2003,342,0500) | 2.8029E-02 (2003,253,0700) | 2.2673E-02 (2003,286,0400) | 2.2635E-02 (2003,342,0400) |
| 583 | -30.927 | -196.727 | 3.4240E-02 (2003,342,0500) | 2.7319E-02 (2003,253,0700) | 2.1922E-02 (2003,342,0400) | 2.1534E-02 (2003,286,0400) |
| 584 | -29.472 | -196.733 | 3.3840E-02 (2003,342,0500) | 2.6503E-02 (2003,253,0700) | 2.1366E-02 (2003,342,0400) | 2.0365E-02 (2003,286,0400) |
| 585 | -28.016 | -196.738 | 2.5588E-02 (2003,253,0700) | 1.9318E-02 (2003,342,0300) | 1.9185E-02 (2003,286,0400) | 1.7559E-02 (2003,253,0800) |
| 586 | -26.561 | -196.743 | 2.4584E-02 (2003,253,0700) | 1.9636E-02 (2003,342,0300) | 1.8010E-02 (2003,286,0400) | 1.7637E-02 (2003,253,0800) |
| 587 | -46.925 | -194.794 | 3.7564E-02 (2003,342,0400) | 3.5635E-02 (2003,253,0600) | 2.8959E-02 (2003,342,0500) | 2.8128E-02 (2003,286,0400) |
| 588 | -45.470 | -194.803 | 3.6170E-02 (2003,342,0400) | 3.3717E-02 (2003,253,0600) | 3.0904E-02 (2003,342,0500) | 2.8146E-02 (2003,286,0400) |
| 589 | -44.015 | -194.811 | 3.4669E-02 (2003,342,0400) | 3.2599E-02 (2003,342,0500) | 3.1758E-02 (2003,253,0600) | 2.8001E-02 (2003,286,0400) |
| 590 | -42.560 | -194.819 | 3.2744E-02 (2003,342,0400) | 3.2013E-02 (2003,342,0500) | 2.9754E-02 (2003,253,0600) | 2.7963E-02 (2003,253,0700) |
| 591 | -41.105 | -194.827 | 3.5218E-02 (2003,342,0500) | 3.1545E-02 (2003,342,0400) | 2.8454E-02 (2003,253,0700) | 2.7754E-02 (2003,253,0600) |
| 592 | -39.650 | -194.835 | 3.7982E-02 (2003,342,0500) | 3.0218E-02 (2003,342,0400) | 2.8768E-02 (2003,253,0700) | 2.6657E-02 (2003,286,0400) |
| 593 | -38.195 | -194.842 | 3.5216E-02 (2003,342,0500) | 2.8902E-02 (2003,253,0700) | 2.8393E-02 (2003,342,0400) | 2.5942E-02 (2003,286,0400) |
| 594 | -36.740 | -194.849 | 2.8862E-02 (2003,253,0700) | 2.5123E-02 (2003,286,0400) | 2.1915E-02 (2003,253,0600) | 1.8695E-02 (2003,342,0300) |
| 595 | -35.285 | -194.856 | 2.8656E-02 (2003,253,0700) | 2.8624E-02 (2003,342,0500) | 2.4221E-02 (2003,286,0400) | 2.2510E-02 (2003,342,0400) |
| 596 | -33.830 | -194.862 | 3.6642E-02 (2003,342,0500) | 2.8290E-02 (2003,253,0700) | 2.4838E-02 (2003,342,0400) | 2.3244E-02 (2003,286,0400) |
| 597 | -32.375 | -194.868 | 3.7815E-02 (2003,342,0500) | 2.7772E-02 (2003,253,0700) | 2.3912E-02 (2003,342,0400) | 2.2197E-02 (2003,286,0400) |
| 598 | -30.920 | -194.874 | 3.7455E-02 (2003,342,0500) | 2.7129E-02 (2003,253,0700) | 2.3106E-02 (2003,342,0400) | 2.1818E-02 (2003,342,0300) |
| 599 | -29.465 | -194.880 | 2.6360E-02 (2003,253,0700) | 2.0878E-02 (2003,342,0300) | 2.0000E-02 (2003,286,0400) | 1.7661E-02 (2003,342,0500) |
| 600 | -28.009 | -194.885 | 2.5489E-02 (2003,253,0700) | 2.1189E-02 (2003,342,0300) | 1.8862E-02 (2003,286,0400) | 1.7772E-02 (2003,342,0500) |
| 601 | -26.554 | -194.890 | 3.4649E-02 (2003,342,0500) | 2.4540E-02 (2003,253,0700) | 2.2592E-02 (2003,342,0300) | 2.1496E-02 (2003,342,0400) |
| 602 | -45.459 | -192.950 | 3.8781E-02 (2003,342,0400) | 3.3995E-02 (2003,253,0600) | 3.2365E-02 (2003,342,0500) | 2.6625E-02 (2003,286,0300) |
| 603 | -44.004 | -192.959 | 3.6598E-02 (2003,342,0400) | 3.2056E-02 (2003,253,0600) | 3.2038E-02 (2003,342,0500) | 2.6570E-02 (2003,286,0400) |
| 604 | -42.550 | -192.967 | 3.4835E-02 (2003,342,0400) | 3.3424E-02 (2003,342,0500) | 3.0070E-02 (2003,253,0600) | 2.7029E-02 (2003,253,0700) |
| 605 | -41.095 | -192.975 | 3.3175E-02 (2003,342,0500) | 3.1538E-02 (2003,342,0400) | 2.8086E-02 (2003,253,0600) | 2.7580E-02 (2003,253,0700) |
| 606 | -39.640 | -192.982 | 3.7973E-02 (2003,342,0500) | 3.1745E-02 (2003,342,0400) | 2.7958E-02 (2003,253,0700) | 2.6094E-02 (2003,253,0600) |
| 607 | -38.186 | -192.989 | 2.8159E-02 (2003,253,0700) | 2.4888E-02 (2003,286,0400) | 2.4143E-02 (2003,253,0600) | 1.9903E-02 (2003,342,0300) |
| 608 | -36.731 | -192.996 | 2.8188E-02 (2003,253,0700) | 2.4166E-02 (2003,286,0400) | 2.2227E-02 (2003,253,0600) | 2.0445E-02 (2003,342,0300) |
| 609 | -35.276 | -193.003 | 2.8048E-02 (2003,253,0700) | 2.3350E-02 (2003,286,0400) | 2.0983E-02 (2003,342,0300) | 2.0381E-02 (2003,253,0600) |
| 610 | -33.822 | -193.010 | 3.8516E-02 (2003,342,0500) | 2.7743E-02 (2003,253,0700) | 2.5905E-02 (2003,342,0400) | 2.2906E-02 (2003,342,0300) |
| 611 | -32.367 | -193.016 | 3.9706E-02 (2003,342,0500) | 2.7298E-02 (2003,253,0700) | 2.4914E-02 (2003,342,0400) | 2.3380E-02 (2003,342,0300) |
| 612 | -30.912 | -193.022 | 3.9279E-02 (2003,342,0500) | 2.6712E-02 (2003,253,0700) | 2.3936E-02 (2003,342,0400) | 2.3758E-02 (2003,342,0300) |
| 613 | -29.457 | -193.027 | 3.7647E-02 (2003,342,0500) | 2.6001E-02 (2003,253,0700) | 2.4038E-02 (2003,342,0300) | 2.3151E-02 (2003,342,0400) |
| 614 | -28.003 | -193.033 | 3.6966E-02 (2003,342,0500) | 2.5192E-02 (2003,253,0700) | 2.4286E-02 (2003,342,0300) | 2.2557E-02 (2003,342,0400) |
| 615 | -26.548 | -193.038 | 2.4280E-02 (2003,253,0700) | 2.3276E-02 (2003,342,0300) | 1.8511E-02 (2003,342,0500) | 1.8146E-02 (2003,342,0400) |
| 616 | -25.093 | -193.043 | 3.5100E-02 (2003,342,0500) | 2.4569E-02 (2003,342,0300) | 2.3301E-02 (2003,253,0700) | 2.3178E-02 (2003,342,0600) |
| 617 | -41.085 | -191.122 | 3.8155E-02 (2003,342,0500) | 3.4906E-02 (2003,342,0400) | 2.8121E-02 (2003,253,0600) | 2.6522E-02 (2003,253,0700) |
| 618 | -39.631 | -191.129 | 2.8280E-02 (2003,342,0500) | 2.6954E-02 (2003,253,0700) | 2.6157E-02 (2003,253,0600) | 2.5983E-02 (2003,342,0400) |
| 619 | -38.176 | -191.137 | 3.6286E-02 (2003,342,0500) | 2.9636E-02 (2003,342,0400) | 2.7215E-02 (2003,253,0700) | 2.4225E-02 (2003,253,0600) |
| 620 | -36.722 | -191.144 | 3.8859E-02 (2003,342,0500) | 2.9353E-02 (2003,342,0400) | 2.7306E-02 (2003,253,0700) | 2.3557E-02 (2003,342,0300) |
| 621 | -35.268 | -191.150 | 4.0967E-02 (2003,342,0500) | 2.8012E-02 (2003,342,0400) | 2.7226E-02 (2003,253,0700) | 2.4241E-02 (2003,342,0300) |
| 622 | -33.813 | -191.157 | 4.2125E-02 (2003,342,0500) | 2.6993E-02 (2003,253,0700) | 2.6707E-02 (2003,342,0400) | 2.4729E-02 (2003,342,0300) |
| 623 | -32.359 | -191.163 | 4.1862E-02 (2003,342,0500) | 2.6598E-02 (2003,253,0700) | 2.5523E-02 (2003,342,0400) | 2.5188E-02 (2003,342,0300) |
| 624 | -30.905 | -191.169 | 4.1272E-02 (2003,342,0500) | 2.6081E-02 (2003,253,0700) | 2.5552E-02 (2003,342,0300) | 2.4418E-02 (2003,342,0400) |
| 625 | -29.450 | -191.175 | 3.8714E-02 (2003,342,0500) | 2.5803E-02 (2003,342,0300) | 2.5439E-02 (2003,253,0700) | 2.3535E-02 (2003,342,0400) |
| 626 | -27.996 | -191.180 | 3.7968E-02 (2003,342,0500) | 2.6043E-02 (2003,342,0300) | 2.4677E-02 (2003,253,0700) | 2.2877E-02 (2003,342,0400) |
| 627 | -26.542 | -191.185 | 3.6927E-02 (2003,342,0500) | 2.6022E-02 (2003,342,0300) | 2.3826E-02 (2003,253,0700) | 2.2391E-02 (2003,342,0600) |
| 628 | -25.087 | -191.190 | 3.6018E-02 (2003,342,0500) | 2.6287E-02 (2003,342,0300) | 2.4364E-02 (2003,342,0600) | 2.2896E-02 (2003,253,0700) |
| 629 | -39.621 | -189.277 | 2.5963E-02 (2003,253,0600) | 2.5777E-02 (2003,253,0700) | 2.2479E-02 (2003,286,0400) | 2.2330E-02 (2003,342,0300) |
| 630 | -38.167 | -189.284 | 4.0325E-02 (2003,342,0500) | 3.1705E-02 (2003,342,0400) | 2.6081E-02 (2003,253,0700) | 2.4847E-02 (2003,342,0300) |
| 631 | -36.713 | -189.291 | 4.0894E-02 (2003,342,0500) | 2.9923E-02 (2003,342,0400) | 2.6228E-02 (2003,253,0700) | 2.5354E-02 (2003,342,0300) |
| 632 | -35.259 | -189.298 | 3.7770E-02 (2003,342,0500) | 2.7127E-02 (2003,342,0400) | 2.6212E-02 (2003,253,0700) | 2.5544E-02 (2003,342,0300) |
| 633 | -33.805 | -189.304 | 4.2566E-02 (2003,342,0500) | 2.6955E-02 (2003,342,0400) | 2.6344E-02 (2003,342,0300) | 2.6028E-02 (2003,253,0700) |
| 634 | -32.351 | -189.310 | 4.2329E-02 (2003,342,0500) | 2.6821E-02 (2003,342,0300) | 2.5711E-02 (2003,253,0700) | 2.5697E-02 (2003,342,0400) |
| 635 | -30.897 | -189.316 | 4.0651E-02 (2003,342,0500) | 2.7083E-02 (2003,342,0300) | 2.5248E-02 (2003,253,0700) | 2.4479E-02 (2003,342,0400) |
| 636 | -29.443 | -189.322 | 3.9587E-02 (2003,342,0500) | 2.7371E-02 (2003,342,0300) | 2.4666E-02 (2003,253,0700) | 2.3565E-02 (2003,342,0400) |
| 637 | -27.989 | -189.327 | 2.9193E-02 (2003,342,0500) | 2.6961E-02 (2003,342,0300) | 2.3971E-02 (2003,253,0700) | 2.0341E-02 (2003,342,0400) |
| 638 | -26.535 | -189.332 | 3.7243E-02 (2003,342,0500) | 2.7535E-02 (2003,342,0300) | 2.3175E-02 (2003,253,0700) | 2.3051E-02 (2003,342,0600) |
| 639 | -25.081 | -189.337 | 2.6341E-02 (2003,342,0300) | 2.2310E-02 (2003,253,0700) | 1.8469E-02 (2003,342,0500) | 1.8395E-02 (2003,342,0400) |
| 640 | -23.628 | -189.342 | 3.5027E-02 (2003,342,0500) | 2.7582E-02 (2003,342,0300) | 2.6384E-02 (2003,342,0600) | 2.1750E-02 (2003,342,0400) |
| 641 | -22.173 | -189.346 | 3.3756E-02 (2003,342,0500) | 2.7816E-02 (2003,342,0600) | 2.7442E-02 (2003,342,0300) | 2.1688E-02 (2003,342,0400) |
| 642 | -41.066 | -187.417 | 3.6314E-02 (2003,342,0500) | 3.5540E-02 (2003,342,0400) | 2.7352E-02 (2003,253,0600) | 2.5256E-02 (2003,342,0300) |
| 643 | -39.612 | -187.424 | 2.5484E-02 (2003,253,0600) | 2.4438E-02 (2003,253,0700) | 2.3522E-02 (2003,342,0300) | 2.0686E-02 (2003,286,0400) |
| 644 | -38.158 | -187.431 | 3.8541E-02 (2003,342,0500) | 3.1497E-02 (2003,342,0400) | 2.6146E-02 (2003,342,0300) | 2.4789E-02 (2003,253,0700) |
| 645 | -36.705 | -187.438 | 4.0598E-02 (2003,342,0500) | 2.9824E-02 (2003,342,0400) | 2.6698E-02 (2003,342,0300) | 2.4969E-02 (2003,253,0700) |
| 646 | -35.251 | -187.445 | 4.0834E-02 (2003,342,0500) | 2.8113E-02 (2003,342,0400) | 2.7155E-02 (2003,342,0300) | 2.5007E-02 (2003,253,0700) |
| 647 | -33.797 | -187.452 | 4.0981E-02 (2003,342,0500) | 2.7600E-02 (2003,342,0300) | 2.6634E-02 (2003,342,0400) | 2.4889E-02 (2003,253,0700) |
| 648 | -32.344 | -187.458 | 4.1784E-02 (2003,342,0500) | 2.8088E-02 (2003,342,0300) | 2.5381E-02 (2003,342,0400) | 2.4626E-02 (2003,253,0700) |
| 649 | -30.890 | -187.464 | 4.1499E-02 (2003,342,0500) | 2.8545E-02 (2003,342,0300) | 2.4293E-02 (2003,342,0400) | 2.4234E-02 (2003,253,0700) |
| 650 | -29.436 | -187.469 | 3.9646E-02 (2003,342,0500) | 2.8697E-02 (2003,342,0300) | 2.3703E-02 (2003,253,0700) | 2.3227E-02 (2003,342,0400) |
| 651 | -27.983 | -187.475 | 3.8771E-02 (2003,342,0500) | 2.8911E-02 (2003,342,0300) | 2.3525E-02 (2003,342,0600) | 2.3079E-02 (2003,253,0700) |
| 652 | -26.529 | -187.480 | 3.7768E-02 (2003,342,0500) | 2.9041E-02 (2003,342,0300) | 2.5296E-02 (2003,342,0600) | 2.2351E-02 (2003,253,0700) |
| 653 | -25.076 | -187.485 | 3.6591E-02 (2003,342,0500) | 2.9069E-02 (2003,342,0300) | 2.6929E-02 (2003,342,0600) | 2.1538E-02 (2003,253,0700) |
| 654 | -23.622 | -187.489 | 3.4714E-02 (2003,342,0500) | 2.8787E-02 (2003,342,0300) | 2.6683E-02 (2003,342,0600) | 2.1320E-02 (2003,342,0400) |
| 655 | -22.168 | -187.494 | 3.1811E-02 (2003,342,0500) | 2.8619E-02 (2003,342,0300) | 2.6961E-02 (2003,342,0600) | 2.1030E-02 (2003,342,0400) |
| 656 | -41.056 | -185.564 | 2.6540E-02 (2003,253,0600) | 2.3754E-02 (2003,342,0300) | 2.2444E-02 (2003,253,0700) | 1.9950E-02 (2003,286,0300) |
| 657 | -39.602 | -185.572 | 2.7741E-02 (2003,342,0500) | 2.6089E-02 (2003,342,0400) | 2.5597E-02 (2003,342,0300) | 2.4778E-02 (2003,253,0600) |
| 658 | -38.149 | -185.579 | 3.7364E-02 (2003,342,0500) | 3.0867E-02 (2003,342,0400) | 2.7143E-02 (2003,342,0300) | 2.3345E-02 (2003,253,0700) |
| 659 | -36.696 | -185.586 | 3.8010E-02 (2003,342,0500) | 2.9019E-02 (2003,342,0400) | 2.7645E-02 (2003,342,0300) | 2.3569E-02 (2003,253,0700) |
| 660 | -35.243 | -185.593 | 4.0937E-02 (2003,342,0500) | 2.8230E-02 (2003,342,0300) | 2.7529E-02 (2003,342,0400) | 2.3650E-02 (2003,253,0700) |
| 661 | -33.789 | -185.599 | 3.9886E-02 (2003,342,0500) | 2.8609E-02 (2003,342,0300) | 2.5947E-02 (2003,342,0400) | 2.3589E-02 (2003,253,0700) |
| 662 | -32.336 | -185.605 | 4.0699E-02 (2003,342,0500) | 2.9131E-02 (2003,342,0300) | 2.4697E-02 (2003,342,0400) | 2.3376E-02 (2003,253,0700) |
| 663 | -30.883 | -185.611 | 4.0395E-02 (2003,342,0500) | 2.9569E-02 (2003,342,0300) | 2.3581E-02 (2003,342,0400) | 2.3043E-02 (2003,253,0700) |
| 664 | -29.429 | -185.617 | 3.8646E-02 (2003,342,0500) | 2.9702E-02 (2003,342,0300) | 2.2589E-02 (2003,253,0700) | 2.2508E-02 (2003,342,0400) |
| 665 | -27.976 | -185.622 | 3.7748E-02 (2003,342,0500) | 2.9879E-02 (2003,342,0300) | 2.3256E-02 (2003,342,0600) | 2.2018E-02 (2003,253,0700) |
| 666 | -26.523 | -185.627 | 3.6770E-02 (2003,342,0500) | 2.9991E-02 (2003,342,0300) | 2.5016E-02 (2003,342,0600) | 2.1362E-02 (2003,253,0700) |
| 667 | -25.070 | -185.632 | 3.4998E-02 (2003,342,0500) | 2.9778E-02 (2003,342,0300) | 2.4963E-02 (2003,342,0600) | 2.0789E-02 (2003,342,0400) |
| 668 | -23.616 | -185.637 | 2.8345E-02 (2003,342,0300) | 1.9794E-02 (2003,253,0700) | 1.7666E-02 (2003,342,0400) | 1.7329E-02 (2003,342,0500) |
| 669 | -22.163 | -185.641 | 2.9123E-02 (2003,342,0300) | 2.5283E-02 (2003,342,0500) | 2.2432E-02 (2003,342,0600) | 1.9284E-02 (2003,342,0400) |
| 670 | -42.499 | -183.704 | 3.1851E-02 (2003,342,0400) | 2.7912E-02 (2003,342,0500) | 2.7144E-02 (2003,253,0600) | 2.5945E-02 (2003,342,0300) |
| 671 | -41.046 | -183.711 | 2.5489E-02 (2003,253,0600) | 2.4319E-02 (2003,342,0300) | 2.0848E-02 (2003,253,0700) | 1.9316E-02 (2003,342,0200) |
| 672 | -39.593 | -183.719 | 2.4992E-02 (2003,342,0300) | 2.3800E-02 (2003,253,0600) | 2.1387E-02 (2003,253,0700) | 1.8667E-02 (2003,342,0200) |
| 673 | -38.140 | -183.726 | 2.5565E-02 (2003,342,0300) | 2.2131E-02 (2003,253,0600) | 2.1791E-02 (2003,253,0700) | 1.7847E-02 (2003,342,0200) |
| 674 | -36.687 | -183.733 | 2.7771E-02 (2003,342,0500) | 2.7295E-02 (2003,342,0300) | 2.2626E-02 (2003,342,0400) | 2.2045E-02 (2003,253,0700) |
| 675 | -35.234 | -183.740 | 3.7907E-02 (2003,342,0500) | 2.8842E-02 (2003,342,0300) | 2.6309E-02 (2003,342,0400) | 2.2167E-02 (2003,253,0700) |
| 676 | -33.781 | -183.746 | 3.9130E-02 (2003,342,0500) | 2.9365E-02 (2003,342,0300) | 2.4918E-02 (2003,342,0400) | 2.2143E-02 (2003,253,0700) |
| 677 | -32.328 | -183.753 | 3.9065E-02 (2003,342,0500) | 2.9877E-02 (2003,342,0300) | 2.3643E-02 (2003,342,0400) | 2.1992E-02 (2003,253,0700) |
| 678 | -30.875 | -183.759 | 3.8312E-02 (2003,342,0500) | 3.0103E-02 (2003,342,0300) | 2.2433E-02 (2003,342,0400) | 2.1714E-02 (2003,253,0700) |
| 679 | -29.422 | -183.764 | 3.6918E-02 (2003,342,0500) | 3.0322E-02 (2003,342,0300) | 2.1450E-02 (2003,342,0400) | 2.1323E-02 (2003,253,0700) |
| 680 | -27.969 | -183.770 | 3.6159E-02 (2003,342,0500) | 3.0531E-02 (2003,342,0300) | 2.2637E-02 (2003,342,0600) | 2.0825E-02 (2003,253,0700) |
| 681 | -26.517 | -183.775 | 3.4535E-02 (2003,342,0500) | 3.0372E-02 (2003,342,0300) | 2.2678E-02 (2003,342,0600) | 2.0223E-02 (2003,253,0700) |
| 682 | -25.064 | -183.779 | 2.9927E-02 (2003,342,0300) | 2.5920E-02 (2003,342,0500) | 1.9546E-02 (2003,253,0700) | 1.9477E-02 (2003,342,0600) |
| 683 | -23.611 | -183.784 | 2.8884E-02 (2003,342,0300) | 1.8808E-02 (2003,253,0700) | 1.6781E-02 (2003,342,0400) | 1.6535E-02 (2003,342,0500) |
| 684 | -22.158 | -183.788 | 3.0095E-02 (2003,342,0300) | 2.9849E-02 (2003,342,0500) | 2.6317E-02 (2003,342,0600) | 1.9356E-02 (2003,342,0400) |
| 685 | -20.705 | -183.792 | 3.0066E-02 (2003,342,0500) | 2.9793E-02 (2003,342,0300) | 2.8672E-02 (2003,342,0600) | 1.9615E-02 (2003,342,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 686 | -45.394 | -181.835 | 2.8681E-02 (2003,253,0600) | 2.3322E-02 (2003,342,0200) | 2.2781E-02 (2003,342,0300) | 2.0944E-02 (2003,286,0300) |
| 687 | -43.941 | -181.843 | 2.8332E-02 (2003,342,0400) | 2.7243E-02 (2003,253,0600) | 2.5018E-02 (2003,342,0300) | 2.3987E-02 (2003,342,0200) |
| 688 | -42.489 | -181.851 | 2.5748E-02 (2003,253,0600) | 2.3939E-02 (2003,342,0300) | 2.2185E-02 (2003,342,0200) | 1.8832E-02 (2003,286,0300) |
| 689 | -41.036 | -181.859 | 2.8556E-02 (2003,342,0400) | 2.7301E-02 (2003,342,0500) | 2.6632E-02 (2003,342,0300) | 2.4204E-02 (2003,253,0600) |
| 690 | -39.584 | -181.866 | 3.2427E-02 (2003,342,0500) | 2.9962E-02 (2003,342,0400) | 2.7684E-02 (2003,342,0300) | 2.4120E-02 (2003,342,0200) |
| 691 | -38.131 | -181.874 | 3.3268E-02 (2003,342,0500) | 2.8036E-02 (2003,342,0400) | 2.7865E-02 (2003,342,0300) | 2.1763E-02 (2003,342,0200) |
| 692 | -36.678 | -181.881 | 2.9623E-02 (2003,342,0500) | 2.8101E-02 (2003,342,0300) | 2.3847E-02 (2003,342,0400) | 2.0428E-02 (2003,253,0700) |
| 693 | -35.226 | -181.887 | 3.4464E-02 (2003,342,0500) | 2.9081E-02 (2003,342,0300) | 2.4685E-02 (2003,342,0400) | 2.0829E-02 (2003,342,0200) |
| 694 | -33.773 | -181.894 | 3.5668E-02 (2003,342,0500) | 2.9532E-02 (2003,342,0300) | 2.3344E-02 (2003,342,0400) | 2.0603E-02 (2003,253,0700) |
| 695 | -32.321 | -181.900 | 3.6687E-02 (2003,342,0500) | 3.0190E-02 (2003,342,0300) | 2.2215E-02 (2003,342,0400) | 2.0497E-02 (2003,253,0700) |
| 696 | -30.868 | -181.906 | 3.6127E-02 (2003,342,0500) | 3.0504E-02 (2003,342,0300) | 2.1099E-02 (2003,342,0400) | 2.0279E-02 (2003,253,0700) |
| 697 | -29.415 | -181.912 | 3.4743E-02 (2003,342,0500) | 3.0615E-02 (2003,342,0300) | 2.0122E-02 (2003,342,0400) | 1.9945E-02 (2003,253,0700) |
| 698 | -27.963 | -181.917 | 3.3390E-02 (2003,342,0500) | 3.0762E-02 (2003,342,0300) | 2.0163E-02 (2003,342,0600) | 1.9505E-02 (2003,253,0700) |
| 699 | -26.510 | -181.922 | 3.0522E-02 (2003,342,0300) | 2.8538E-02 (2003,342,0500) | 1.9106E-02 (2003,342,0600) | 1.8976E-02 (2003,253,0700) |
| 700 | -25.058 | -181.927 | 2.9322E-02 (2003,342,0300) | 1.8371E-02 (2003,253,0700) | 1.6165E-02 (2003,342,0500) | 1.5437E-02 (2003,342,0400) |
| 701 | -23.605 | -181.931 | 3.0106E-02 (2003,342,0300) | 2.3784E-02 (2003,342,0500) | 2.0036E-02 (2003,342,0600) | 1.7689E-02 (2003,253,0700) |
| 702 | -22.152 | -181.936 | 2.9923E-02 (2003,342,0300) | 2.3008E-02 (2003,342,0500) | 2.1217E-02 (2003,342,0600) | 1.7246E-02 (2003,342,0400) |
| 703 | -20.700 | -181.940 | 2.8871E-02 (2003,342,0300) | 1.6648E-02 (2003,342,0400) | 1.6177E-02 (2003,253,0700) | 1.5271E-02 (2003,342,0500) |
| 704 | -46.835 | -179.973 | 2.9483E-02 (2003,342,0400) | 2.8037E-02 (2003,253,0600) | 2.7480E-02 (2003,342,0200) | 2.4335E-02 (2003,342,0300) |
| 705 | -45.383 | -179.982 | 2.6829E-02 (2003,253,0600) | 2.5722E-02 (2003,342,0200) | 2.2702E-02 (2003,342,0300) | 1.9118E-02 (2003,286,0300) |
| 706 | -43.931 | -179.990 | 2.6368E-02 (2003,342,0200) | 2.5520E-02 (2003,253,0600) | 2.4403E-02 (2003,342,0400) | 2.4388E-02 (2003,342,0300) |
| 707 | -42.479 | -179.999 | 2.5650E-02 (2003,342,0200) | 2.5350E-02 (2003,342,0300) | 2.4919E-02 (2003,342,0400) | 2.4145E-02 (2003,253,0600) |
| 708 | -41.026 | -180.006 | 2.5801E-02 (2003,342,0300) | 2.4816E-02 (2003,342,0200) | 2.3493E-02 (2003,342,0400) | 2.2720E-02 (2003,253,0600) |
| 709 | -39.574 | -180.014 | 2.8506E-02 (2003,342,0500) | 2.7245E-02 (2003,342,0300) | 2.6719E-02 (2003,342,0400) | 2.4861E-02 (2003,342,0200) |
| 710 | -38.122 | -180.021 | 3.0682E-02 (2003,342,0500) | 2.8034E-02 (2003,342,0300) | 2.5991E-02 (2003,342,0400) | 2.5300E-02 (2003,342,0200) |
| 711 | -36.670 | -180.028 | 3.1667E-02 (2003,342,0500) | 2.8536E-02 (2003,342,0300) | 2.4338E-02 (2003,342,0400) | 2.4143E-02 (2003,342,0200) |
| 712 | -35.217 | -180.035 | 3.2705E-02 (2003,342,0500) | 2.9050E-02 (2003,342,0300) | 2.2910E-02 (2003,342,0400) | 2.2882E-02 (2003,342,0200) |
| 713 | -33.765 | -180.041 | 3.3842E-02 (2003,342,0500) | 2.9628E-02 (2003,342,0300) | 2.1897E-02 (2003,342,0200) | 2.1662E-02 (2003,342,0400) |
| 714 | -32.313 | -180.048 | 3.3770E-02 (2003,342,0500) | 3.0107E-02 (2003,342,0300) | 2.0900E-02 (2003,301,0800) | 2.0578E-02 (2003,342,0200) |
| 715 | -30.861 | -180.053 | 3.2583E-02 (2003,342,0500) | 3.0265E-02 (2003,342,0300) | 1.9421E-02 (2003,342,0400) | 1.8865E-02 (2003,342,0200) |
| 716 | -29.408 | -180.059 | 3.1535E-02 (2003,342,0500) | 3.0506E-02 (2003,342,0300) | 1.8544E-02 (2003,342,0400) | 1.8474E-02 (2003,253,0700) |
| 717 | -27.956 | -180.064 | 3.0974E-02 (2003,342,0500) | 3.0700E-02 (2003,342,0300) | 1.9072E-02 (2003,342,0600) | 1.8102E-02 (2003,253,0700) |
| 718 | -26.504 | -180.069 | 3.0550E-02 (2003,342,0300) | 3.0207E-02 (2003,342,0500) | 2.0567E-02 (2003,342,0600) | 1.7636E-02 (2003,253,0700) |
| 719 | -25.052 | -180.074 | 3.0080E-02 (2003,342,0300) | 2.2806E-02 (2003,342,0500) | 1.7754E-02 (2003,342,0600) | 1.7099E-02 (2003,253,0700) |
| 720 | -23.599 | -180.079 | 3.0008E-02 (2003,342,0300) | 2.2144E-02 (2003,342,0500) | 1.9000E-02 (2003,342,0600) | 1.6497E-02 (2003,253,0700) |
| 721 | -22.147 | -180.083 | 3.0252E-02 (2003,342,0300) | 2.7487E-02 (2003,342,0500) | 2.5009E-02 (2003,342,0600) | 1.7001E-02 (2003,342,0400) |
| 722 | -20.695 | -180.087 | 2.9534E-02 (2003,342,0300) | 2.1166E-02 (2003,342,0600) | 2.0695E-02 (2003,342,0500) | 1.6238E-02 (2003,342,0400) |
| 723 | -46.824 | -178.121 | 2.8498E-02 (2003,342,0200) | 2.5884E-02 (2003,253,0600) | 2.2784E-02 (2003,138,0100) | 2.2657E-02 (2003,342,0300) |
| 724 | -45.372 | -178.130 | 2.7159E-02 (2003,342,0200) | 2.4791E-02 (2003,253,0600) | 2.1960E-02 (2003,342,0300) | 2.0779E-02 (2003,138,0100) |
| 725 | -43.920 | -178.138 | 2.8615E-02 (2003,342,0200) | 2.4411E-02 (2003,342,0300) | 2.4101E-02 (2003,342,0400) | 2.3619E-02 (2003,253,0600) |
| 726 | -42.469 | -178.146 | 2.7810E-02 (2003,342,0200) | 2.4865E-02 (2003,342,0300) | 2.2738E-02 (2003,342,0400) | 2.2375E-02 (2003,253,0600) |
| 727 | -41.017 | -178.154 | 2.5561E-02 (2003,342,0200) | 2.3972E-02 (2003,342,0300) | 2.1083E-02 (2003,253,0600) | 1.9786E-02 (2003,138,0100) |
| 728 | -39.565 | -178.161 | 2.6909E-02 (2003,342,0200) | 2.6760E-02 (2003,342,0300) | 2.5729E-02 (2003,342,0500) | 2.4344E-02 (2003,342,0400) |
| 729 | -38.113 | -178.169 | 2.7564E-02 (2003,342,0500) | 2.7278E-02 (2003,342,0300) | 2.5743E-02 (2003,342,0200) | 2.3599E-02 (2003,342,0400) |
| 730 | -36.661 | -178.176 | 2.8338E-02 (2003,342,0500) | 2.8038E-02 (2003,342,0300) | 2.5997E-02 (2003,342,0200) | 2.2088E-02 (2003,342,0400) |
| 731 | -35.209 | -178.182 | 3.0496E-02 (2003,342,0500) | 2.8775E-02 (2003,342,0300) | 2.5118E-02 (2003,342,0200) | 2.3020E-02 (2003,301,0800) |
| 732 | -33.757 | -178.189 | 3.0675E-02 (2003,342,0500) | 2.9218E-02 (2003,342,0300) | 2.3688E-02 (2003,342,0200) | 2.2337E-02 (2003,301,0800) |
| 733 | -32.305 | -178.195 | 3.0602E-02 (2003,342,0500) | 2.9668E-02 (2003,342,0300) | 2.2194E-02 (2003,342,0200) | 2.1290E-02 (2003,301,0800) |
| 734 | -30.853 | -178.201 | 3.0354E-02 (2003,342,0500) | 3.0046E-02 (2003,342,0300) | 2.0689E-02 (2003,342,0200) | 2.0243E-02 (2003,301,0800) |
| 735 | -29.401 | -178.206 | 3.0100E-02 (2003,342,0300) | 2.9237E-02 (2003,342,0500) | 1.9119E-02 (2003,361,0400) | 1.8874E-02 (2003,342,0200) |
| 736 | -27.949 | -178.212 | 3.0410E-02 (2003,342,0300) | 2.9202E-02 (2003,342,0500) | 1.9983E-02 (2003,342,0600) | 1.8657E-02 (2003,361,0400) |
| 737 | -26.498 | -178.217 | 3.0410E-02 (2003,342,0300) | 2.8078E-02 (2003,342,0500) | 2.0375E-02 (2003,342,0600) | 1.8133E-02 (2003,361,0400) |
| 738 | -25.046 | -178.222 | 2.9641E-02 (2003,342,0300) | 2.0872E-02 (2003,342,0500) | 1.6524E-02 (2003,342,0600) | 1.5768E-02 (2003,253,0700) |
| 739 | -23.594 | -178.226 | 3.0256E-02 (2003,342,0300) | 2.6092E-02 (2003,342,0500) | 2.2154E-02 (2003,342,0600) | 1.7096E-02 (2003,361,0400) |
| 740 | -22.142 | -178.231 | 2.9397E-02 (2003,342,0300) | 1.9666E-02 (2003,342,0500) | 1.8814E-02 (2003,342,0600) | 1.4652E-02 (2003,361,0400) |
| 741 | -20.690 | -178.235 | 2.8428E-02 (2003,342,0300) | 1.4456E-02 (2003,342,0400) | 1.4006E-02 (2003,253,0700) | 1.3478E-02 (2003,138,0300) |
| 742 | -46.813 | -176.268 | 3.2170E-02 (2003,342,0200) | 2.7587E-02 (2003,342,0400) | 2.5774E-02 (2003,138,0100) | 2.4096E-02 (2003,342,0300) |
| 743 | -45.361 | -176.277 | 3.1365E-02 (2003,342,0200) | 2.5391E-02 (2003,138,0100) | 2.3226E-02 (2003,342,0300) | 2.2827E-02 (2003,342,0400) |
| 744 | -43.910 | -176.285 | 2.8248E-02 (2003,342,0200) | 2.2505E-02 (2003,138,0100) | 2.1677E-02 (2003,342,0300) | 2.1604E-02 (2003,253,0600) |
| 745 | -42.458 | -176.293 | 2.9881E-02 (2003,342,0200) | 2.4801E-02 (2003,342,0300) | 2.4128E-02 (2003,138,0100) | 2.3131E-02 (2003,342,0400) |
| 746 | -41.007 | -176.301 | 2.9928E-02 (2003,342,0200) | 2.5500E-02 (2003,342,0300) | 2.4076E-02 (2003,342,0400) | 2.3248E-02 (2003,138,0100) |
| 747 | -39.555 | -176.309 | 2.8738E-02 (2003,342,0200) | 2.5916E-02 (2003,342,0300) | 2.2794E-02 (2003,342,0500) | 2.2265E-02 (2003,138,0100) |
| 748 | -38.104 | -176.316 | 2.9510E-02 (2003,342,0200) | 2.6844E-02 (2003,342,0300) | 2.6029E-02 (2003,342,0500) | 2.3359E-02 (2003,301,0800) |
| 749 | -36.652 | -176.323 | 2.7775E-02 (2003,342,0200) | 2.7235E-02 (2003,342,0300) | 2.5196E-02 (2003,342,0500) | 2.1896E-02 (2003,361,0400) |
| 750 | -35.201 | -176.330 | 2.7958E-02 (2003,342,0300) | 2.7050E-02 (2003,342,0500) | 2.6776E-02 (2003,342,0200) | 2.3327E-02 (2003,301,0800) |
| 751 | -33.749 | -176.336 | 2.8393E-02 (2003,342,0300) | 2.7213E-02 (2003,342,0500) | 2.5183E-02 (2003,342,0200) | 2.2269E-02 (2003,301,0800) |
| 752 | -32.297 | -176.342 | 2.8694E-02 (2003,342,0300) | 2.6610E-02 (2003,342,0500) | 2.3304E-02 (2003,342,0200) | 2.1046E-02 (2003,361,0400) |
| 753 | -30.846 | -176.348 | 2.9276E-02 (2003,342,0300) | 2.7112E-02 (2003,342,0500) | 2.2058E-02 (2003,342,0200) | 2.0695E-02 (2003,361,0400) |
| 754 | -29.394 | -176.354 | 2.9563E-02 (2003,342,0300) | 2.6764E-02 (2003,342,0500) | 2.0459E-02 (2003,342,0200) | 2.0295E-02 (2003,361,0400) |
| 755 | -27.943 | -176.359 | 2.9626E-02 (2003,342,0300) | 2.6139E-02 (2003,342,0500) | 1.9847E-02 (2003,361,0400) | 1.8702E-02 (2003,342,0200) |
| 756 | -26.491 | -176.364 | 2.9715E-02 (2003,342,0300) | 2.5534E-02 (2003,342,0500) | 1.9533E-02 (2003,342,0600) | 1.9377E-02 (2003,361,0400) |
| 757 | -25.040 | -176.369 | 2.9697E-02 (2003,342,0300) | 2.4578E-02 (2003,342,0500) | 2.0018E-02 (2003,342,0600) | 1.8905E-02 (2003,361,0400) |
| 758 | -23.588 | -176.374 | 2.9485E-02 (2003,342,0300) | 2.3468E-02 (2003,342,0500) | 2.0235E-02 (2003,342,0600) | 1.8402E-02 (2003,361,0400) |
| 759 | -22.137 | -176.378 | 2.9298E-02 (2003,342,0300) | 2.2717E-02 (2003,342,0500) | 2.1513E-02 (2003,342,0600) | 1.7881E-02 (2003,361,0400) |
| 760 | -20.685 | -176.382 | 2.8386E-02 (2003,342,0300) | 1.8219E-02 (2003,342,0600) | 1.7170E-02 (2003,342,0500) | 1.5623E-02 (2003,361,0400) |
| 761 | -62.765 | -174.303 | 3.9157E-02 (2003,342,0300) | 3.4393E-02 (2003,342,0200) | 3.3837E-02 (2003,342,0400) | 3.1065E-02 (2003,342,0100) |
| 762 | -46.802 | -174.416 | 3.7978E-02 (2003,342,0200) | 2.9581E-02 (2003,301,0700) | 2.7507E-02 (2003,342,0400) | 2.7480E-02 (2003,301,0800) |
| 763 | -45.351 | -174.425 | 3.2753E-02 (2003,342,0200) | 2.6824E-02 (2003,138,0100) | 2.1575E-02 (2003,342,0300) | 2.1445E-02 (2003,301,0800) |
| 764 | -43.899 | -174.433 | 3.0605E-02 (2003,342,0200) | 2.4359E-02 (2003,138,0100) | 2.0878E-02 (2003,342,0300) | 2.0154E-02 (2003,301,0800) |
| 765 | -42.448 | -174.441 | 3.1497E-02 (2003,342,0200) | 2.5695E-02 (2003,138,0100) | 2.3625E-02 (2003,342,0300) | 2.1474E-02 (2003,301,0800) |
| 766 | -40.997 | -174.449 | 3.1532E-02 (2003,342,0200) | 2.4852E-02 (2003,138,0100) | 2.4259E-02 (2003,342,0300) | 2.1311E-02 (2003,301,0800) |
| 767 | -39.546 | -174.456 | 3.2511E-02 (2003,342,0200) | 2.5194E-02 (2003,342,0300) | 2.4146E-02 (2003,301,0800) | 2.3864E-02 (2003,138,0100) |
| 768 | -38.095 | -174.464 | 3.1296E-02 (2003,342,0200) | 2.5740E-02 (2003,342,0300) | 2.5044E-02 (2003,301,0800) | 2.3984E-02 (2003,301,0700) |
| 769 | -36.643 | -174.471 | 2.9742E-02 (2003,342,0200) | 2.6271E-02 (2003,342,0300) | 2.4052E-02 (2003,301,0800) | 2.3176E-02 (2003,342,0500) |
| 770 | -35.192 | -174.477 | 2.7741E-02 (2003,342,0200) | 2.6649E-02 (2003,342,0300) | 2.2936E-02 (2003,342,0500) | 2.2138E-02 (2003,361,0400) |
| 771 | -33.741 | -174.484 | 2.7084E-02 (2003,342,0300) | 2.6077E-02 (2003,342,0200) | 2.3172E-02 (2003,342,0500) | 2.1941E-02 (2003,361,0400) |
| 772 | -32.290 | -174.490 | 2.7737E-02 (2003,342,0300) | 2.4827E-02 (2003,342,0200) | 2.3820E-02 (2003,342,0500) | 2.1730E-02 (2003,361,0400) |
| 773 | -30.839 | -174.496 | 2.8131E-02 (2003,342,0300) | 2.3718E-02 (2003,342,0500) | 2.3143E-02 (2003,342,0200) | 2.1431E-02 (2003,361,0400) |
| 774 | -29.387 | -174.501 | 2.8464E-02 (2003,342,0300) | 2.3517E-02 (2003,342,0500) | 2.1521E-02 (2003,342,0200) | 2.1117E-02 (2003,361,0400) |
| 775 | -27.936 | -174.507 | 2.8686E-02 (2003,342,0300) | 2.3142E-02 (2003,342,0500) | 2.0754E-02 (2003,361,0400) | 1.9886E-02 (2003,342,0200) |
| 776 | -26.485 | -174.512 | 2.8658E-02 (2003,342,0300) | 2.2535E-02 (2003,342,0500) | 2.0329E-02 (2003,361,0400) | 1.8112E-02 (2003,342,0200) |
| 777 | -25.034 | -174.517 | 2.8535E-02 (2003,342,0300) | 2.1398E-02 (2003,342,0500) | 1.9907E-02 (2003,361,0400) | 1.7353E-02 (2003,138,0200) |
| 778 | -23.582 | -174.521 | 2.8248E-02 (2003,342,0300) | 2.0784E-02 (2003,342,0500) | 1.9460E-02 (2003,361,0400) | 1.8200E-02 (2003,342,0600) |
| 779 | -22.131 | -174.526 | 2.7638E-02 (2003,342,0300) | 1.6948E-02 (2003,361,0400) | 1.6286E-02 (2003,138,0300) | 1.5778E-02 (2003,342,0500) |
| 780 | -62.750 | -172.451 | 3.6564E-02 (2003,342,0300) | 3.5794E-02 (2003,342,0200) | 3.4421E-02 (2003,342,0100) | 3.0697E-02 (2003,138,0000) |
| 781 | -61.299 | -172.462 | 3.6953E-02 (2003,342,0200) | 3.3993E-02 (2003,342,0300) | 3.3420E-02 (2003,301,0700) | 3.3095E-02 (2003,342,0100) |
| 782 | -46.791 | -172.563 | 3.2260E-02 (2003,342,0200) | 2.4868E-02 (2003,138,0100) | 2.0354E-02 (2003,301,0800) | 1.9903E-02 (2003,015,1000) |
| 783 | -45.340 | -172.572 | 3.2555E-02 (2003,342,0200) | 2.5385E-02 (2003,138,0100) | 2.0600E-02 (2003,301,0800) | 1.9518E-02 (2003,301,0700) |
| 784 | -43.889 | -172.580 | 3.7332E-02 (2003,342,0200) | 2.7209E-02 (2003,138,0100) | 2.4172E-02 (2003,301,0700) | 2.4118E-02 (2003,301,0800) |
| 785 | -42.438 | -172.588 | 3.6412E-02 (2003,342,0200) | 2.6624E-02 (2003,138,0100) | 2.5244E-02 (2003,301,0700) | 2.4970E-02 (2003,301,0800) |
| 786 | -40.987 | -172.596 | 3.4974E-02 (2003,342,0200) | 2.5866E-02 (2003,138,0100) | 2.3367E-02 (2003,301,0800) | 2.3187E-02 (2003,342,0300) |
| 787 | -39.536 | -172.604 | 3.1516E-02 (2003,342,0200) | 2.4922E-02 (2003,138,0100) | 2.3340E-02 (2003,342,0300) | 2.1512E-02 (2003,138,0200) |
| 788 | -38.086 | -172.611 | 3.2445E-02 (2003,342,0200) | 2.4421E-02 (2003,301,0800) | 2.4280E-02 (2003,342,0300) | 2.3831E-02 (2003,138,0100) |
| 789 | -36.635 | -172.618 | 3.0837E-02 (2003,342,0200) | 2.4830E-02 (2003,342,0300) | 2.3475E-02 (2003,301,0800) | 2.2628E-02 (2003,138,0100) |
| 790 | -35.184 | -172.625 | 2.8754E-02 (2003,342,0200) | 2.5191E-02 (2003,342,0300) | 2.2198E-02 (2003,361,0400) | 2.2196E-02 (2003,138,0200) |
| 791 | -33.733 | -172.631 | 2.7413E-02 (2003,342,0200) | 2.5824E-02 (2003,342,0300) | 2.2122E-02 (2003,361,0400) | 2.2061E-02 (2003,138,0200) |
| 792 | -32.282 | -172.637 | 2.6156E-02 (2003,342,0300) | 2.5410E-02 (2003,342,0200) | 2.1962E-02 (2003,361,0400) | 2.1795E-02 (2003,138,0200) |
| 793 | -30.831 | -172.643 | 2.6767E-02 (2003,342,0300) | 2.4088E-02 (2003,342,0200) | 2.1789E-02 (2003,361,0400) | 2.1403E-02 (2003,138,0200) |
| 794 | -29.380 | -172.649 | 2.7030E-02 (2003,342,0300) | 2.2282E-02 (2003,342,0200) | 2.1551E-02 (2003,361,0400) | 2.0877E-02 (2003,138,0200) |
| 795 | -27.929 | -172.654 | 2.7315E-02 (2003,342,0300) | 2.1279E-02 (2003,361,0400) | 2.0665E-02 (2003,342,0200) | 2.0176E-02 (2003,138,0200) |
| 796 | -26.479 | -172.659 | 2.7397E-02 (2003,342,0300) | 2.0961E-02 (2003,361,0400) | 1.9611E-02 (2003,342,0500) | 1.9455E-02 (2003,138,0200) |
| 797 | -25.028 | -172.664 | 2.7288E-02 (2003,342,0300) | 2.0607E-02 (2003,361,0400) | 1.8894E-02 (2003,342,0500) | 1.8658E-02 (2003,138,0200) |
| 798 | -23.577 | -172.669 | 2.6961E-02 (2003,342,0300) | 2.0225E-02 (2003,361,0400) | 1.8138E-02 (2003,342,0500) | 1.7752E-02 (2003,138,0200) |
| 799 | -61.285 | -170.610 | 3.7854E-02 (2003,342,0200) | 3.6122E-02 (2003,342,0100) | 3.4366E-02 (2003,301,0700) | 3.1088E-02 (2003,301,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 800 | -46.780 | -170.711 | 4.0258E-02 (2003,342,0200) | 2.8053E-02 (2003,301,0700) | 2.7561E-02 (2003,138,0100) | 2.5799E-02 (2003,301,0800) |
| 801 | -45.329 | -170.720 | 3.9610E-02 (2003,342,0200) | 2.8610E-02 (2003,301,0700) | 2.7586E-02 (2003,138,0100) | 2.6447E-02 (2003,301,0800) |
| 802 | -43.879 | -170.728 | 3.1599E-02 (2003,342,0200) | 2.5472E-02 (2003,138,0100) | 1.9918E-02 (2003,301,0800) | 1.9885E-02 (2003,138,0200) |
| 803 | -42.428 | -170.736 | 3.1759E-02 (2003,342,0200) | 2.6094E-02 (2003,138,0100) | 2.0787E-02 (2003,138,0200) | 2.0299E-02 (2003,301,0800) |
| 804 | -40.977 | -170.744 | 3.6167E-02 (2003,342,0200) | 2.6227E-02 (2003,138,0100) | 2.5260E-02 (2003,301,0700) | 2.4867E-02 (2003,301,0800) |
| 805 | -39.527 | -170.751 | 3.4669E-02 (2003,342,0200) | 2.5374E-02 (2003,138,0100) | 2.3738E-02 (2003,301,0800) | 2.3441E-02 (2003,301,0700) |
| 806 | -38.076 | -170.759 | 3.3200E-02 (2003,342,0200) | 2.4335E-02 (2003,138,0100) | 2.3480E-02 (2003,301,0800) | 2.2833E-02 (2003,301,0700) |
| 807 | -36.626 | -170.766 | 2.9441E-02 (2003,342,0200) | 2.3186E-02 (2003,138,0100) | 2.3098E-02 (2003,138,0200) | 2.2770E-02 (2003,342,0300) |
| 808 | -35.175 | -170.772 | 2.9692E-02 (2003,342,0200) | 2.3623E-02 (2003,342,0300) | 2.3243E-02 (2003,138,0200) | 2.1948E-02 (2003,138,0100) |
| 809 | -33.725 | -170.779 | 2.7712E-02 (2003,342,0200) | 2.4033E-02 (2003,342,0300) | 2.3157E-02 (2003,138,0200) | 2.1845E-02 (2003,361,0400) |
| 810 | -32.274 | -170.785 | 2.6349E-02 (2003,342,0200) | 2.4669E-02 (2003,342,0300) | 2.2920E-02 (2003,138,0200) | 2.1816E-02 (2003,361,0400) |
| 811 | -30.824 | -170.791 | 2.4968E-02 (2003,342,0300) | 2.4361E-02 (2003,342,0200) | 2.2539E-02 (2003,138,0200) | 2.1720E-02 (2003,361,0400) |
| 812 | -29.373 | -170.796 | 2.5439E-02 (2003,342,0300) | 2.2901E-02 (2003,342,0200) | 2.1961E-02 (2003,138,0200) | 2.1609E-02 (2003,361,0400) |
| 813 | -27.923 | -170.802 | 2.5718E-02 (2003,342,0300) | 2.1437E-02 (2003,361,0400) | 2.1294E-02 (2003,138,0200) | 2.1246E-02 (2003,342,0200) |
| 814 | -26.472 | -170.807 | 2.5736E-02 (2003,342,0300) | 2.1206E-02 (2003,361,0400) | 2.0544E-02 (2003,138,0200) | 1.9372E-02 (2003,342,0200) |
| 815 | -25.022 | -170.812 | 2.5663E-02 (2003,342,0300) | 2.0954E-02 (2003,361,0400) | 1.9714E-02 (2003,138,0200) | 1.8135E-02 (2003,138,0300) |
| 816 | -59.820 | -168.769 | 3.9197E-02 (2003,342,0200) | 3.6682E-02 (2003,342,0100) | 3.6053E-02 (2003,301,0700) | 3.3425E-02 (2003,301,0600) |
| 817 | -43.868 | -168.875 | 3.1775E-02 (2003,342,0200) | 2.4846E-02 (2003,138,0100) | 1.9911E-02 (2003,015,1000) | 1.9411E-02 (2003,138,0200) |
| 818 | -42.418 | -168.884 | 3.3121E-02 (2003,342,0200) | 2.6486E-02 (2003,138,0100) | 2.1328E-02 (2003,361,0300) | 2.0847E-02 (2003,138,0200) |
| 819 | -40.968 | -168.891 | 3.2756E-02 (2003,342,0200) | 2.5948E-02 (2003,138,0100) | 2.1812E-02 (2003,138,0200) | 2.0927E-02 (2003,361,0300) |
| 820 | -39.518 | -168.899 | 3.1502E-02 (2003,342,0200) | 2.5197E-02 (2003,138,0100) | 2.2551E-02 (2003,138,0200) | 2.0488E-02 (2003,361,0300) |
| 821 | -38.067 | -168.906 | 3.0132E-02 (2003,342,0200) | 2.4269E-02 (2003,138,0100) | 2.3189E-02 (2003,138,0200) | 2.0023E-02 (2003,361,0300) |
| 822 | -36.617 | -168.913 | 3.1586E-02 (2003,342,0200) | 2.3617E-02 (2003,138,0200) | 2.3205E-02 (2003,138,0100) | 2.1253E-02 (2003,342,0300) |
| 823 | -35.167 | -168.920 | 2.8357E-02 (2003,342,0200) | 2.3803E-02 (2003,138,0200) | 2.2030E-02 (2003,138,0100) | 2.1525E-02 (2003,342,0300) |
| 824 | -33.717 | -168.926 | 2.8505E-02 (2003,342,0200) | 2.3794E-02 (2003,138,0200) | 2.2415E-02 (2003,342,0300) | 2.1196E-02 (2003,361,0400) |
| 825 | -32.267 | -168.932 | 2.6567E-02 (2003,342,0200) | 2.3625E-02 (2003,138,0200) | 2.2823E-02 (2003,342,0300) | 2.1253E-02 (2003,361,0400) |
| 826 | -30.816 | -168.938 | 2.5008E-02 (2003,342,0200) | 2.3330E-02 (2003,342,0300) | 2.3274E-02 (2003,138,0200) | 2.1294E-02 (2003,361,0400) |
| 827 | -29.366 | -168.944 | 2.3685E-02 (2003,342,0300) | 2.3288E-02 (2003,342,0200) | 2.2720E-02 (2003,138,0200) | 2.1273E-02 (2003,361,0400) |
| 828 | -27.916 | -168.949 | 2.3978E-02 (2003,342,0300) | 2.2063E-02 (2003,138,0200) | 2.1624E-02 (2003,342,0200) | 2.1215E-02 (2003,361,0400) |
| 829 | -26.466 | -168.954 | 2.4154E-02 (2003,342,0300) | 2.1309E-02 (2003,138,0200) | 2.1116E-02 (2003,361,0400) | 1.9938E-02 (2003,342,0200) |
| 830 | -25.016 | -168.959 | 2.4100E-02 (2003,342,0300) | 2.0953E-02 (2003,361,0400) | 2.0442E-02 (2003,138,0200) | 1.8553E-02 (2003,138,0300) |
| 831 | -45.307 | -167.015 | 2.3401E-02 (2003,342,0200) | 2.3642E-02 (2003,138,0100) | 2.1924E-02 (2003,015,1000) | 1.9485E-02 (2003,301,0800) |
| 832 | -43.858 | -167.023 | 2.2836E-02 (2003,342,0200) | 2.4055E-02 (2003,138,0100) | 2.0849E-02 (2003,015,1000) | 1.9518E-02 (2003,301,0800) |
| 833 | -42.408 | -167.031 | 3.7944E-02 (2003,342,0200) | 2.5918E-02 (2003,301,0700) | 2.5463E-02 (2003,138,0100) | 2.4166E-02 (2003,301,0800) |
| 834 | -25.010 | -167.107 | 2.2224E-02 (2003,342,0300) | 2.0830E-02 (2003,138,0200) | 2.0572E-02 (2003,361,0400) | 1.8662E-02 (2003,138,0300) |

**********
CALPOST Version 5.6394 Level 070622
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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 329 | -19.357 | -226.410 | 6.5100E-05 | 582 | -32.382 | -196.721 | 1.0473E-04 |
| 330 | -23.734 | -224.545 | 7.3303E-05 | 583 | -30.927 | -196.727 | 9.9096E-05 |
| 331 | -22.274 | -224.549 | 6.9868E-05 | 584 | -29.472 | -196.733 | 9.5579E-05 |
| 332 | -20.813 | -224.553 | 6.7427E-05 | 585 | -28.016 | -196.738 | 7.9803E-05 |
| 333 | -17.892 | -224.561 | 6.2459E-05 | 586 | -26.561 | -196.743 | 7.8992E-05 |
| 334 | -16.432 | -224.564 | 6.0814E-05 | 587 | -46.925 | -194.794 | 1.5274E-04 |
| 335 | -23.729 | -222.692 | 7.2995E-05 | 588 | -45.470 | -194.803 | 1.4844E-04 |
| 336 | -22.269 | -222.696 | 7.0801E-05 | 589 | -44.015 | -194.811 | 1.4345E-04 |
| 337 | -20.808 | -222.701 | 6.7758E-05 | 590 | -42.560 | -194.819 | 1.3238E-04 |
| 338 | -19.348 | -222.704 | 6.5313E-05 | 591 | -41.105 | -194.827 | 1.3257E-04 |
| 339 | -17.888 | -222.708 | 6.2951E-05 | 592 | -39.650 | -194.835 | 1.3055E-04 |
| 340 | -16.428 | -222.711 | 6.1012E-05 | 593 | -38.195 | -194.842 | 1.1684E-04 |
| 341 | -14.967 | -222.714 | 5.8191E-05 | 594 | -36.740 | -194.849 | 1.0020E-04 |
| 342 | -25.183 | -220.835 | 7.6348E-05 | 595 | -35.285 | -194.856 | 1.0470E-04 |
| 343 | -23.723 | -220.839 | 7.3933E-05 | 596 | -33.830 | -194.862 | 1.0679E-04 |
| 344 | -22.263 | -220.844 | 7.0758E-05 | 597 | -32.375 | -194.868 | 1.0735E-04 |
| 345 | -20.803 | -220.848 | 6.8488E-05 | 598 | -30.920 | -194.874 | 1.0390E-04 |
| 346 | -19.344 | -220.851 | 6.6400E-05 | 599 | -29.465 | -194.880 | 8.3240E-05 |
| 347 | -17.884 | -220.855 | 6.4366E-05 | 600 | -28.009 | -194.885 | 8.1451E-05 |
| 348 | -16.424 | -220.858 | 6.0646E-05 | 601 | -26.554 | -194.890 | 9.2544E-05 |
| 349 | -14.964 | -220.861 | 5.8478E-05 | 602 | -45.459 | -192.950 | 1.5079E-04 |
| 350 | -25.177 | -218.982 | 7.6813E-05 | 603 | -44.004 | -192.959 | 1.4027E-04 |
| 351 | -23.718 | -218.986 | 7.4269E-05 | 604 | -42.550 | -192.967 | 1.3266E-04 |
| 352 | -22.258 | -218.991 | 7.0813E-05 | 605 | -41.095 | -192.975 | 1.2660E-04 |
| 353 | -20.799 | -218.995 | 6.8873E-05 | 606 | -39.640 | -192.982 | 1.3032E-04 |
| 354 | -19.339 | -218.998 | 6.6596E-05 | 607 | -38.186 | -192.989 | 1.0683E-04 |
| 355 | -17.879 | -219.002 | 6.3150E-05 | 608 | -36.731 | -192.996 | 1.0178E-04 |
| 356 | -16.420 | -219.005 | 6.1825E-05 | 609 | -35.276 | -193.003 | 9.8407E-05 |
| 357 | -26.630 | -217.124 | 8.0090E-05 | 610 | -33.822 | -193.010 | 1.1048E-04 |
| 358 | -25.171 | -217.129 | 7.6765E-05 | 611 | -32.367 | -193.016 | 1.1109E-04 |
| 359 | -23.712 | -217.133 | 7.3578E-05 | 612 | -30.912 | -193.022 | 1.0747E-04 |
| 360 | -22.253 | -217.138 | 7.1890E-05 | 613 | -29.457 | -193.027 | 1.0046E-04 |
| 361 | -20.794 | -217.142 | 6.9587E-05 | 614 | -28.003 | -193.033 | 9.7621E-05 |
| 362 | -19.334 | -217.145 | 6.6677E-05 | 615 | -26.548 | -193.038 | 8.1461E-05 |
| 363 | -17.875 | -217.149 | 6.3984E-05 | 616 | -25.093 | -193.043 | 9.1304E-05 |
| 364 | -16.416 | -217.152 | 6.1461E-05 | 617 | -41.085 | -191.122 | 1.3979E-04 |
| 365 | -47.048 | -215.175 | 1.2498E-04 | 618 | -39.631 | -191.129 | 1.1949E-04 |
| 366 | -45.589 | -215.183 | 1.3065E-04 | 619 | -38.176 | -191.137 | 1.2121E-04 |
| 367 | -44.130 | -215.192 | 1.2744E-04 | 620 | -36.722 | -191.144 | 1.1902E-04 |
| 368 | -42.671 | -215.200 | 1.2292E-04 | 621 | -35.268 | -191.150 | 1.2168E-04 |
| 369 | -41.212 | -215.208 | 1.1842E-04 | 622 | -33.813 | -191.157 | 1.1831E-04 |
| 370 | -39.754 | -215.215 | 1.1375E-04 | 623 | -32.359 | -191.163 | 1.1567E-04 |
| 371 | -38.295 | -215.223 | 1.0909E-04 | 624 | -30.905 | -191.169 | 1.1137E-04 |
| 372 | -36.836 | -215.230 | 1.0563E-04 | 625 | -29.450 | -191.175 | 1.0365E-04 |
| 373 | -35.377 | -215.236 | 1.0143E-04 | 626 | -27.996 | -191.180 | 1.0037E-04 |
| 374 | -33.918 | -215.243 | 9.7635E-05 | 627 | -26.542 | -191.185 | 9.4578E-05 |
| 375 | -32.459 | -215.249 | 9.3509E-05 | 628 | -25.087 | -191.190 | 9.4261E-05 |
| 376 | -31.001 | -215.255 | 8.9915E-05 | 629 | -39.621 | -189.277 | 1.1624E-04 |
| 377 | -29.542 | -215.261 | 8.6693E-05 | 630 | -38.167 | -189.284 | 1.3231E-04 |
| 378 | -28.083 | -215.266 | 8.4423E-05 | 631 | -36.713 | -189.291 | 1.2776E-04 |
| 379 | -26.624 | -215.271 | 8.0382E-05 | 632 | -35.259 | -189.298 | 1.1647E-04 |
| 380 | -25.165 | -215.276 | 7.6945E-05 | 633 | -33.805 | -189.304 | 1.2326E-04 |
| 381 | -23.706 | -215.280 | 7.4051E-05 | 634 | -32.351 | -189.310 | 1.2064E-04 |
| 382 | -22.247 | -215.285 | 7.2450E-05 | 635 | -30.897 | -189.316 | 1.1240E-04 |
| 383 | -20.789 | -215.289 | 6.8812E-05 | 636 | -29.443 | -189.322 | 1.0802E-04 |
| 384 | -19.330 | -215.293 | 6.7245E-05 | 637 | -27.989 | -189.327 | 9.5196E-05 |
| 385 | -17.871 | -215.296 | 6.4881E-05 | 638 | -26.535 | -189.332 | 9.7017E-05 |
| 386 | -16.412 | -215.299 | 6.1769E-05 | 639 | -25.081 | -189.337 | 8.2274E-05 |
| 387 | -51.412 | -213.294 | 1.5731E-04 | 640 | -23.628 | -189.342 | 9.2194E-05 |
| 388 | -49.953 | -213.304 | 1.4892E-04 | 641 | -22.173 | -189.346 | 8.9186E-05 |
| 389 | -48.495 | -213.313 | 1.3930E-04 | 642 | -41.066 | -187.417 | 1.4213E-04 |
| 390 | -47.037 | -213.322 | 1.0764E-04 | 643 | -39.612 | -187.424 | 1.1934E-04 |
| 391 | -45.578 | -213.330 | 1.3005E-04 | 644 | -38.158 | -187.431 | 1.3296E-04 |

| | | | |
|---|---|---|---|
| 392 | -44.120 | -213.339 | 1.2634E-04 |
| 393 | -42.661 | -213.347 | 1.1862E-04 |
| 394 | -41.203 | -213.355 | 1.1735E-04 |
| 395 | -39.744 | -213.362 | 1.1329E-04 |
| 396 | -38.286 | -213.370 | 1.0873E-04 |
| 397 | -36.827 | -213.377 | 1.0510E-04 |
| 398 | -35.369 | -213.383 | 1.0107E-04 |
| 399 | -33.910 | -213.390 | 9.7370E-05 |
| 400 | -32.452 | -213.396 | 9.3634E-05 |
| 401 | -30.993 | -213.402 | 9.1419E-05 |
| 402 | -29.535 | -213.408 | 8.6732E-05 |
| 403 | -28.076 | -213.413 | 8.4266E-05 |
| 404 | -26.618 | -213.418 | 8.1078E-05 |
| 405 | -25.159 | -213.423 | 7.7428E-05 |
| 406 | -23.701 | -213.428 | 7.4426E-05 |
| 407 | -22.242 | -213.432 | 7.1806E-05 |
| 408 | -20.784 | -213.436 | 6.9295E-05 |
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| 574 | -44.025 | -196.664 | 1.3918E-04 | 827 | -29.366 | -168.944 | 1.4161E-04 |
| 575 | -42.570 | -196.672 | 1.2961E-04 | 828 | -27.916 | -168.949 | 1.3920E-04 |
| 576 | -41.115 | -196.680 | 1.2914E-04 | 829 | -26.466 | -168.954 | 1.3568E-04 |
| 577 | -39.659 | -196.687 | 1.2154E-04 | 830 | -25.016 | -168.959 | 1.2515E-04 |
| 578 | -38.204 | -196.695 | 1.2008E-04 | 831 | -45.307 | -167.015 | 1.6701E-04 |
| 579 | -36.748 | -196.702 | 1.1343E-04 | 832 | -43.858 | -167.023 | 1.6495E-04 |
| 580 | -35.293 | -196.708 | 9.3977E-05 | 833 | -42.408 | -167.031 | 1.8848E-04 |
| 581 | -33.838 | -196.715 | 9.0979E-05 | 834 | -25.010 | -167.107 | 1.2432E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 633 | -33.805 | -189.304 | DISCRETE | 4.2566E-02 (2003,342,0500) | RANK 1 | 1 | HOUR |
| 816 | -59.820 | -168.769 | DISCRETE | 3.6682E-02 (2003,342,0100) | RANK 2 | 1 | HOUR |
| 816 | -59.820 | -168.769 | DISCRETE | 3.6053E-02 (2003,301,0700) | RANK 3 | 1 | HOUR |
| 816 | -59.820 | -168.769 | DISCRETE | 3.3425E-02 (2003,301,0600) | RANK 4 | 1 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 2.9919E-04 | RANK 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Capitol Reef

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  834*0, 363*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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```

```
0 0 0 
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 841 | -129.441 | -256.870 | 5.3372E-02 (2003,052,0700) | 4.2770E-02 (2003,331,0600) | 4.0666E-02 (2003,125,0700) | 4.0443E-02 (2003,331,0700) |
| 842 | -127.975 | -256.894 | 5.2442E-02 (2003,052,0700) | 4.2846E-02 (2003,331,0600) | 4.1528E-02 (2003,125,0700) | 4.0120E-02 (2003,331,0700) |
| 843 | -126.508 | -256.918 | 4.9996E-02 (2003,052,0700) | 4.1868E-02 (2003,125,0700) | 3.9229E-02 (2003,125,0600) | 3.9053E-02 (2003,331,0600) |
| 844 | -125.041 | -256.941 | 4.6341E-02 (2003,052,0700) | 4.1774E-02 (2003,125,0700) | 4.0798E-02 (2003,125,0600) | 3.3801E-02 (2003,331,0600) |
| 845 | -129.411 | -255.017 | 5.3193E-02 (2003,052,0700) | 4.6608E-02 (2003,331,0600) | 4.2481E-02 (2003,125,0700) | 4.0607E-02 (2003,080,0000) |
| 846 | -127.944 | -255.041 | 5.0878E-02 (2003,052,0700) | 4.3136E-02 (2003,331,0600) | 4.2832E-02 (2003,125,0700) | 4.0304E-02 (2003,125,0600) |
| 847 | -126.478 | -255.065 | 4.7685E-02 (2003,052,0700) | 4.2767E-02 (2003,125,0700) | 4.2014E-02 (2003,125,0600) | 4.1469E-02 (2003,327,0100) |
| 848 | -129.380 | -253.164 | 5.1878E-02 (2003,052,0700) | 4.9122E-02 (2003,331,0600) | 4.3628E-02 (2003,125,0700) | 4.2043E-02 (2003,080,0000) |
| 849 | -127.914 | -253.188 | 4.9139E-02 (2003,052,0700) | 4.6678E-02 (2003,331,0600) | 4.3498E-02 (2003,125,0700) | 4.3242E-02 (2003,125,0600) |
| 850 | -126.448 | -253.212 | 4.4674E-02 (2003,052,0700) | 4.4634E-02 (2003,125,0600) | 4.2937E-02 (2003,125,0700) | 3.9770E-02 (2003,331,0600) |
| 851 | -130.815 | -251.286 | 5.1930E-02 (2003,052,0700) | 5.1486E-02 (2003,331,0600) | 4.5592E-02 (2003,080,0000) | 4.4097E-02 (2003,125,0700) |
| 852 | -129.349 | -251.311 | 4.8147E-02 (2003,052,0700) | 4.4814E-02 (2003,331,0600) | 4.4513E-02 (2003,125,0600) | 4.3787E-02 (2003,125,0700) |
| 853 | -127.884 | -251.335 | 4.6156E-02 (2003,327,0100) | 4.6064E-02 (2003,125,0600) | 4.5522E-02 (2003,052,0700) | 4.5260E-02 (2003,331,0600) |
| 854 | -126.418 | -251.359 | 4.7000E-02 (2003,125,0600) | 4.2277E-02 (2003,125,0700) | 4.1889E-02 (2003,331,0600) | 4.1563E-02 (2003,052,0700) |
| 855 | -133.715 | -249.384 | 5.2839E-02 (2003,052,0700) | 5.1022E-02 (2003,331,0600) | 4.9427E-02 (2003,080,0000) | 4.4361E-02 (2003,125,0700) |
| 856 | -132.249 | -249.409 | 5.1806E-02 (2003,331,0600) | 5.1502E-02 (2003,052,0700) | 4.8373E-02 (2003,080,0000) | 4.7349E-02 (2003,096,0200) |
| 857 | -130.784 | -249.433 | 4.8590E-02 (2003,052,0700) | 4.8512E-02 (2003,331,0600) | 4.6261E-02 (2003,080,0000) | 4.6193E-02 (2003,327,0000) |
| 858 | -129.319 | -249.458 | 4.7654E-02 (2003,327,0000) | 4.7467E-02 (2003,331,0600) | 4.7368E-02 (2003,125,0600) | 4.5508E-02 (2003,052,0700) |
| 859 | -127.854 | -249.482 | 4.8435E-02 (2003,125,0600) | 4.2060E-02 (2003,125,0700) | 4.1889E-02 (2003,331,0600) | 4.0804E-02 (2003,052,0700) |
| 860 | -133.683 | -247.531 | 5.0523E-02 (2003,052,0700) | 5.0290E-02 (2003,080,0000) | 5.0163E-02 (2003,331,0600) | 4.9576E-02 (2003,096,0200) |
| 861 | -132.218 | -247.556 | 4.8786E-02 (2003,080,0000) | 4.7715E-02 (2003,052,0700) | 4.7344E-02 (2003,327,0000) | 4.6812E-02 (2003,125,0600) |
| 862 | -130.753 | -247.580 | 4.8512E-02 (2003,125,0600) | 4.6271E-02 (2003,080,0000) | 4.3210E-02 (2003,052,0700) | 4.3196E-02 (2003,327,0000) |
| 863 | -129.288 | -247.605 | 4.9733E-02 (2003,125,0600) | 4.8815E-02 (2003,327,0100) | 4.5008E-02 (2003,327,0000) | 4.3050E-02 (2003,080,0000) |
| 864 | -127.823 | -247.629 | 5.8062E-02 (2003,327,0100) | 5.0339E-02 (2003,125,0600) | 4.6608E-02 (2003,327,0000) | 4.4029E-02 (2003,053,2300) |
| 865 | -135.116 | -245.653 | 5.1289E-02 (2003,080,0000) | 5.0151E-02 (2003,096,0200) | 4.8970E-02 (2003,120,0500) | 4.8934E-02 (2003,052,0700) |
| 866 | -133.651 | -245.678 | 5.0473E-02 (2003,080,0000) | 5.0324E-02 (2003,327,0000) | 4.7820E-02 (2003,125,0600) | 4.7688E-02 (2003,096,0200) |
| 867 | -132.187 | -245.703 | 5.1938E-02 (2003,327,0000) | 4.9566E-02 (2003,125,0600) | 4.8576E-02 (2003,080,0000) | 4.3787E-02 (2003,052,0700) |
| 868 | -130.722 | -245.727 | 5.0741E-02 (2003,125,0600) | 4.9482E-02 (2003,327,0000) | 4.5732E-02 (2003,080,0000) | 4.5520E-02 (2003,327,0100) |
| 869 | -129.258 | -245.752 | 5.5119E-02 (2003,327,0100) | 5.1408E-02 (2003,125,0600) | 4.9289E-02 (2003,327,0000) | 4.3150E-02 (2003,053,2300) |
| 870 | -136.548 | -243.775 | 5.5105E-02 (2003,120,0500) | 5.1877E-02 (2003,120,0600) | 5.1398E-02 (2003,080,0000) | 4.9012E-02 (2003,096,0200) |
| 871 | -135.084 | -243.800 | 5.4099E-02 (2003,120,0500) | 5.4025E-02 (2003,096,0200) | 5.2650E-02 (2003,327,0000) | 5.2369E-02 (2003,120,0600) |
| 872 | -133.620 | -243.825 | 5.5494E-02 (2003,327,0000) | 5.0375E-02 (2003,125,0600) | 4.9977E-02 (2003,080,0000) | 4.6710E-02 (2003,096,0200) |
| 873 | -132.155 | -243.850 | 5.9158E-02 (2003,327,0000) | 5.1635E-02 (2003,125,0600) | 4.7734E-02 (2003,080,0000) | 4.6299E-02 (2003,096,0200) |
| 874 | -130.691 | -243.874 | 6.2955E-02 (2003,327,0000) | 5.3640E-02 (2003,327,0100) | 5.2307E-02 (2003,125,0600) | 4.9317E-02 (2003,096,0200) |
| 875 | -129.227 | -243.899 | 6.1303E-02 (2003,327,0100) | 5.3084E-02 (2003,327,0000) | 5.2239E-02 (2003,125,0600) | 4.7839E-02 (2003,053,2300) |
| 876 | -137.980 | -241.896 | 6.1352E-02 (2003,120,0500) | 5.7148E-02 (2003,120,0600) | 5.5763E-02 (2003,096,0100) | 5.0679E-02 (2003,080,0000) |
| 877 | -136.516 | -241.922 | 6.0604E-02 (2003,120,0500) | 5.7594E-02 (2003,120,0600) | 5.4598E-02 (2003,096,0100) | 5.2337E-02 (2003,327,0000) |
| 878 | -135.052 | -241.947 | 5.9474E-02 (2003,327,0000) | 5.2906E-02 (2003,096,0200) | 5.2664E-02 (2003,120,0600) | 5.2042E-02 (2003,120,0500) |
| 879 | -133.588 | -241.972 | 6.6268E-02 (2003,327,0000) | 5.7728E-02 (2003,096,0200) | 5.4255E-02 (2003,120,0600) | 5.2474E-02 (2003,120,0500) |
| 880 | -132.124 | -241.997 | 6.7109E-02 (2003,327,0000) | 5.2828E-02 (2003,125,0600) | 5.2365E-02 (2003,096,0200) | 4.9352E-02 (2003,327,0100) |
| 881 | -130.660 | -242.022 | 6.4489E-02 (2003,327,0000) | 5.8908E-02 (2003,327,0100) | 5.2737E-02 (2003,125,0600) | 4.7085E-02 (2003,053,2300) |
| 882 | -129.197 | -242.046 | 6.7344E-02 (2003,327,0100) | 5.8518E-02 (2003,327,0000) | 5.2195E-02 (2003,053,2300) | 5.2069E-02 (2003,125,0600) |
| 883 | -137.947 | -240.043 | 6.6863E-02 (2003,120,0500) | 6.2808E-02 (2003,120,0600) | 6.2556E-02 (2003,096,0100) | 5.1959E-02 (2003,155,0500) |
| 884 | -136.483 | -240.069 | 6.4260E-02 (2003,120,0500) | 6.1858E-02 (2003,120,0600) | 6.0213E-02 (2003,327,0000) | 5.9493E-02 (2003,096,0100) |
| 885 | -135.020 | -240.094 | 6.4832E-02 (2003,327,0000) | 5.2596E-02 (2003,125,0600) | 5.1111E-02 (2003,096,0100) | 5.0306E-02 (2003,052,0600) |
| 886 | -133.556 | -240.119 | 6.7596E-02 (2003,327,0000) | 5.2946E-02 (2003,125,0600) | 4.9864E-02 (2003,052,0600) | 4.9130E-02 (2003,331,0500) |
| 887 | -132.093 | -240.144 | 7.1208E-02 (2003,327,0000) | 5.4856E-02 (2003,327,0100) | 5.2863E-02 (2003,125,0600) | 5.0807E-02 (2003,331,0500) |
| 888 | -130.629 | -240.169 | 6.2916E-02 (2003,327,0100) | 6.2394E-02 (2003,327,0000) | 5.1952E-02 (2003,125,0600) | 5.0714E-02 (2003,053,2300) |
| 889 | -129.166 | -240.193 | 7.2912E-02 (2003,327,0100) | 6.3313E-02 (2003,327,0000) | 5.5804E-02 (2003,053,2300) | 5.0786E-02 (2003,125,0600) |
| 890 | -137.914 | -238.190 | 7.1973E-02 (2003,120,0500) | 6.7825E-02 (2003,120,0600) | 6.7403E-02 (2003,096,0100) | 5.9364E-02 (2003,327,0000) |
| 891 | -136.451 | -238.216 | 6.7453E-02 (2003,327,0000) | 6.2006E-02 (2003,120,0500) | 6.1659E-02 (2003,120,0600) | 6.0798E-02 (2003,096,0100) |
| 892 | -134.988 | -238.241 | 7.1984E-02 (2003,327,0000) | 5.4512E-02 (2003,331,0500) | 5.3598E-02 (2003,096,0100) | 5.3068E-02 (2003,125,0600) |
| 893 | -133.525 | -238.266 | 7.4521E-02 (2003,327,0000) | 5.4882E-02 (2003,331,0500) | 5.2627E-02 (2003,125,0600) | 5.1487E-02 (2003,052,0600) |
| 894 | -132.062 | -238.291 | 6.6013E-02 (2003,327,0000) | 5.7450E-02 (2003,327,0100) | 5.1375E-02 (2003,125,0600) | 4.8723E-02 (2003,053,2300) |
| 895 | -130.599 | -238.316 | 6.7483E-02 (2003,327,0100) | 6.5061E-02 (2003,327,0000) | 5.4163E-02 (2003,053,2300) | 5.0193E-02 (2003,331,0500) |
| 896 | -137.882 | -236.337 | 7.6465E-02 (2003,120,0500) | 7.1975E-02 (2003,120,0600) | 6.9637E-02 (2003,096,0100) | 6.7807E-02 (2003,327,0000) |
| 897 | -136.419 | -236.363 | 7.5887E-02 (2003,327,0000) | 6.8795E-02 (2003,120,0500) | 6.7511E-02 (2003,120,0600) | 6.3049E-02 (2003,096,0100) |
| 898 | -134.956 | -236.388 | 7.8585E-02 (2003,327,0000) | 5.8031E-02 (2003,331,0500) | 5.4960E-02 (2003,120,0600) | 5.3829E-02 (2003,096,0100) |
| 899 | -133.493 | -236.413 | 7.0157E-02 (2003,327,0000) | 5.1390E-02 (2003,327,0100) | 5.0491E-02 (2003,125,0600) | 5.0216E-02 (2003,331,0500) |
| 900 | -132.030 | -236.438 | 7.2002E-02 (2003,327,0000) | 6.2502E-02 (2003,327,0100) | 5.4606E-02 (2003,331,0500) | 5.2917E-02 (2003,053,2300) |
| 901 | -137.849 | -234.485 | 8.0048E-02 (2003,120,0500) | 7.6239E-02 (2003,327,0000) | 7.4929E-02 (2003,120,0600) | 6.8817E-02 (2003,096,0100) |
| 902 | -136.386 | -234.510 | 8.2649E-02 (2003,327,0000) | 6.7962E-02 (2003,120,0500) | 6.7254E-02 (2003,120,0600) | 6.0135E-02 (2003,096,0100) |
| 903 | -134.924 | -234.536 | 8.0208E-02 (2003,327,0000) | 5.6249E-02 (2003,331,0500) | 5.2311E-02 (2003,052,0600) | 5.1715E-02 (2003,079,2300) |
| 904 | -133.462 | -234.561 | 7.6127E-02 (2003,327,0000) | 5.6027E-02 (2003,327,0100) | 5.4530E-02 (2003,331,0500) | 5.1253E-02 (2003,079,2300) |
| 905 | -137.816 | -232.632 | 8.4371E-02 (2003,327,0000) | 8.2813E-02 (2003,120,0500) | 7.6683E-02 (2003,120,0600) | 7.1871E-02 (2003,155,0500) |
| 906 | -136.354 | -232.657 | 8.9187E-02 (2003,327,0000) | 6.9926E-02 (2003,120,0500) | 6.8525E-02 (2003,120,0600) | 6.2851E-02 (2003,155,0500) |
| 907 | -134.892 | -232.683 | 7.9557E-02 (2003,327,0000) | 5.3899E-02 (2003,079,2300) | 5.1768E-02 (2003,331,0500) | 4.9781E-02 (2003,052,0600) |
| 908 | -139.245 | -230.753 | 8.7505E-02 (2003,120,0500) | 8.3820E-02 (2003,327,0000) | 8.1749E-02 (2003,155,0500) | 7.8064E-02 (2003,120,0600) |
| 909 | -137.784 | -230.779 | 9.1492E-02 (2003,327,0000) | 8.4751E-02 (2003,120,0500) | 7.7103E-02 (2003,120,0600) | 7.5666E-02 (2003,155,0500) |
| 910 | -136.322 | -230.805 | 8.5085E-02 (2003,327,0000) | 5.5377E-02 (2003,079,2300) | 5.1055E-02 (2003,326,2100) | 5.0107E-02 (2003,052,0600) |
| 911 | -134.860 | -230.830 | 8.4616E-02 (2003,327,0000) | 5.5646E-02 (2003,079,2300) | 5.3330E-02 (2003,327,0100) | 5.3327E-02 (2003,053,2300) |
| 912 | -139.212 | -228.900 | 9.1654E-02 (2003,327,0000) | 8.8415E-02 (2003,120,0500) | 8.4578E-02 (2003,155,0500) | 7.6962E-02 (2003,120,0600) |
| 913 | -137.751 | -228.926 | 9.7159E-02 (2003,327,0000) | 8.5256E-02 (2003,120,0500) | 7.8028E-02 (2003,155,0500) | 7.5846E-02 (2003,120,0600) |
| 914 | -136.290 | -228.952 | 8.7584E-02 (2003,327,0000) | 5.6815E-02 (2003,079,2300) | 5.2903E-02 (2003,326,2100) | 5.1517E-02 (2003,053,2300) |
| 915 | -134.828 | -228.977 | 8.7858E-02 (2003,327,0000) | 5.7138E-02 (2003,327,0100) | 5.7131E-02 (2003,053,2300) | 5.6634E-02 (2003,079,2300) |
| 916 | -140.640 | -227.021 | 9.2699E-02 (2003,155,0500) | 9.1172E-02 (2003,120,0500) | 9.0529E-02 (2003,327,0000) | 7.5440E-02 (2003,120,0600) |
| 917 | -139.179 | -227.048 | 9.7780E-02 (2003,327,0000) | 8.8037E-02 (2003,120,0500) | 8.6259E-02 (2003,155,0500) | 7.4290E-02 (2003,120,0600) |
| 918 | -137.718 | -227.073 | 9.6168E-02 (2003,327,0000) | 6.8458E-02 (2003,155,0500) | 5.9333E-02 (2003,120,0500) | 5.8248E-02 (2003,326,2100) |
| 919 | -136.257 | -227.099 | 9.0929E-02 (2003,327,0000) | 5.7655E-02 (2003,079,2300) | 5.5955E-02 (2003,326,2100) | 5.5916E-02 (2003,155,0500) |
| 920 | -140.607 | -225.169 | 9.7376E-02 (2003,327,0000) | 9.3119E-02 (2003,155,0500) | 8.9757E-02 (2003,120,0500) | 7.1358E-02 (2003,120,0600) |
| 921 | -139.146 | -225.195 | 1.0162E-01 (2003,327,0000) | 8.6475E-02 (2003,155,0500) | 8.6313E-02 (2003,120,0500) | 7.0163E-02 (2003,120,0600) |
| 922 | -137.686 | -225.221 | 9.5220E-02 (2003,327,0000) | 6.6054E-02 (2003,155,0500) | 5.8408E-02 (2003,326,2100) | 5.7546E-02 (2003,079,2300) |
| 923 | -136.225 | -225.246 | 9.1107E-02 (2003,327,0000) | 6.1754E-02 (2003,155,0500) | 5.9683E-02 (2003,053,2300) | 5.8381E-02 (2003,253,0500) |
| 924 | -140.574 | -223.316 | 1.0166E-01 (2003,327,0000) | 9.2144E-02 (2003,155,0500) | 8.6814E-02 (2003,120,0500) | 6.5957E-02 (2003,120,0600) |
| 925 | -139.113 | -223.342 | 9.7502E-02 (2003,327,0000) | 7.3137E-02 (2003,155,0500) | 5.9092E-02 (2003,326,2100) | 5.8222E-02 (2003,120,0500) |
| 926 | -137.653 | -223.368 | 8.9602E-02 (2003,327,0000) | 6.1556E-02 (2003,253,0500) | 5.9668E-02 (2003,155,0500) | 5.8101E-02 (2003,053,2300) |
| 927 | -136.193 | -223.394 | 8.3771E-02 (2003,327,0000) | 6.6247E-02 (2003,253,0500) | 6.1458E-02 (2003,053,2300) | 5.8109E-02 (2003,155,0500) |
| 928 | -143.460 | -221.410 | 1.0096E-01 (2003,155,0500) | 9.4002E-02 (2003,327,0000) | 8.9559E-02 (2003,120,0500) | 7.3505E-02 (2003,326,2300) |
| 929 | -142.000 | -221.437 | 1.0098E-01 (2003,327,0000) | 9.5706E-02 (2003,155,0500) | 8.6123E-02 (2003,120,0500) | 6.5591E-02 (2003,231,0400) |
| 930 | -140.540 | -221.463 | 1.0273E-01 (2003,327,0000) | 8.7342E-02 (2003,155,0500) | 7.7930E-02 (2003,120,0500) | 6.2946E-02 (2003,326,2100) |
| 931 | -139.080 | -221.489 | 9.0551E-02 (2003,327,0000) | 6.3754E-02 (2003,253,0500) | 6.3186E-02 (2003,155,0500) | 5.7488E-02 (2003,053,2300) |
| 932 | -137.620 | -221.515 | 8.2357E-02 (2003,327,0000) | 6.8500E-02 (2003,253,0500) | 6.0551E-02 (2003,053,2300) | 5.6669E-02 (2003,034,0900) |
| 933 | -146.346 | -219.503 | 1.0405E-01 (2003,155,0500) | 9.0886E-02 (2003,120,0500) | 9.0221E-02 (2003,155,0400) | 8.3873E-02 (2003,326,2300) |
| 934 | -144.886 | -219.531 | 1.0103E-01 (2003,155,0500) | 9.1689E-02 (2003,327,0000) | 8.7600E-02 (2003,120,0500) | 8.2438E-02 (2003,155,0400) |
| 935 | -143.426 | -219.558 | 9.9700E-02 (2003,327,0000) | 9.6928E-02 (2003,155,0500) | 8.4088E-02 (2003,120,0500) | 7.4250E-02 (2003,155,0400) |
| 936 | -141.967 | -219.584 | 1.0256E-01 (2003,327,0000) | 9.1671E-02 (2003,155,0500) | 8.0427E-02 (2003,120,0500) | 6.6177E-02 (2003,155,0400) |
| 937 | -140.507 | -219.611 | 9.4725E-02 (2003,327,0000) | 7.2566E-02 (2003,155,0500) | 6.4930E-02 (2003,253,0500) | 5.8241E-02 (2003,059,0300) |
| 938 | -139.047 | -219.637 | 8.3953E-02 (2003,327,0000) | 6.9733E-02 (2003,253,0500) | 6.1021E-02 (2003,053,2300) | 5.9415E-02 (2003,155,0500) |
| 939 | -137.588 | -219.663 | 7.3238E-02 (2003,253,0500) | 7.1724E-02 (2003,327,0000) | 6.7699E-02 (2003,034,0900) | 6.1200E-02 (2003,053,2300) |
| 940 | -146.311 | -217.651 | 9.8471E-02 (2003,155,0500) | 9.3798E-02 (2003,155,0400) | 8.9099E-02 (2003,327,0000) | 8.4206E-02 (2003,120,0500) |
| 941 | -144.851 | -217.678 | 9.8120E-02 (2003,327,0000) | 9.5406E-02 (2003,155,0500) | 8.4889E-02 (2003,155,0400) | 8.0705E-02 (2003,120,0500) |
| 942 | -143.392 | -217.705 | 1.0203E-01 (2003,327,0000) | 9.1368E-02 (2003,155,0500) | 7.7058E-02 (2003,120,0500) | 7.5862E-02 (2003,155,0400) |
| 943 | -141.933 | -217.732 | 1.0032E-01 (2003,327,0000) | 8.5267E-02 (2003,155,0500) | 7.2940E-02 (2003,120,0500) | 6.6082E-02 (2003,155,0400) |
| 944 | -140.474 | -217.758 | 8.5371E-02 (2003,327,0000) | 6.9164E-02 (2003,253,0500) | 6.2174E-02 (2003,155,0500) | 6.1915E-02 (2003,053,2300) |
| 945 | -139.014 | -217.784 | 7.7377E-02 (2003,327,0000) | 7.3819E-02 (2003,253,0500) | 6.9072E-02 (2003,034,0900) | 6.4548E-02 (2003,053,2300) |
| 946 | -137.555 | -217.810 | 7.7733E-02 (2003,034,0900) | 7.5531E-02 (2003,253,0500) | 6.0779E-02 (2003,327,0000) | 6.0497E-02 (2003,053,2300) |
| 947 | -146.276 | -215.798 | 9.6153E-02 (2003,327,0000) | 9.5832E-02 (2003,155,0400) | 9.1495E-02 (2003,155,0500) | 7.5885E-02 (2003,120,0500) |
| 948 | -144.817 | -215.825 | 1.0106E-01 (2003,327,0000) | 8.8412E-02 (2003,155,0500) | 8.6121E-02 (2003,155,0400) | 7.2355E-02 (2003,120,0500) |
| 949 | -143.358 | -215.852 | 9.8771E-02 (2003,327,0000) | 7.8650E-02 (2003,155,0500) | 6.8513E-02 (2003,155,0400) | 6.1068E-02 (2003,253,0500) |
| 950 | -141.899 | -215.879 | 8.7245E-02 (2003,327,0000) | 6.6514E-02 (2003,253,0500) | 6.4075E-02 (2003,155,0500) | 6.3280E-02 (2003,053,2300) |
| 951 | -146.241 | -213.946 | 9.9737E-02 (2003,327,0000) | 9.6574E-02 (2003,155,0400) | 8.3213E-02 (2003,155,0500) | 7.0335E-02 (2003,120,0400) |
| 952 | -144.783 | -213.973 | 1.0002E-01 (2003,327,0000) | 8.6048E-02 (2003,155,0400) | 8.0183E-02 (2003,155,0500) | 6.5252E-02 (2003,059,0200) |
| 953 | -143.324 | -214.000 | 9.4755E-02 (2003,327,0000) | 7.5677E-02 (2003,155,0500) | 7.4894E-02 (2003,155,0400) | 6.7189E-02 (2003,053,2300) |
| 954 | -146.207 | -212.093 | 9.9219E-02 (2003,327,0000) | 9.2021E-02 (2003,155,0400) | 7.1998E-02 (2003,155,0500) | 6.2225E-02 (2003,059,0200) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 955 | -144.748 | -212.120 | 9.4967E-02 (2003,327,0000) | 8.4980E-02 (2003,155,0400) | 7.0903E-02 (2003,155,0500) | 6.8556E-02 (2003,053,2300) |
| 956 | -143.290 | -212.147 | 8.5845E-02 (2003,327,0000) | 7.2662E-02 (2003,155,0400) | 7.2317E-02 (2003,053,2300) | 6.6318E-02 (2003,155,0500) |
| 957 | -141.832 | -212.174 | 7.2267E-02 (2003,327,0000) | 7.1984E-02 (2003,034,0900) | 7.1345E-02 (2003,053,2300) | 6.5998E-02 (2003,076,0500) |
| 958 | -146.172 | -210.241 | 9.4815E-02 (2003,327,0000) | 9.4072E-02 (2003,155,0400) | 7.0036E-02 (2003,053,2300) | 6.8608E-02 (2003,059,0200) |
| 959 | -144.714 | -210.268 | 8.6568E-02 (2003,327,0000) | 8.2674E-02 (2003,155,0400) | 7.4419E-02 (2003,053,2300) | 6.8995E-02 (2003,076,0500) |
| 960 | -143.256 | -210.295 | 7.4671E-02 (2003,327,0000) | 7.4150E-02 (2003,053,2300) | 7.0642E-02 (2003,076,0500) | 6.9054E-02 (2003,155,0400) |
| 961 | -141.798 | -210.321 | 7.3004E-02 (2003,034,0900) | 7.1269E-02 (2003,076,0500) | 6.9530E-02 (2003,053,2300) | 6.8006E-02 (2003,059,0300) |
| 962 | -146.137 | -208.388 | 9.0746E-02 (2003,155,0400) | 8.6951E-02 (2003,327,0000) | 7.6370E-02 (2003,053,2300) | 7.3070E-02 (2003,076,0500) |
| 963 | -144.680 | -208.415 | 7.9227E-02 (2003,155,0400) | 7.6257E-02 (2003,053,2300) | 7.5789E-02 (2003,076,0500) | 7.5788E-02 (2003,327,0000) |
| 964 | -143.222 | -208.442 | 7.7225E-02 (2003,076,0500) | 7.2683E-02 (2003,076,0600) | 7.1442E-02 (2003,053,2300) | 6.8340E-02 (2003,054,0000) |
| 965 | -141.764 | -208.469 | 7.9323E-02 (2003,076,0600) | 7.7569E-02 (2003,076,0500) | 7.6176E-02 (2003,327,0200) | 7.4076E-02 (2003,054,0000) |
| 966 | -140.307 | -208.495 | 8.5162E-02 (2003,076,0600) | 8.1595E-02 (2003,327,0200) | 7.6788E-02 (2003,076,0500) | 7.1559E-02 (2003,054,0000) |
| 967 | -146.102 | -206.535 | 8.6069E-02 (2003,155,0400) | 8.1511E-02 (2003,076,0500) | 7.8242E-02 (2003,053,2300) | 7.6832E-02 (2003,327,0000) |
| 968 | -144.645 | -206.563 | 8.4123E-02 (2003,076,0500) | 7.7844E-02 (2003,076,0600) | 7.4602E-02 (2003,155,0400) | 7.3119E-02 (2003,053,2300) |
| 969 | -143.188 | -206.590 | 8.5834E-02 (2003,076,0600) | 8.5297E-02 (2003,076,0500) | 7.6505E-02 (2003,327,0200) | 7.5863E-02 (2003,054,0000) |
| 970 | -141.731 | -206.616 | 9.2995E-02 (2003,076,0600) | 8.7748E-02 (2003,327,0200) | 8.5039E-02 (2003,076,0500) | 7.6205E-02 (2003,054,0000) |
| 971 | -146.068 | -204.683 | 9.1861E-02 (2003,076,0500) | 8.1750E-02 (2003,076,0600) | 7.8691E-02 (2003,155,0400) | 7.4542E-02 (2003,053,2300) |
| 972 | -144.611 | -204.710 | 9.4224E-02 (2003,076,0500) | 9.1134E-02 (2003,076,0600) | 7.7595E-02 (2003,054,0000) | 7.7383E-02 (2003,327,0200) |
| 973 | -143.154 | -204.737 | 9.9770E-02 (2003,076,0600) | 9.4826E-02 (2003,076,0500) | 9.1536E-02 (2003,327,0200) | 7.9218E-02 (2003,054,0000) |
| 974 | -141.697 | -204.764 | 1.0738E-01 (2003,076,0600) | 1.0136E-01 (2003,327,0200) | 9.3868E-02 (2003,076,0500) | 7.5180E-02 (2003,054,0000) |
| 975 | -148.946 | -202.775 | 9.4805E-02 (2003,076,0500) | 9.4737E-02 (2003,155,0400) | 8.3469E-02 (2003,253,0400) | 8.1543E-02 (2003,053,2300) |
| 976 | -147.489 | -202.803 | 1.0041E-01 (2003,076,0500) | 8.3735E-02 (2003,076,0600) | 8.3688E-02 (2003,155,0400) | 7.9470E-02 (2003,253,0400) |
| 977 | -146.033 | -202.831 | 1.0416E-01 (2003,076,0500) | 9.4381E-02 (2003,076,0600) | 7.9386E-02 (2003,054,0000) | 7.8698E-02 (2003,327,0200) |
| 978 | -144.576 | -202.858 | 1.0582E-01 (2003,076,0500) | 1.0438E-01 (2003,076,0600) | 9.3268E-02 (2003,327,0200) | 8.1601E-02 (2003,054,0000) |
| 979 | -143.120 | -202.885 | 1.1351E-01 (2003,076,0600) | 1.0569E-01 (2003,076,0500) | 1.0365E-01 (2003,327,0200) | 7.7664E-02 (2003,054,0000) |
| 980 | -141.663 | -202.911 | 1.2119E-01 (2003,076,0600) | 1.0356E-01 (2003,076,0500) | 9.7952E-02 (2003,327,0200) | 7.3610E-02 (2003,054,0100) |
| 981 | -148.910 | -200.923 | 1.0893E-01 (2003,076,0500) | 8.7663E-02 (2003,253,0400) | 8.4896E-02 (2003,155,0400) | 8.3002E-02 (2003,076,0600) |
| 982 | -147.454 | -200.951 | 1.1430E-01 (2003,076,0500) | 9.4604E-02 (2003,076,0600) | 8.1245E-02 (2003,253,0400) | 8.0767E-02 (2003,054,0000) |
| 983 | -145.998 | -200.978 | 1.1780E-01 (2003,076,0500) | 1.0602E-01 (2003,076,0600) | 9.5140E-02 (2003,327,0200) | 8.4037E-02 (2003,054,0000) |
| 984 | -144.542 | -201.005 | 1.1844E-01 (2003,076,0500) | 1.1622E-01 (2003,076,0600) | 1.0220E-01 (2003,327,0200) | 7.9514E-02 (2003,054,0000) |
| 985 | -143.086 | -201.032 | 1.2536E-01 (2003,076,0600) | 1.1708E-01 (2003,076,0500) | 1.0324E-01 (2003,327,0200) | 7.7219E-02 (2003,054,0100) |
| 986 | -141.630 | -201.059 | 1.3291E-01 (2003,076,0600) | 1.1366E-01 (2003,076,0500) | 8.0983E-02 (2003,327,0200) | 7.5597E-02 (2003,054,0100) |
| 987 | -148.875 | -199.071 | 1.2368E-01 (2003,076,0500) | 9.1427E-02 (2003,076,0600) | 8.5229E-02 (2003,253,0400) | 8.0309E-02 (2003,054,0000) |
| 988 | -147.419 | -199.098 | 1.2914E-01 (2003,076,0500) | 1.0392E-01 (2003,076,0600) | 9.7082E-02 (2003,327,0200) | 8.6952E-02 (2003,054,0000) |
| 989 | -145.963 | -199.126 | 1.3117E-01 (2003,076,0500) | 1.1498E-01 (2003,076,0600) | 9.9732E-02 (2003,327,0200) | 8.1008E-02 (2003,054,0000) |
| 990 | -144.508 | -199.153 | 1.3107E-01 (2003,076,0500) | 1.2544E-01 (2003,076,0600) | 1.1231E-01 (2003,327,0200) | 8.8285E-02 (2003,327,0400) |
| 991 | -151.751 | -197.162 | 1.2283E-01 (2003,076,0500) | 9.6504E-02 (2003,253,0400) | 8.6026E-02 (2003,076,0400) | 7.8496E-02 (2003,155,0400) |
| 992 | -150.295 | -197.190 | 1.3098E-01 (2003,076,0500) | 8.9614E-02 (2003,253,0400) | 8.6106E-02 (2003,054,0000) | 8.5253E-02 (2003,076,0600) |
| 993 | -148.840 | -197.218 | 1.3751E-01 (2003,076,0500) | 9.7516E-02 (2003,076,0600) | 8.6883E-02 (2003,327,0200) | 8.6073E-02 (2003,054,0000) |
| 994 | -147.384 | -197.246 | 1.4177E-01 (2003,076,0500) | 1.0944E-01 (2003,076,0600) | 9.2378E-02 (2003,327,0200) | 8.1233E-02 (2003,054,0000) |
| 995 | -145.929 | -197.273 | 1.4330E-01 (2003,076,0500) | 1.2066E-01 (2003,076,0600) | 1.0701E-01 (2003,327,0200) | 8.8590E-02 (2003,327,0100) |
| 996 | -144.473 | -197.300 | 1.4145E-01 (2003,076,0500) | 1.2988E-01 (2003,076,0600) | 7.7032E-02 (2003,054,0100) | 6.7172E-02 (2003,327,0200) |
| 997 | -151.714 | -195.310 | 1.3471E-01 (2003,076,0500) | 9.2455E-02 (2003,076,0400) | 8.9994E-02 (2003,253,0400) | 8.8984E-02 (2003,054,0000) |
| 998 | -150.259 | -195.338 | 1.4231E-01 (2003,076,0500) | 9.3335E-02 (2003,327,0200) | 9.1995E-02 (2003,054,0000) | 8.8691E-02 (2003,076,0600) |
| 999 | -148.804 | -195.366 | 1.4917E-01 (2003,076,0500) | 1.1122E-01 (2003,327,0200) | 1.0189E-01 (2003,076,0600) | 9.6107E-02 (2003,327,0100) |
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| 1001 | -145.894 | -195.421 | 1.5189E-01 (2003,076,0500) | 1.2227E-01 (2003,076,0600) | 1.0756E-01 (2003,327,0200) | 9.4998E-02 (2003,327,0100) |
| 1002 | -144.439 | -195.448 | 1.4884E-01 (2003,076,0500) | 1.3018E-01 (2003,076,0600) | 8.1173E-02 (2003,054,0100) | 7.3121E-02 (2003,327,0200) |
| 1003 | -153.133 | -193.429 | 1.3357E-01 (2003,076,0500) | 1.0795E-01 (2003,076,0400) | 9.1773E-02 (2003,054,0000) | 8.9320E-02 (2003,034,0800) |
| 1004 | -151.678 | -193.457 | 1.4131E-01 (2003,076,0500) | 9.7965E-02 (2003,076,0400) | 9.2376E-02 (2003,054,0000) | 8.5939E-02 (2003,327,0200) |
| 1005 | -150.224 | -193.485 | 1.4873E-01 (2003,076,0500) | 1.1074E-01 (2003,327,0200) | 1.0263E-01 (2003,327,0100) | 9.5444E-02 (2003,054,0000) |
| 1006 | -148.769 | -193.513 | 1.5433E-01 (2003,076,0500) | 1.1550E-01 (2003,327,0200) | 1.0969E-01 (2003,327,0100) | 1.0282E-01 (2003,076,0600) |
| 1007 | -147.314 | -193.541 | 1.5572E-01 (2003,076,0500) | 1.1115E-01 (2003,076,0600) | 1.0739E-01 (2003,327,0200) | 1.0308E-01 (2003,327,0100) |
| 1008 | -145.859 | -193.568 | 1.5476E-01 (2003,076,0500) | 1.1898E-01 (2003,076,0600) | 8.6963E-02 (2003,054,0100) | 8.6136E-02 (2003,327,0200) |
| 1009 | -144.404 | -193.596 | 1.5069E-01 (2003,076,0500) | 1.2490E-01 (2003,076,0600) | 7.1625E-02 (2003,076,0700) | 7.0808E-02 (2003,054,0100) |
| 1010 | -156.005 | -191.519 | 1.3431E-01 (2003,076,0400) | 1.1901E-01 (2003,076,0500) | 9.8504E-02 (2003,034,0800) | 9.3342E-02 (2003,362,0000) |
| 1011 | -154.551 | -191.548 | 1.2779E-01 (2003,076,0500) | 1.2677E-01 (2003,076,0400) | 9.4437E-02 (2003,054,0000) | 9.3347E-02 (2003,034,0800) |
| 1012 | -153.097 | -191.576 | 1.3488E-01 (2003,076,0500) | 1.1431E-01 (2003,076,0400) | 1.0108E-01 (2003,054,0000) | 9.8767E-02 (2003,327,0200) |
| 1013 | -151.642 | -191.605 | 1.4182E-01 (2003,076,0500) | 1.0385E-01 (2003,076,0400) | 1.0061E-01 (2003,327,0100) | 9.9336E-02 (2003,327,0200) |
| 1014 | -150.188 | -191.633 | 1.4744E-01 (2003,076,0500) | 1.0368E-01 (2003,327,0100) | 9.7541E-02 (2003,327,0200) | 9.3226E-02 (2003,076,0400) |
| 1015 | -148.733 | -191.661 | 1.5162E-01 (2003,076,0500) | 1.1676E-01 (2003,327,0100) | 1.0940E-01 (2003,327,0200) | 1.0299E-01 (2003,327,0400) |
| 1016 | -147.279 | -191.689 | 1.5270E-01 (2003,076,0500) | 1.0672E-01 (2003,076,0600) | 1.0083E-01 (2003,327,0100) | 9.3852E-02 (2003,327,0200) |
| 1017 | -145.824 | -191.716 | 1.5097E-01 (2003,076,0500) | 1.1189E-01 (2003,076,0600) | 7.8269E-02 (2003,054,0100) | 7.5800E-02 (2003,327,0100) |
| 1018 | -144.370 | -191.743 | 1.4637E-01 (2003,076,0500) | 1.1536E-01 (2003,076,0600) | 7.9189E-02 (2003,076,0700) | 6.8711E-02 (2003,361,2200) |
| 1019 | -155.968 | -189.666 | 1.4264E-01 (2003,076,0400) | 1.1761E-01 (2003,076,0500) | 9.6832E-02 (2003,054,0000) | 9.5632E-02 (2003,034,0800) |
| 1020 | -154.514 | -189.695 | 1.2948E-01 (2003,076,0400) | 1.2307E-01 (2003,076,0500) | 1.0401E-01 (2003,054,0000) | 9.9340E-02 (2003,327,0200) |
| 1021 | -153.060 | -189.724 | 1.2852E-01 (2003,076,0500) | 1.1712E-01 (2003,076,0400) | 9.0965E-02 (2003,054,0000) | 9.0840E-02 (2003,327,0100) |
| 1022 | -151.606 | -189.753 | 1.3480E-01 (2003,076,0500) | 1.2417E-01 (2003,327,0100) | 1.0889E-01 (2003,327,0200) | 1.0775E-01 (2003,076,0400) |
| 1023 | -150.152 | -189.781 | 1.3843E-01 (2003,076,0500) | 9.6327E-02 (2003,327,0100) | 9.4222E-02 (2003,076,0400) | 8.7349E-02 (2003,054,0100) |
| 1024 | -148.698 | -189.809 | 1.4131E-01 (2003,076,0500) | 9.8669E-02 (2003,327,0100) | 9.3931E-02 (2003,076,0600) | 8.7200E-02 (2003,054,0100) |
| 1025 | -147.244 | -189.836 | 1.4122E-01 (2003,076,0500) | 9.6247E-02 (2003,076,0600) | 7.1345E-02 (2003,076,0700) | 7.0955E-02 (2003,076,0400) |
| 1026 | -145.790 | -189.864 | 1.3954E-01 (2003,076,0500) | 9.9637E-02 (2003,076,0600) | 7.6865E-02 (2003,076,0700) | 7.2615E-02 (2003,361,2200) |
| 1027 | -144.336 | -189.891 | 1.3555E-01 (2003,076,0500) | 1.0236E-01 (2003,076,0600) | 8.2568E-02 (2003,076,0700) | 7.1833E-02 (2003,361,2200) |
| 1028 | -157.385 | -187.785 | 1.5078E-01 (2003,076,0400) | 1.0511E-01 (2003,076,0500) | 9.9729E-02 (2003,054,0000) | 9.5758E-02 (2003,034,0800) |
| 1029 | -155.931 | -187.814 | 1.4171E-01 (2003,076,0400) | 1.0954E-01 (2003,327,0100) | 1.0886E-01 (2003,054,0000) | 1.0879E-01 (2003,076,0500) |
| 1030 | -154.477 | -187.843 | 1.2872E-01 (2003,076,0400) | 1.1189E-01 (2003,076,0500) | 9.8503E-02 (2003,327,0100) | 9.4775E-02 (2003,054,0000) |
| 1031 | -153.024 | -187.872 | 1.4279E-01 (2003,327,0100) | 1.2134E-01 (2003,076,0400) | 1.1738E-01 (2003,076,0500) | 1.1246E-01 (2003,327,0200) |
| 1032 | -151.570 | -187.900 | 1.3189E-01 (2003,327,0100) | 1.2047E-01 (2003,076,0500) | 1.0740E-01 (2003,076,0400) | 1.0095E-01 (2003,327,0200) |
| 1033 | -150.116 | -187.928 | 1.2328E-01 (2003,076,0500) | 1.1664E-01 (2003,327,0100) | 9.4243E-02 (2003,076,0400) | 8.9866E-02 (2003,054,0100) |
| 1034 | -148.663 | -187.956 | 1.2464E-01 (2003,076,0500) | 8.7466E-02 (2003,076,0600) | 8.5583E-02 (2003,361,2200) | 8.4869E-02 (2003,327,0100) |
| 1035 | -147.209 | -187.984 | 1.2508E-01 (2003,076,0500) | 9.0386E-02 (2003,076,0600) | 8.9056E-02 (2003,361,2200) | 8.6914E-02 (2003,207,0200) |
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| 1037 | -144.301 | -188.039 | 1.1910E-01 (2003,076,0500) | 8.6772E-02 (2003,076,0600) | 7.8622E-02 (2003,076,0700) | 6.6728E-02 (2003,210,0500) |
| 1038 | -142.848 | -188.065 | 1.1402E-01 (2003,076,0500) | 8.7461E-02 (2003,076,0600) | 8.1409E-02 (2003,076,0700) | 7.7378E-02 (2003,207,0200) |
| 1039 | -141.394 | -188.092 | 1.0707E-01 (2003,076,0500) | 8.7166E-02 (2003,076,0600) | 8.0297E-02 (2003,076,0700) | 7.0744E-02 (2003,207,0200) |
| 1040 | -161.707 | -185.843 | 1.5146E-01 (2003,076,0400) | 1.1377E-01 (2003,034,0800) | 1.0115E-01 (2003,362,0000) | 9.0295E-02 (2003,053,2300) |
| 1041 | -160.254 | -185.873 | 1.5461E-01 (2003,076,0400) | 1.0493E-01 (2003,034,0800) | 9.6399E-02 (2003,362,0000) | 9.3351E-02 (2003,049,2100) |
| 1042 | -158.801 | -185.903 | 1.5217E-01 (2003,076,0400) | 1.0350E-01 (2003,054,0000) | 9.5665E-02 (2003,039,2300) | 9.5534E-02 (2003,049,2100) |
| 1043 | -157.347 | -185.932 | 1.4561E-01 (2003,076,0400) | 1.1782E-01 (2003,327,0100) | 1.1230E-01 (2003,054,0000) | 1.0555E-01 (2003,327,0200) |
| 1044 | -155.894 | -185.962 | 1.4638E-01 (2003,327,0100) | 1.4201E-01 (2003,076,0400) | 1.1357E-01 (2003,327,0200) | 1.1009E-01 (2003,054,0000) |
| 1045 | -154.441 | -185.991 | 1.5508E-01 (2003,327,0100) | 1.3182E-01 (2003,076,0400) | 1.1112E-01 (2003,327,0200) | 1.0859E-01 (2003,327,0400) |
| 1046 | -152.987 | -186.019 | 1.4130E-01 (2003,327,0100) | 1.1535E-01 (2003,076,0400) | 9.9231E-02 (2003,076,0500) | 9.8598E-02 (2003,054,0100) |
| 1047 | -151.534 | -186.048 | 1.0006E-01 (2003,076,0500) | 9.9824E-02 (2003,076,0400) | 9.3092E-02 (2003,327,0100) | 8.3028E-02 (2003,361,2200) |
| 1048 | -150.080 | -186.076 | 1.0268E-01 (2003,076,0500) | 1.0210E-01 (2003,327,0100) | 9.7913E-02 (2003,207,0100) | 9.6364E-02 (2003,361,2200) |
| 1049 | -148.627 | -186.104 | 1.0388E-01 (2003,076,0500) | 9.8882E-02 (2003,207,0100) | 9.4246E-02 (2003,361,2200) | 9.0532E-02 (2003,207,0200) |
| 1050 | -147.174 | -186.132 | 1.0338E-01 (2003,076,0500) | 9.1634E-02 (2003,207,0100) | 8.7288E-02 (2003,207,0200) | 8.2793E-02 (2003,361,2200) |
| 1051 | -145.720 | -186.159 | 1.0185E-01 (2003,076,0500) | 7.8081E-02 (2003,207,0100) | 7.3717E-02 (2003,076,0600) | 7.3001E-02 (2003,076,0700) |
| 1052 | -144.267 | -186.186 | 9.9208E-02 (2003,076,0500) | 7.2074E-02 (2003,207,0100) | 7.1046E-02 (2003,076,0600) | 6.9982E-02 (2003,076,0700) |
| 1053 | -142.813 | -186.213 | 9.5297E-02 (2003,076,0500) | 7.3234E-02 (2003,207,0100) | 7.0051E-02 (2003,083,0200) | 6.9941E-02 (2003,076,0600) |
| 1054 | -141.360 | -186.240 | 9.0038E-02 (2003,076,0500) | 7.0571E-02 (2003,083,0200) | 6.9747E-02 (2003,361,0500) | 6.9094E-02 (2003,076,0600) |
| 1055 | -161.669 | -183.991 | 1.5037E-01 (2003,076,0400) | 1.0640E-01 (2003,039,2300) | 1.0190E-01 (2003,034,0800) | 1.0001E-01 (2003,342,2100) |
| 1056 | -160.216 | -184.021 | 1.4930E-01 (2003,076,0400) | 1.0861E-01 (2003,054,0000) | 1.0698E-01 (2003,039,2300) | 1.0259E-01 (2003,054,0100) |
| 1057 | -158.763 | -184.051 | 1.5550E-01 (2003,076,0400) | 1.3486E-01 (2003,327,0100) | 1.1761E-01 (2003,054,0000) | 1.1164E-01 (2003,054,0100) |
| 1058 | -157.310 | -184.080 | 1.5952E-01 (2003,327,0100) | 1.4696E-01 (2003,076,0400) | 1.1540E-01 (2003,327,0300) | 1.1463E-01 (2003,327,0200) |
| 1059 | -155.857 | -184.109 | 1.6745E-01 (2003,327,0100) | 1.3487E-01 (2003,076,0400) | 1.1487E-01 (2003,207,0100) | 1.1380E-01 (2003,327,0300) |
| 1060 | -154.404 | -184.138 | 1.5760E-01 (2003,327,0100) | 1.1963E-01 (2003,207,0100) | 1.1828E-01 (2003,076,0400) | 1.0524E-01 (2003,327,0300) |
| 1061 | -152.951 | -184.167 | 1.3394E-01 (2003,327,0100) | 1.2238E-01 (2003,207,0100) | 1.0892E-01 (2003,076,0400) | 9.9673E-02 (2003,361,2200) |
| 1062 | -151.498 | -184.196 | 1.2131E-01 (2003,207,0100) | 1.0381E-01 (2003,327,0100) | 1.0094E-01 (2003,361,2200) | 9.4587E-02 (2003,076,0400) |
| 1063 | -150.045 | -184.224 | 1.1472E-01 (2003,207,0100) | 9.4224E-02 (2003,361,2200) | 8.1320E-02 (2003,361,0700) | 8.0488E-02 (2003,207,0200) |
| 1064 | -148.592 | -184.252 | 1.0608E-01 (2003,207,0100) | 8.2273E-02 (2003,207,0200) | 8.0998E-02 (2003,361,2200) | 8.0150E-02 (2003,076,0500) |
| 1065 | -147.139 | -184.279 | 8.8853E-02 (2003,207,0100) | 8.0044E-02 (2003,076,0500) | 7.7087E-02 (2003,083,0200) | 6.8571E-02 (2003,207,0200) |
| 1066 | -145.686 | -184.307 | 8.0083E-02 (2003,083,0200) | 7.9492E-02 (2003,076,0500) | 7.8059E-02 (2003,207,0100) | 6.7687E-02 (2003,361,0500) |
| 1067 | -144.233 | -184.334 | 8.3389E-02 (2003,083,0200) | 7.8118E-02 (2003,076,0500) | 7.7777E-02 (2003,207,0100) | 7.2573E-02 (2003,361,0500) |
| 1068 | -161.630 | -182.138 | 1.4733E-01 (2003,076,0400) | 1.1572E-01 (2003,039,2300) | 1.1538E-01 (2003,054,0000) | 1.1278E-01 (2003,054,0100) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069 | -160.178 | -182.169 | 1.4746E-01 (2003,327,0100) | 1.4342E-01 (2003,076,0400) | 1.2346E-01 (2003,327,0300) | 1.2300E-01 (2003,054,0000) |
| 1070 | -158.725 | -182.198 | 1.7235E-01 (2003,327,0100) | 1.3722E-01 (2003,076,0400) | 1.2766E-01 (2003,327,0300) | 1.2447E-01 (2003,207,0100) |
| 1071 | -157.272 | -182.228 | 1.7836E-01 (2003,327,0100) | 1.3714E-01 (2003,207,0100) | 1.2671E-01 (2003,076,0400) | 1.2338E-01 (2003,327,0300) |
| 1072 | -155.820 | -182.257 | 1.6463E-01 (2003,327,0100) | 1.4397E-01 (2003,207,0100) | 1.1608E-01 (2003,076,0400) | 1.1176E-01 (2003,327,0300) |
| 1073 | -154.367 | -182.286 | 1.4521E-01 (2003,207,0100) | 1.3680E-01 (2003,327,0100) | 1.0692E-01 (2003,076,0400) | 1.0466E-01 (2003,361,2200) |
| 1074 | -152.914 | -182.315 | 1.4217E-01 (2003,207,0100) | 1.0324E-01 (2003,327,0100) | 1.0255E-01 (2003,361,2200) | 9.3906E-02 (2003,076,0400) |
| 1075 | -151.462 | -182.343 | 1.3648E-01 (2003,207,0100) | 9.3837E-02 (2003,361,2200) | 8.8207E-02 (2003,361,0700) | 8.6723E-02 (2003,327,0700) |
| 1076 | -150.009 | -182.372 | 1.1317E-01 (2003,207,0100) | 8.2511E-02 (2003,083,0200) | 7.7655E-02 (2003,361,0700) | 7.7522E-02 (2003,361,2100) |
| 1077 | -148.556 | -182.399 | 1.0203E-01 (2003,207,0100) | 8.8095E-02 (2003,083,0200) | 7.6751E-02 (2003,361,0500) | 7.4395E-02 (2003,361,0400) |
| 1078 | -147.104 | -182.427 | 9.1935E-02 (2003,083,0200) | 8.6760E-02 (2003,207,0100) | 7.5930E-02 (2003,361,0500) | 7.5367E-02 (2003,361,0400) |
| 1079 | -145.651 | -182.454 | 9.6684E-02 (2003,083,0200) | 8.5332E-02 (2003,207,0100) | 7.9159E-02 (2003,361,0500) | 7.8576E-02 (2003,361,0400) |
| 1080 | -161.592 | -180.286 | 1.6113E-01 (2003,327,0100) | 1.3767E-01 (2003,327,0300) | 1.2940E-01 (2003,054,0000) | 1.2553E-01 (2003,054,0100) |
| 1081 | -160.139 | -180.316 | 1.8387E-01 (2003,327,0100) | 1.3992E-01 (2003,207,0100) | 1.3882E-01 (2003,327,0300) | 1.1986E-01 (2003,327,0200) |
| 1082 | -158.687 | -180.346 | 1.8578E-01 (2003,327,0100) | 1.5590E-01 (2003,207,0100) | 1.3088E-01 (2003,327,0300) | 1.1167E-01 (2003,076,0400) |
| 1083 | -157.235 | -180.376 | 1.6742E-01 (2003,327,0100) | 1.6390E-01 (2003,207,0100) | 1.1560E-01 (2003,327,0300) | 1.0694E-01 (2003,083,0100) |
| 1084 | -155.783 | -180.405 | 1.6422E-01 (2003,207,0100) | 1.3550E-01 (2003,327,0100) | 1.0738E-01 (2003,361,2200) | 1.0435E-01 (2003,083,0100) |
| 1085 | -154.330 | -180.434 | 1.5875E-01 (2003,207,0100) | 1.0133E-01 (2003,361,2200) | 1.0044E-01 (2003,083,0100) | 9.9082E-02 (2003,327,0100) |
| 1086 | -152.878 | -180.463 | 1.4964E-01 (2003,207,0100) | 9.5345E-02 (2003,083,0100) | 9.4317E-02 (2003,361,0700) | 9.1427E-02 (2003,361,2100) |
| 1087 | -151.426 | -180.491 | 1.2243E-01 (2003,207,0100) | 9.0086E-02 (2003,083,0200) | 8.9391E-02 (2003,361,0400) | 8.5007E-02 (2003,083,0100) |
| 1088 | -149.973 | -180.519 | 1.1088E-01 (2003,207,0100) | 9.7161E-02 (2003,083,0200) | 9.5294E-02 (2003,361,0400) | 8.6484E-02 (2003,361,0500) |
| 1089 | -148.521 | -180.547 | 1.0190E-01 (2003,083,0200) | 9.4417E-02 (2003,361,0400) | 9.3196E-02 (2003,207,0100) | 8.2751E-02 (2003,361,0500) |
| 1090 | -147.068 | -180.575 | 1.0658E-01 (2003,083,0200) | 9.2623E-02 (2003,361,0400) | 8.2239E-02 (2003,207,0100) | 7.9841E-02 (2003,361,0500) |
| 1091 | -145.616 | -180.602 | 1.1136E-01 (2003,083,0200) | 9.1552E-02 (2003,361,0400) | 7.9132E-02 (2003,207,0100) | 7.8890E-02 (2003,361,0500) |
| 1092 | -161.553 | -178.434 | 1.9456E-01 (2003,327,0100) | 1.4804E-01 (2003,207,0100) | 1.4764E-01 (2003,327,0300) | 1.3292E-01 (2003,083,0100) |
| 1093 | -160.101 | -178.464 | 1.8967E-01 (2003,327,0100) | 1.6728E-01 (2003,207,0100) | 1.3492E-01 (2003,327,0300) | 1.3465E-01 (2003,083,0100) |
| 1094 | -158.649 | -178.494 | 1.7644E-01 (2003,207,0100) | 1.6469E-01 (2003,327,0100) | 1.3413E-01 (2003,083,0100) | 1.1546E-01 (2003,327,0300) |
| 1095 | -157.197 | -178.523 | 1.7671E-01 (2003,207,0100) | 1.3189E-01 (2003,083,0100) | 1.2858E-01 (2003,327,0100) | 1.0789E-01 (2003,361,2200) |
| 1096 | -155.745 | -178.553 | 1.6909E-01 (2003,207,0100) | 1.2779E-01 (2003,083,0100) | 1.0776E-01 (2003,207,0000) | 1.0272E-01 (2003,361,0700) |
| 1097 | -154.293 | -178.582 | 1.5660E-01 (2003,207,0100) | 1.2201E-01 (2003,083,0100) | 1.0943E-01 (2003,207,0000) | 1.0607E-01 (2003,361,0400) |
| 1098 | -152.841 | -178.610 | 1.4067E-01 (2003,207,0100) | 1.1589E-01 (2003,361,0400) | 1.1485E-01 (2003,083,0100) | 1.0794E-01 (2003,207,0000) |
| 1099 | -151.389 | -178.639 | 1.1757E-01 (2003,361,0400) | 1.1694E-01 (2003,207,0100) | 1.0401E-01 (2003,083,0200) | 1.0375E-01 (2003,083,0100) |
| 1100 | -149.937 | -178.667 | 1.0928E-01 (2003,361,0400) | 1.0733E-01 (2003,083,0200) | 9.0377E-02 (2003,083,0100) | 8.8213E-02 (2003,207,0100) |
| 1101 | -148.485 | -178.695 | 1.1353E-01 (2003,083,0200) | 1.0637E-01 (2003,361,0400) | 8.2080E-02 (2003,083,0100) | 7.9072E-02 (2003,207,0100) |
| 1102 | -147.033 | -178.723 | 1.2340E-01 (2003,083,0200) | 1.1202E-01 (2003,361,0400) | 9.4466E-02 (2003,176,0300) | 9.2191E-02 (2003,361,0800) |
| 1103 | -145.581 | -178.750 | 1.2501E-01 (2003,083,0200) | 9.8504E-02 (2003,361,0400) | 8.8554E-02 (2003,361,0800) | 7.3265E-02 (2003,207,0100) |
| 1104 | -164.418 | -176.521 | 1.9286E-01 (2003,327,0100) | 1.6233E-01 (2003,327,0300) | 1.5493E-01 (2003,083,0100) | 1.4302E-01 (2003,054,0000) |
| 1105 | -162.966 | -176.552 | 2.0431E-01 (2003,327,0100) | 1.6029E-01 (2003,083,0100) | 1.5303E-01 (2003,327,0300) | 1.4821E-01 (2003,207,0100) |
| 1106 | -161.515 | -176.582 | 1.9007E-01 (2003,327,0100) | 1.7048E-01 (2003,207,0100) | 1.6324E-01 (2003,083,0100) | 1.3454E-01 (2003,327,0300) |
| 1107 | -160.063 | -176.612 | 1.8148E-01 (2003,207,0100) | 1.6368E-01 (2003,083,0100) | 1.5735E-01 (2003,327,0100) | 1.2486E-01 (2003,207,0000) |
| 1108 | -158.611 | -176.642 | 1.8122E-01 (2003,207,0100) | 1.6158E-01 (2003,083,0100) | 1.2929E-01 (2003,207,0000) | 1.1707E-01 (2003,327,0100) |
| 1109 | -157.160 | -176.671 | 1.6960E-01 (2003,207,0100) | 1.5686E-01 (2003,083,0100) | 1.3152E-01 (2003,207,0000) | 1.1506E-01 (2003,361,0400) |
| 1110 | -155.708 | -176.701 | 1.5636E-01 (2003,207,0100) | 1.5127E-01 (2003,083,0100) | 1.3128E-01 (2003,207,0000) | 1.2810E-01 (2003,361,0400) |
| 1111 | -154.257 | -176.730 | 1.4319E-01 (2003,083,0100) | 1.3744E-01 (2003,207,0100) | 1.3572E-01 (2003,361,0400) | 1.2788E-01 (2003,207,0000) |
| 1112 | -152.805 | -176.758 | 1.3332E-01 (2003,361,0400) | 1.3009E-01 (2003,083,0100) | 1.1804E-01 (2003,207,0000) | 1.1000E-01 (2003,207,0100) |
| 1113 | -151.353 | -176.787 | 1.2337E-01 (2003,361,0400) | 1.1618E-01 (2003,083,0100) | 1.1034E-01 (2003,083,0200) | 1.0197E-01 (2003,207,0000) |
| 1114 | -149.902 | -176.815 | 1.1516E-01 (2003,083,0200) | 1.1289E-01 (2003,361,0400) | 1.0408E-01 (2003,083,0100) | 8.8241E-02 (2003,207,0000) |
| 1115 | -148.450 | -176.843 | 1.2362E-01 (2003,083,0200) | 1.1013E-01 (2003,361,0400) | 9.7349E-02 (2003,083,0100) | 8.7967E-02 (2003,361,0800) |
| 1116 | -146.998 | -176.870 | 1.2803E-01 (2003,083,0200) | 9.8859E-02 (2003,361,0400) | 9.0419E-02 (2003,361,0800) | 8.6765E-02 (2003,083,0100) |
| 1117 | -164.379 | -174.669 | 2.1126E-01 (2003,327,0100) | 1.8795E-01 (2003,083,0100) | 1.5409E-01 (2003,327,0300) | 1.4628E-01 (2003,207,0000) |
| 1118 | -162.927 | -174.699 | 1.9194E-01 (2003,083,0100) | 1.8712E-01 (2003,327,0100) | 1.6660E-01 (2003,207,0100) | 1.5098E-01 (2003,207,0000) |
| 1119 | -161.476 | -174.730 | 1.9257E-01 (2003,083,0100) | 1.7909E-01 (2003,207,0100) | 1.5293E-01 (2003,207,0000) | 1.4645E-01 (2003,327,0100) |
| 1120 | -160.025 | -174.760 | 1.9079E-01 (2003,083,0100) | 1.7903E-01 (2003,207,0100) | 1.5279E-01 (2003,207,0000) | 1.2157E-01 (2003,361,0400) |
| 1121 | -158.574 | -174.790 | 1.8660E-01 (2003,083,0100) | 1.6852E-01 (2003,207,0100) | 1.5118E-01 (2003,207,0000) | 1.3790E-01 (2003,361,0400) |
| 1122 | -157.122 | -174.819 | 1.8007E-01 (2003,083,0100) | 1.5097E-01 (2003,207,0100) | 1.4760E-01 (2003,361,0400) | 1.4733E-01 (2003,207,0000) |
| 1123 | -155.671 | -174.848 | 1.7154E-01 (2003,083,0100) | 1.5034E-01 (2003,361,0400) | 1.4056E-01 (2003,207,0000) | 1.2997E-01 (2003,207,0100) |
| 1124 | -154.220 | -174.877 | 1.6129E-01 (2003,083,0100) | 1.4695E-01 (2003,361,0400) | 1.3158E-01 (2003,207,0000) | 1.0859E-01 (2003,207,0100) |
| 1125 | -152.768 | -174.906 | 1.4033E-01 (2003,083,0100) | 1.2682E-01 (2003,361,0400) | 1.0930E-01 (2003,207,0000) | 1.0822E-01 (2003,083,0200) |
| 1126 | -151.317 | -174.934 | 1.2977E-01 (2003,083,0100) | 1.1659E-01 (2003,361,0400) | 1.1448E-01 (2003,083,0200) | 9.8912E-02 (2003,207,0000) |
| 1127 | -149.866 | -174.963 | 1.1954E-01 (2003,083,0200) | 1.1782E-01 (2003,083,0100) | 1.0371E-01 (2003,361,0400) | 8.7330E-02 (2003,361,0800) |
| 1128 | -148.415 | -174.991 | 1.2760E-01 (2003,083,0200) | 1.0990E-01 (2003,083,0100) | 1.0614E-01 (2003,176,0300) | 9.7444E-02 (2003,361,0800) |
| 1129 | -167.241 | -172.755 | 2.2246E-01 (2003,327,0100) | 2.0338E-01 (2003,083,0100) | 1.7577E-01 (2003,327,0300) | 1.7144E-01 (2003,207,0000) |
| 1130 | -165.790 | -172.786 | 2.1423E-01 (2003,327,0100) | 2.1237E-01 (2003,083,0100) | 1.8041E-01 (2003,207,0000) | 1.5058E-01 (2003,327,0300) |
| 1131 | -164.339 | -172.817 | 2.1697E-01 (2003,083,0100) | 1.8124E-01 (2003,207,0000) | 1.7905E-01 (2003,327,0100) | 1.5984E-01 (2003,207,0100) |
| 1132 | -162.888 | -172.847 | 2.1808E-01 (2003,083,0100) | 1.7706E-01 (2003,207,0000) | 1.7424E-01 (2003,207,0100) | 1.3476E-01 (2003,240,0400) |
| 1133 | -161.438 | -172.878 | 2.1596E-01 (2003,083,0100) | 1.7454E-01 (2003,207,0100) | 1.7079E-01 (2003,207,0000) | 1.4650E-01 (2003,361,0400) |
| 1134 | -159.987 | -172.908 | 2.1112E-01 (2003,083,0100) | 1.6311E-01 (2003,207,0100) | 1.6282E-01 (2003,207,0000) | 1.5890E-01 (2003,361,0400) |
| 1135 | -158.536 | -172.937 | 2.0437E-01 (2003,083,0100) | 1.6265E-01 (2003,361,0400) | 1.5359E-01 (2003,207,0000) | 1.4407E-01 (2003,207,0100) |
| 1136 | -157.085 | -172.967 | 1.9353E-01 (2003,083,0100) | 1.5813E-01 (2003,361,0400) | 1.4301E-01 (2003,207,0000) | 1.1773E-01 (2003,207,0100) |
| 1137 | -155.634 | -172.996 | 1.7734E-01 (2003,083,0100) | 1.4125E-01 (2003,361,0400) | 1.2645E-01 (2003,207,0000) | 1.0178E-01 (2003,176,0300) |
| 1138 | -154.183 | -173.025 | 1.6262E-01 (2003,083,0100) | 1.2326E-01 (2003,361,0400) | 1.0961E-01 (2003,207,0000) | 1.0417E-01 (2003,083,0200) |
| 1139 | -152.732 | -173.054 | 1.5893E-01 (2003,083,0100) | 1.1901E-01 (2003,176,0300) | 1.1643E-01 (2003,361,0400) | 1.1380E-01 (2003,083,0200) |
| 1140 | -151.281 | -173.082 | 1.4384E-01 (2003,083,0100) | 1.1739E-01 (2003,176,0300) | 1.1694E-01 (2003,083,0200) | 9.9246E-02 (2003,361,0400) |
| 1141 | -149.830 | -173.110 | 1.3024E-01 (2003,083,0100) | 1.2037E-01 (2003,083,0200) | 1.1420E-01 (2003,176,0300) | 9.9891E-02 (2003,361,0800) |
| 1142 | -148.379 | -173.138 | 1.2055E-01 (2003,083,0200) | 1.1261E-01 (2003,083,0100) | 9.4389E-02 (2003,361,0800) | 9.0479E-02 (2003,176,0300) |
| 1143 | -146.928 | -173.166 | 1.2199E-01 (2003,083,0200) | 9.7939E-02 (2003,083,0100) | 8.6222E-02 (2003,361,0800) | 7.3411E-02 (2003,083,0300) |
| 1144 | -165.751 | -170.934 | 2.3460E-01 (2003,083,0100) | 2.0666E-01 (2003,207,0000) | 1.6663E-01 (2003,327,0100) | 1.5316E-01 (2003,207,0100) |
| 1145 | -164.300 | -170.965 | 2.3525E-01 (2003,083,0100) | 1.9527E-01 (2003,207,0000) | 1.6958E-01 (2003,207,0100) | 1.5554E-01 (2003,361,0400) |
| 1146 | -162.850 | -170.995 | 2.3250E-01 (2003,083,0100) | 1.8026E-01 (2003,207,0000) | 1.7153E-01 (2003,361,0400) | 1.7139E-01 (2003,207,0100) |
| 1147 | -161.399 | -171.025 | 2.2728E-01 (2003,083,0100) | 1.7676E-01 (2003,361,0400) | 1.6452E-01 (2003,207,0000) | 1.6071E-01 (2003,207,0100) |
| 1148 | -159.948 | -171.056 | 2.1967E-01 (2003,083,0100) | 1.7132E-01 (2003,361,0400) | 1.4930E-01 (2003,207,0000) | 1.4091E-01 (2003,207,0100) |
| 1149 | -158.498 | -171.085 | 2.0489E-01 (2003,083,0100) | 1.5505E-01 (2003,361,0400) | 1.3303E-01 (2003,207,0000) | 1.1626E-01 (2003,245,0600) |
| 1150 | -157.047 | -171.115 | 1.9559E-01 (2003,083,0100) | 1.3791E-01 (2003,361,0400) | 1.1921E-01 (2003,207,0000) | 1.1593E-01 (2003,176,0300) |
| 1151 | -155.597 | -171.144 | 1.8733E-01 (2003,083,0100) | 1.2533E-01 (2003,327,0600) | 1.2198E-01 (2003,176,0300) | 1.1890E-01 (2003,361,0400) |
| 1152 | -154.146 | -171.173 | 1.7351E-01 (2003,083,0100) | 1.2307E-01 (2003,176,0300) | 1.1075E-01 (2003,176,0200) | 1.0590E-01 (2003,083,0200) |
| 1153 | -152.696 | -171.202 | 1.5931E-01 (2003,083,0100) | 1.2056E-01 (2003,176,0300) | 1.1269E-01 (2003,176,0200) | 1.0734E-01 (2003,083,0200) |
| 1154 | -151.245 | -171.230 | 1.4096E-01 (2003,083,0100) | 1.0665E-01 (2003,176,0300) | 1.0662E-01 (2003,083,0200) | 1.0139E-01 (2003,176,0200) |
| 1155 | -149.794 | -171.258 | 1.2973E-01 (2003,083,0100) | 1.0992E-01 (2003,083,0200) | 1.0697E-01 (2003,176,0300) | 1.0438E-01 (2003,176,0200) |
| 1156 | -148.344 | -171.286 | 1.0621E-01 (2003,083,0100) | 1.0481E-01 (2003,083,0200) | 8.0690E-02 (2003,361,0800) | 7.3819E-02 (2003,346,0700) |
| 1157 | -146.893 | -171.314 | 1.0593E-01 (2003,083,0200) | 9.2276E-02 (2003,083,0100) | 7.8814E-02 (2003,346,0700) | 7.7158E-02 (2003,064,0700) |
| 1158 | -162.811 | -169.143 | 2.3019E-01 (2003,083,0100) | 1.8961E-01 (2003,361,0400) | 1.6330E-01 (2003,207,0100) | 1.5702E-01 (2003,207,0000) |
| 1159 | -161.360 | -169.173 | 2.2220E-01 (2003,083,0100) | 1.7259E-01 (2003,361,0400) | 1.4344E-01 (2003,207,0100) | 1.3532E-01 (2003,207,0000) |
| 1160 | -159.910 | -169.203 | 2.1283E-01 (2003,083,0100) | 1.4945E-01 (2003,361,0400) | 1.2456E-01 (2003,245,0600) | 1.1836E-01 (2003,207,0100) |
| 1161 | -158.460 | -169.233 | 2.0195E-01 (2003,083,0100) | 1.2632E-01 (2003,327,0600) | 1.2376E-01 (2003,361,0400) | 1.2140E-01 (2003,176,0300) |
| 1162 | -157.010 | -169.263 | 1.9037E-01 (2003,083,0100) | 1.3082E-01 (2003,327,0600) | 1.2490E-01 (2003,176,0300) | 1.2317E-01 (2003,176,0200) |
| 1163 | -155.560 | -169.292 | 1.7625E-01 (2003,083,0100) | 1.2830E-01 (2003,176,0200) | 1.2429E-01 (2003,176,0300) | 1.0489E-01 (2003,327,0600) |
| 1164 | -154.109 | -169.321 | 1.6356E-01 (2003,083,0100) | 1.2825E-01 (2003,176,0200) | 1.2003E-01 (2003,176,0300) | 1.0749E-01 (2003,207,0200) |
| 1165 | -152.659 | -169.350 | 1.4965E-01 (2003,083,0100) | 1.2313E-01 (2003,176,0200) | 1.1289E-01 (2003,176,0300) | 1.0859E-01 (2003,207,0200) |
| 1166 | -151.209 | -169.378 | 1.3098E-01 (2003,083,0100) | 1.0117E-01 (2003,176,0200) | 9.8872E-02 (2003,361,0800) | 9.8218E-02 (2003,207,0200) |
| 1167 | -149.759 | -169.406 | 1.1891E-01 (2003,083,0100) | 9.9598E-02 (2003,207,0200) | 9.8443E-02 (2003,176,0200) | 9.3666E-02 (2003,083,0200) |
| 1168 | -148.308 | -169.434 | 1.0497E-01 (2003,083,0100) | 9.7778E-02 (2003,346,0700) | 9.3794E-02 (2003,083,0200) | 9.3240E-02 (2003,253,0200) |
| 1169 | -164.222 | -167.260 | 2.1873E-01 (2003,083,0100) | 1.9684E-01 (2003,361,0400) | 1.7170E-01 (2003,207,0100) | 1.4911E-01 (2003,041,2300) |
| 1170 | -162.772 | -167.291 | 2.0970E-01 (2003,083,0100) | 1.6661E-01 (2003,361,0400) | 1.5226E-01 (2003,207,0100) | 1.4760E-01 (2003,041,2300) |
| 1171 | -161.322 | -167.321 | 1.9993E-01 (2003,083,0100) | 1.4174E-01 (2003,041,2300) | 1.3389E-01 (2003,361,0400) | 1.2823E-01 (2003,271,0000) |
| 1172 | -159.872 | -167.351 | 1.9008E-01 (2003,083,0100) | 1.3631E-01 (2003,176,0200) | 1.3260E-01 (2003,041,2300) | 1.3250E-01 (2003,327,0600) |
| 1173 | -158.422 | -167.381 | 1.7936E-01 (2003,083,0100) | 1.4420E-01 (2003,176,0200) | 1.3481E-01 (2003,327,0600) | 1.2574E-01 (2003,176,0300) |
| 1174 | -156.972 | -167.411 | 1.6808E-01 (2003,083,0100) | 1.4679E-01 (2003,176,0200) | 1.2636E-01 (2003,327,0600) | 1.2360E-01 (2003,176,0300) |
| 1175 | -155.522 | -167.440 | 1.5614E-01 (2003,083,0100) | 1.4364E-01 (2003,176,0200) | 1.1733E-01 (2003,176,0300) | 1.1164E-01 (2003,207,0200) |
| 1176 | -154.072 | -167.469 | 1.4371E-01 (2003,083,0100) | 1.3518E-01 (2003,176,0200) | 1.1298E-01 (2003,207,0200) | 1.0832E-01 (2003,176,0300) |
| 1177 | -152.623 | -167.497 | 1.3090E-01 (2003,083,0100) | 1.2256E-01 (2003,176,0200) | 1.1369E-01 (2003,330,2100) | 1.1368E-01 (2003,055,0000) |
| 1178 | -164.182 | -165.408 | 1.8346E-01 (2003,083,0100) | 1.7982E-01 (2003,253,0100) | 1.6651E-01 (2003,207,0100) | 1.6422E-01 (2003,041,2300) |
| 1179 | -162.733 | -165.439 | 1.7364E-01 (2003,083,0100) | 1.7293E-01 (2003,253,0100) | 1.6184E-01 (2003,041,2300) | 1.5174E-01 (2003,176,0200) |
| 1180 | -161.283 | -165.469 | 1.6415E-01 (2003,083,0100) | 1.6033E-01 (2003,176,0200) | 1.6017E-01 (2003,253,0100) | 1.5482E-01 (2003,041,2300) |
| 1181 | -159.834 | -165.499 | 1.6435E-01 (2003,176,0200) | 1.5523E-01 (2003,083,0100) | 1.4581E-01 (2003,253,0100) | 1.4404E-01 (2003,041,2300) |
| 1182 | -158.384 | -165.529 | 1.6295E-01 (2003,176,0200) | 1.4608E-01 (2003,083,0100) | 1.3085E-01 (2003,041,2300) | 1.2826E-01 (2003,253,0100) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1183 | -156.935 | -165.558 | 1.3593E-01 (2003,176,0200) | 1.2902E-01 (2003,083,0100) | 1.0793E-01 (2003,361,0800) | 1.0534E-01 (2003,176,0300) |
| 1184 | -155.485 | -165.588 | 1.3012E-01 (2003,176,0200) | 1.2162E-01 (2003,083,0100) | 1.0897E-01 (2003,361,0800) | 1.0824E-01 (2003,207,0200) |
| 1185 | -154.036 | -165.617 | 1.0636E-01 (2003,083,0100) | 9.7782E-02 (2003,253,0200) | 9.6254E-02 (2003,361,0800) | 9.3947E-02 (2003,330,2000) |
| 1186 | -152.586 | -165.645 | 1.0022E-01 (2003,253,0200) | 1.0003E-01 (2003,330,2000) | 9.8692E-02 (2003,346,0700) | 9.7741E-02 (2003,083,0100) |
| 1187 | -164.143 | -163.556 | 2.1999E-01 (2003,253,0100) | 1.7714E-01 (2003,176,0200) | 1.7121E-01 (2003,041,2300) | 1.7048E-01 (2003,081,0600) |
| 1188 | -162.694 | -163.587 | 2.0924E-01 (2003,253,0100) | 1.8063E-01 (2003,176,0200) | 1.6771E-01 (2003,041,2300) | 1.5568E-01 (2003,081,0600) |
| 1189 | -161.245 | -163.617 | 1.9310E-01 (2003,253,0100) | 1.7921E-01 (2003,176,0200) | 1.5999E-01 (2003,041,2300) | 1.4517E-01 (2003,327,0600) |
| 1190 | -159.796 | -163.647 | 1.7238E-01 (2003,176,0200) | 1.6010E-01 (2003,253,0100) | 1.4817E-01 (2003,041,2300) | 1.2585E-01 (2003,285,2100) |
| 1191 | -158.346 | -163.677 | 1.6047E-01 (2003,176,0200) | 1.4105E-01 (2003,253,0100) | 1.3427E-01 (2003,041,2300) | 1.1577E-01 (2003,361,0800) |
| 1192 | -156.897 | -163.706 | 1.3669E-01 (2003,176,0200) | 1.1338E-01 (2003,253,0100) | 1.1193E-01 (2003,361,0800) | 1.1096E-01 (2003,207,0200) |
| 1193 | -155.448 | -163.736 | 1.2553E-01 (2003,176,0200) | 1.2127E-01 (2003,330,2000) | 1.1450E-01 (2003,054,2300) | 1.1335E-01 (2003,253,0200) |
| 1194 | -153.999 | -163.765 | 1.1679E-01 (2003,330,2000) | 1.0897E-01 (2003,253,0200) | 1.0750E-01 (2003,346,0700) | 1.0220E-01 (2003,054,2300) |
| 1195 | -152.550 | -163.793 | 1.1086E-01 (2003,346,0700) | 1.0544E-01 (2003,253,0200) | 1.0392E-01 (2003,330,2000) | 9.5078E-02 (2003,285,2200) |
| 1196 | -159.757 | -161.795 | 1.8970E-01 (2003,253,0100) | 1.5412E-01 (2003,176,0200) | 1.4332E-01 (2003,041,2300) | 1.3644E-01 (2003,054,2300) |
| 1197 | -158.309 | -161.825 | 1.6506E-01 (2003,253,0100) | 1.4375E-01 (2003,054,2300) | 1.3537E-01 (2003,176,0200) | 1.3160E-01 (2003,330,2000) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 835 | -122.223 | -264.400 | 3.2481E-04 | 1016 | -147.279 | -191.689 | 1.0648E-03 |
| 836 | -120.755 | -264.423 | 2.8804E-04 | 1017 | -145.824 | -191.716 | 9.6760E-04 |
| 837 | -123.662 | -262.524 | 3.6432E-04 | 1018 | -144.370 | -191.743 | 8.0868E-04 |
| 838 | -122.195 | -262.547 | 3.1597E-04 | 1019 | -155.968 | -189.666 | 1.3183E-03 |
| 839 | -123.633 | -260.671 | 3.2314E-04 | 1020 | -154.514 | -189.695 | 1.1830E-03 |
| 840 | -125.071 | -258.794 | 3.6326E-04 | 1021 | -153.060 | -189.724 | 9.7491E-04 |
| 841 | -129.441 | -256.870 | 4.8734E-04 | 1022 | -151.606 | -189.753 | 1.1353E-03 |
| 842 | -127.975 | -256.894 | 4.8378E-04 | 1023 | -150.152 | -189.781 | 9.5130E-04 |
| 843 | -126.508 | -256.918 | 4.3888E-04 | 1024 | -148.698 | -189.809 | 1.0165E-03 |
| 844 | -125.041 | -256.941 | 3.6670E-04 | 1025 | -147.244 | -189.836 | 7.9490E-04 |
| 845 | -129.411 | -255.017 | 5.0495E-04 | 1026 | -145.790 | -189.864 | 7.7794E-04 |
| 846 | -127.944 | -255.041 | 4.6354E-04 | 1027 | -144.336 | -189.891 | 7.9835E-04 |
| 847 | -126.478 | -255.065 | 4.2145E-04 | 1028 | -157.385 | -187.785 | 1.3362E-03 |
| 848 | -129.380 | -253.164 | 5.1334E-04 | 1029 | -155.931 | -187.814 | 1.2424E-03 |
| 849 | -127.914 | -253.188 | 4.8381E-04 | 1030 | -154.477 | -187.843 | 1.0003E-03 |
| 850 | -126.448 | -253.212 | 4.0610E-04 | 1031 | -153.024 | -187.872 | 1.2324E-03 |
| 851 | -130.815 | -251.286 | 5.3982E-04 | 1032 | -151.570 | -187.900 | 1.1462E-03 |
| 852 | -129.349 | -251.311 | 4.7030E-04 | 1033 | -150.116 | -187.928 | 1.1191E-03 |
| 853 | -127.884 | -251.335 | 4.6631E-04 | 1034 | -148.663 | -187.956 | 1.0102E-03 |
| 854 | -126.418 | -251.359 | 4.2000E-04 | 1035 | -147.209 | -187.984 | 1.0738E-03 |
| 855 | -133.715 | -249.384 | 5.6921E-04 | 1036 | -145.755 | -188.011 | 8.8891E-04 |
| 856 | -132.249 | -249.409 | 5.6706E-04 | 1037 | -144.301 | -188.039 | 7.4124E-04 |
| 857 | -130.784 | -249.433 | 5.2115E-04 | 1038 | -142.848 | -188.065 | 7.9432E-04 |
| 858 | -129.319 | -249.458 | 5.0108E-04 | 1039 | -141.394 | -188.092 | 7.3111E-04 |
| 859 | -127.854 | -249.482 | 4.3159E-04 | 1040 | -161.707 | -185.843 | 1.4295E-03 |
| 860 | -133.683 | -247.531 | 5.8939E-04 | 1041 | -160.254 | -185.873 | 1.4035E-03 |
| 861 | -132.218 | -247.556 | 5.3917E-04 | 1042 | -158.801 | -185.903 | 1.3599E-03 |
| 862 | -130.753 | -247.580 | 4.7134E-04 | 1043 | -157.347 | -185.932 | 1.2614E-03 |
| 863 | -129.288 | -247.605 | 4.6660E-04 | 1044 | -155.894 | -185.962 | 1.3275E-03 |
| 864 | -127.823 | -247.629 | 4.6977E-04 | 1045 | -154.441 | -185.991 | 1.3029E-03 |
| 865 | -135.116 | -245.653 | 6.1554E-04 | 1046 | -152.987 | -186.019 | 1.1727E-03 |
| 866 | -133.651 | -245.678 | 5.8031E-04 | 1047 | -151.534 | -186.048 | 9.5088E-04 |
| 867 | -132.187 | -245.703 | 5.4228E-04 | 1048 | -150.080 | -186.076 | 1.1563E-03 |
| 868 | -130.722 | -245.727 | 4.9654E-04 | 1049 | -148.627 | -186.104 | 1.1445E-03 |
| 869 | -129.258 | -245.752 | 4.8245E-04 | 1050 | -147.174 | -186.132 | 1.0057E-03 |
| 870 | -136.548 | -243.775 | 6.4175E-04 | 1051 | -145.720 | -186.159 | 8.0810E-04 |
| 871 | -135.084 | -243.800 | 6.3075E-04 | 1052 | -144.267 | -186.186 | 7.2944E-04 |
| 872 | -133.620 | -243.825 | 5.8175E-04 | 1053 | -142.813 | -186.213 | 7.3257E-04 |
| 873 | -132.155 | -243.850 | 5.6929E-04 | 1054 | -141.360 | -186.240 | 6.8924E-04 |
| 874 | -130.691 | -243.874 | 5.7303E-04 | 1055 | -161.669 | -183.991 | 1.4570E-03 |
| 875 | -129.227 | -243.899 | 4.9845E-04 | 1056 | -160.216 | -184.021 | 1.4277E-03 |
| 876 | -137.980 | -241.896 | 6.6838E-04 | 1057 | -158.763 | -184.051 | 1.4324E-03 |
| 877 | -136.516 | -241.922 | 6.6201E-04 | 1058 | -157.310 | -184.080 | 1.3977E-03 |
| 878 | -135.052 | -241.947 | 6.3765E-04 | 1059 | -155.857 | -184.109 | 1.3550E-03 |
| 879 | -133.588 | -241.972 | 6.3942E-04 | 1060 | -154.404 | -184.138 | 1.2754E-03 |
| 880 | -132.124 | -241.997 | 6.0535E-04 | 1061 | -152.951 | -184.167 | 1.2732E-03 |
| 881 | -130.660 | -242.022 | 5.7082E-04 | 1062 | -151.498 | -184.196 | 1.2275E-03 |
| 882 | -129.197 | -242.046 | 5.3307E-04 | 1063 | -150.045 | -184.224 | 1.1270E-03 |
| 883 | -137.947 | -240.043 | 6.8876E-04 | 1064 | -148.592 | -184.252 | 1.0241E-03 |
| 884 | -136.483 | -240.069 | 6.7225E-04 | 1065 | -147.139 | -184.279 | 8.3980E-04 |
| 885 | -135.020 | -240.094 | 6.3494E-04 | 1066 | -145.686 | -184.307 | 7.3776E-04 |
| 886 | -133.556 | -240.119 | 6.1028E-04 | 1067 | -144.233 | -184.334 | 7.3549E-04 |
| 887 | -132.093 | -240.144 | 6.1591E-04 | 1068 | -161.630 | -182.138 | 1.5104E-03 |
| 888 | -130.629 | -240.169 | 5.4703E-04 | 1069 | -160.178 | -182.169 | 1.4805E-03 |
| 889 | -129.166 | -240.193 | 5.6897E-04 | 1070 | -158.725 | -182.198 | 1.4451E-03 |
| 890 | -137.914 | -238.190 | 7.0523E-04 | 1071 | -157.272 | -182.228 | 1.3993E-03 |
| 891 | -136.451 | -238.216 | 6.8140E-04 | 1072 | -155.820 | -182.257 | 1.3534E-03 |
| 892 | -134.988 | -238.241 | 6.5469E-04 | 1073 | -154.367 | -182.286 | 1.3188E-03 |
| 893 | -133.525 | -238.266 | 6.3898E-04 | 1074 | -152.914 | -182.315 | 1.2742E-03 |
| 894 | -132.062 | -238.291 | 5.5796E-04 | 1075 | -151.462 | -182.343 | 1.2176E-03 |
| 895 | -130.599 | -238.316 | 5.6348E-04 | 1076 | -150.009 | -182.372 | 1.0012E-03 |
| 896 | -137.882 | -236.337 | 7.2730E-04 | 1077 | -148.556 | -182.399 | 9.1750E-04 |
| 897 | -136.419 | -236.363 | 7.0841E-04 | 1078 | -147.104 | -182.427 | 7.9711E-04 |
| 898 | -134.956 | -236.388 | 6.7397E-04 | 1079 | -145.651 | -182.454 | 8.0319E-04 |
| 899 | -133.493 | -236.413 | 5.7459E-04 | 1080 | -161.592 | -180.286 | 1.5357E-03 |
| 900 | -132.030 | -236.438 | 5.9921E-04 | 1081 | -160.139 | -180.316 | 1.4957E-03 |
| 901 | -137.849 | -234.485 | 7.4134E-04 | 1082 | -158.687 | -180.346 | 1.4508E-03 |
| 902 | -136.386 | -234.510 | 7.2121E-04 | 1083 | -157.235 | -180.376 | 1.4018E-03 |
| 903 | -134.924 | -234.536 | 6.5419E-04 | 1084 | -155.783 | -180.405 | 1.3555E-03 |
| 904 | -133.462 | -234.561 | 6.1263E-04 | 1085 | -154.330 | -180.434 | 1.3029E-03 |
| 905 | -137.816 | -232.632 | 7.6074E-04 | 1086 | -152.878 | -180.463 | 1.2340E-03 |
| 906 | -136.354 | -232.657 | 7.3995E-04 | 1087 | -151.426 | -180.491 | 1.0474E-03 |
| 907 | -134.892 | -232.683 | 6.2475E-04 | 1088 | -149.973 | -180.519 | 9.9522E-04 |
| 908 | -139.245 | -230.753 | 7.9524E-04 | 1089 | -148.521 | -180.547 | 8.7617E-04 |
| 909 | -137.784 | -230.779 | 7.8568E-04 | 1090 | -147.068 | -180.575 | 8.1310E-04 |
| 910 | -136.322 | -230.805 | 6.6708E-04 | 1091 | -145.616 | -180.602 | 8.2389E-04 |
| 911 | -134.860 | -230.830 | 6.6804E-04 | 1092 | -161.553 | -178.434 | 1.5541E-03 |
| 912 | -139.212 | -228.900 | 8.1573E-04 | 1093 | -160.101 | -178.464 | 1.5019E-03 |
| 913 | -137.751 | -228.926 | 8.0416E-04 | 1094 | -158.649 | -178.494 | 1.4460E-03 |
| 914 | -136.290 | -228.952 | 6.8330E-04 | 1095 | -157.197 | -178.523 | 1.3931E-03 |
| 915 | -134.828 | -228.977 | 7.1618E-04 | 1096 | -155.745 | -178.553 | 1.3335E-03 |
| 916 | -140.640 | -227.021 | 8.3704E-04 | 1097 | -154.293 | -178.582 | 1.2782E-03 |
| 917 | -139.179 | -227.048 | 8.3653E-04 | 1098 | -152.841 | -178.610 | 1.2143E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 918 | -137.718 | -227.073 | 7.6350E-04 | 1099 | -151.389 | -178.639 | 1.0990E-03 |
| 919 | -136.257 | -227.099 | 7.3089E-04 | 1100 | -149.937 | -178.667 | 8.9926E-04 |
| 920 | -140.607 | -225.169 | 8.5848E-04 | 1101 | -148.485 | -178.695 | 8.7232E-04 |
| 921 | -139.146 | -225.195 | 8.4126E-04 | 1102 | -147.033 | -178.723 | 1.0938E-03 |
| 922 | -137.686 | -225.221 | 7.6770E-04 | 1103 | -145.581 | -178.750 | 9.5999E-04 |
| 923 | -136.225 | -225.246 | 7.7821E-04 | 1104 | -164.418 | -176.521 | 1.6789E-03 |
| 924 | -140.574 | -223.316 | 8.7370E-04 | 1105 | -162.966 | -176.552 | 1.6217E-03 |
| 925 | -139.113 | -223.342 | 7.9309E-04 | 1106 | -161.515 | -176.582 | 1.5601E-03 |
| 926 | -137.653 | -223.368 | 7.5733E-04 | 1107 | -160.063 | -176.612 | 1.4951E-03 |
| 927 | -136.193 | -223.394 | 7.8015E-04 | 1108 | -158.611 | -176.642 | 1.4182E-03 |
| 928 | -143.460 | -221.410 | 8.9365E-04 | 1109 | -157.160 | -176.671 | 1.3259E-03 |
| 929 | -142.000 | -221.437 | 8.9507E-04 | 1110 | -155.708 | -176.701 | 1.3159E-03 |
| 930 | -140.540 | -221.463 | 8.6097E-04 | 1111 | -154.257 | -176.730 | 1.2478E-03 |
| 931 | -139.080 | -221.489 | 7.6925E-04 | 1112 | -152.805 | -176.758 | 1.1338E-03 |
| 932 | -137.620 | -221.515 | 7.6168E-04 | 1113 | -151.353 | -176.787 | 9.8922E-04 |
| 933 | -146.346 | -219.503 | 9.2670E-04 | 1114 | -149.902 | -176.815 | 9.0135E-04 |
| 934 | -144.886 | -219.531 | 9.2126E-04 | 1115 | -148.450 | -176.843 | 1.0023E-03 |
| 935 | -143.426 | -219.558 | 9.1550E-04 | 1116 | -146.998 | -176.870 | 9.9125E-04 |
| 936 | -141.967 | -219.584 | 9.0404E-04 | 1117 | -164.379 | -174.669 | 1.6999E-03 |
| 937 | -140.507 | -219.611 | 8.1746E-04 | 1118 | -162.927 | -174.699 | 1.6277E-03 |
| 938 | -139.047 | -219.637 | 7.7891E-04 | 1119 | -161.476 | -174.730 | 1.5558E-03 |
| 939 | -137.588 | -219.663 | 7.5570E-04 | 1120 | -160.025 | -174.760 | 1.4886E-03 |
| 940 | -146.311 | -217.651 | 9.4101E-04 | 1121 | -158.574 | -174.790 | 1.4267E-03 |
| 941 | -144.851 | -217.678 | 9.3257E-04 | 1122 | -157.122 | -174.819 | 1.3652E-03 |
| 942 | -143.392 | -217.705 | 9.2873E-04 | 1123 | -155.671 | -174.848 | 1.3208E-03 |
| 943 | -141.933 | -217.732 | 9.0064E-04 | 1124 | -154.220 | -174.877 | 1.2509E-03 |
| 944 | -140.474 | -217.758 | 7.9855E-04 | 1125 | -152.768 | -174.906 | 1.0277E-03 |
| 945 | -139.014 | -217.784 | 8.1771E-04 | 1126 | -151.317 | -174.934 | 1.0169E-03 |
| 946 | -137.555 | -217.810 | 7.6187E-04 | 1127 | -149.866 | -174.963 | 9.9637E-04 |
| 947 | -146.276 | -215.798 | 9.4539E-04 | 1128 | -148.415 | -174.991 | 1.1407E-03 |
| 948 | -144.817 | -215.825 | 9.4728E-04 | 1129 | -167.241 | -172.755 | 1.8687E-03 |
| 949 | -143.358 | -215.852 | 8.8743E-04 | 1130 | -165.790 | -172.786 | 1.7876E-03 |
| 950 | -141.899 | -215.879 | 8.2436E-04 | 1131 | -164.339 | -172.817 | 1.7006E-03 |
| 951 | -146.241 | -213.946 | 9.7157E-04 | 1132 | -162.888 | -172.847 | 1.6198E-03 |
| 952 | -144.783 | -213.973 | 9.6185E-04 | 1133 | -161.438 | -172.878 | 1.5479E-03 |
| 953 | -143.324 | -214.000 | 9.3213E-04 | 1134 | -159.987 | -172.908 | 1.4779E-03 |
| 954 | -146.207 | -212.093 | 9.4930E-04 | 1135 | -158.536 | -172.937 | 1.4048E-03 |
| 955 | -144.748 | -212.120 | 9.6351E-04 | 1136 | -157.085 | -172.967 | 1.3057E-03 |
| 956 | -143.290 | -212.147 | 9.4182E-04 | 1137 | -155.634 | -172.996 | 1.1918E-03 |
| 957 | -141.832 | -212.174 | 9.0457E-04 | 1138 | -154.183 | -173.025 | 1.0988E-03 |
| 958 | -146.172 | -210.241 | 9.9610E-04 | 1139 | -152.732 | -173.054 | 1.2435E-03 |
| 959 | -144.714 | -210.268 | 9.8380E-04 | 1140 | -151.281 | -173.082 | 1.2090E-03 |
| 960 | -143.256 | -210.295 | 9.4983E-04 | 1141 | -149.830 | -173.110 | 1.2164E-03 |
| 961 | -141.798 | -210.321 | 9.4362E-04 | 1142 | -148.379 | -173.138 | 1.1030E-03 |
| 962 | -146.137 | -208.388 | 1.0028E-03 | 1143 | -146.928 | -173.166 | 1.0453E-03 |
| 963 | -144.680 | -208.415 | 9.9886E-04 | 1144 | -165.751 | -170.934 | 1.7857E-03 |
| 964 | -143.222 | -208.442 | 9.8474E-04 | 1145 | -164.300 | -170.965 | 1.6938E-03 |
| 965 | -141.764 | -208.469 | 9.4540E-04 | 1146 | -162.850 | -170.995 | 1.6096E-03 |
| 966 | -140.307 | -208.495 | 8.7348E-04 | 1147 | -161.399 | -171.025 | 1.5279E-03 |
| 967 | -146.102 | -206.535 | 1.0150E-03 | 1148 | -159.948 | -171.056 | 1.4501E-03 |
| 968 | -144.645 | -206.563 | 1.0080E-03 | 1149 | -158.498 | -171.085 | 1.3207E-03 |
| 969 | -143.188 | -206.590 | 9.9782E-04 | 1150 | -157.047 | -171.115 | 1.2945E-03 |
| 970 | -141.731 | -206.616 | 9.3503E-04 | 1151 | -155.597 | -171.144 | 1.3424E-03 |
| 971 | -146.068 | -204.683 | 1.0160E-03 | 1152 | -154.146 | -171.173 | 1.2876E-03 |
| 972 | -144.611 | -204.710 | 1.0183E-03 | 1153 | -152.696 | -171.202 | 1.2775E-03 |
| 973 | -143.154 | -204.737 | 1.0005E-03 | 1154 | -151.245 | -171.230 | 1.1933E-03 |
| 974 | -141.697 | -204.764 | 9.6210E-04 | 1155 | -149.794 | -171.258 | 1.3101E-03 |
| 975 | -148.946 | -202.775 | 1.0793E-03 | 1156 | -148.344 | -171.286 | 9.5836E-04 |
| 976 | -147.489 | -202.803 | 1.0559E-03 | 1157 | -146.893 | -171.314 | 9.0702E-04 |
| 977 | -146.033 | -202.831 | 1.0471E-03 | 1158 | -162.811 | -169.143 | 1.6049E-03 |
| 978 | -144.576 | -202.858 | 1.0167E-03 | 1159 | -161.360 | -169.173 | 1.5096E-03 |
| 979 | -143.120 | -202.885 | 1.0164E-03 | 1160 | -159.910 | -169.203 | 1.4563E-03 |
| 980 | -141.663 | -202.911 | 9.1385E-04 | 1161 | -158.460 | -169.233 | 1.4258E-03 |
| 981 | -148.910 | -200.923 | 1.0850E-03 | 1162 | -157.010 | -169.263 | 1.3995E-03 |
| 982 | -147.454 | -200.951 | 1.0204E-03 | 1163 | -155.560 | -169.292 | 1.3290E-03 |
| 983 | -145.998 | -200.978 | 1.0667E-03 | 1164 | -154.109 | -169.321 | 1.3279E-03 |
| 984 | -144.542 | -201.005 | 9.8773E-04 | 1165 | -152.659 | -169.350 | 1.3287E-03 |
| 985 | -143.086 | -201.032 | 9.5530E-04 | 1166 | -151.209 | -169.378 | 1.2223E-03 |
| 986 | -141.630 | -201.059 | 8.4095E-04 | 1167 | -149.759 | -169.406 | 1.2791E-03 |
| 987 | -148.875 | -199.071 | 1.0006E-03 | 1168 | -148.308 | -169.434 | 1.2757E-03 |
| 988 | -147.419 | -199.098 | 1.1019E-03 | 1169 | -164.222 | -167.260 | 1.6897E-03 |
| 989 | -145.963 | -199.126 | 9.8688E-04 | 1170 | -162.772 | -167.291 | 1.6107E-03 |
| 990 | -144.508 | -199.153 | 1.0412E-03 | 1171 | -161.322 | -167.321 | 1.5535E-03 |
| 991 | -151.751 | -197.162 | 1.1827E-03 | 1172 | -159.872 | -167.351 | 1.5131E-03 |
| 992 | -150.295 | -197.190 | 1.1254E-03 | 1173 | -158.422 | -167.381 | 1.4676E-03 |
| 993 | -148.840 | -197.218 | 9.9945E-04 | 1174 | -156.972 | -167.411 | 1.4459E-03 |
| 994 | -147.384 | -197.246 | 9.6120E-04 | 1175 | -155.522 | -167.440 | 1.4343E-03 |
| 995 | -145.929 | -197.273 | 1.0068E-03 | 1176 | -154.072 | -167.469 | 1.4283E-03 |
| 996 | -144.473 | -197.300 | 8.0939E-04 | 1177 | -152.623 | -167.497 | 1.4435E-03 |
| 997 | -151.714 | -195.310 | 1.1833E-03 | 1178 | -164.182 | -165.408 | 1.7088E-03 |
| 998 | -150.259 | -195.338 | 1.0666E-03 | 1179 | -162.733 | -165.439 | 1.6313E-03 |
| 999 | -148.804 | -195.366 | 1.1587E-03 | 1180 | -161.283 | -165.469 | 1.5583E-03 |
| 1000 | -147.349 | -195.393 | 1.1310E-03 | 1181 | -159.834 | -165.499 | 1.5403E-03 |
| 1001 | -145.894 | -195.421 | 1.0330E-03 | 1182 | -158.384 | -165.529 | 1.5193E-03 |
| 1002 | -144.439 | -195.448 | 8.7725E-04 | 1183 | -156.935 | -165.558 | 1.3298E-03 |
| 1003 | -153.133 | -193.429 | 1.2264E-03 | 1184 | -155.485 | -165.588 | 1.3509E-03 |
| 1004 | -151.678 | -193.457 | 1.0378E-03 | 1185 | -154.036 | -165.617 | 1.1786E-03 |
| 1005 | -150.224 | -193.485 | 1.1294E-03 | 1186 | -152.586 | -165.645 | 1.1783E-03 |
| 1006 | -148.769 | -193.513 | 1.1677E-03 | 1187 | -164.143 | -163.556 | 1.7475E-03 |
| 1007 | -147.314 | -193.541 | 1.0614E-03 | 1188 | -162.694 | -163.587 | 1.6920E-03 |
| 1008 | -145.859 | -193.568 | 9.7495E-04 | 1189 | -161.245 | -163.617 | 1.6210E-03 |
| 1009 | -144.404 | -193.596 | 8.1091E-04 | 1190 | -159.796 | -163.647 | 1.5366E-03 |
| 1010 | -156.005 | -191.519 | 1.3099E-03 | 1191 | -158.346 | -163.677 | 1.5266E-03 |
| 1011 | -154.551 | -191.548 | 1.2817E-03 | 1192 | -156.897 | -163.706 | 1.4469E-03 |
| 1012 | -153.097 | -191.576 | 1.1595E-03 | 1193 | -155.448 | -163.736 | 1.5110E-03 |
| 1013 | -151.642 | -191.605 | 1.0740E-03 | 1194 | -153.999 | -163.765 | 1.3542E-03 |
| 1014 | -150.188 | -191.633 | 1.0292E-03 | 1195 | -152.550 | -163.793 | 1.2310E-03 |
| 1015 | -148.733 | -191.661 | 1.1293E-03 | 1196 | -159.757 | -161.795 | 1.6656E-03 |
| | | | | 1197 | -158.309 | -161.825 | 1.6514E-03 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1145 | -164.300 | -170.965 | DISCRETE | 2.3525E-01 (2003,083,0100) | RANK 1 | 1 | HOUR |
| 1130 | -165.790 | -172.786 | DISCRETE | 2.1237E-01 (2003,083,0100) | RANK 2 | 1 | HOUR |
| 1130 | -165.790 | -172.786 | DISCRETE | 1.8041E-01 (2003,207,0000) | RANK 3 | 1 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 1.7144E-01 (2003,207,0000) | RANK 4 | 1 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 1.8687E-03 | RANK 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Grand Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1197*0, 791*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

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```

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0 0 0 
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 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2003\2003_GRAND_NOX.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_GC.DAT

*********************************************************************************************************************************
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*********************************************************************************************************************************


                                                        NOX           1

 4 RANKED     1   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
   1198     -355.887  -464.319   5.3573E-03 (2003,036,1000)  4.7609E-03 (2003,036,1100)  4.4962E-03 (2003,036,0900)  2.8441E-03 (2003,036,1200)
   1199     -353.629  -464.418   5.3596E-03 (2003,036,1000)  4.8149E-03 (2003,036,1100)  4.4450E-03 (2003,036,0900)  2.9239E-03 (2003,036,1200)
   1200     -351.371  -464.517   5.3282E-03 (2003,036,1000)  4.8389E-03 (2003,036,1100)  4.3662E-03 (2003,036,0900)  2.9867E-03 (2003,036,1200)
   1201     -362.536  -461.234   5.5622E-03 (2003,036,1000)  5.0535E-03 (2003,036,0900)  4.6173E-03 (2003,036,1100)  2.5896E-03 (2003,036,1200)
   1202     -360.279  -461.336   5.6733E-03 (2003,036,1000)  5.0921E-03 (2003,036,0900)  4.7624E-03 (2003,036,1100)  2.7131E-03 (2003,036,1200)
   1203     -358.021  -461.436   5.7479E-03 (2003,036,1000)  5.0970E-03 (2003,036,0900)  4.8786E-03 (2003,036,1100)  2.8244E-03 (2003,036,1200)
   1204     -355.764  -461.536   5.7850E-03 (2003,036,1000)  5.0832E-03 (2003,036,0900)  4.9643E-03 (2003,036,1100)  2.9205E-03 (2003,036,1200)
   1205     -353.507  -461.636   5.7846E-03 (2003,036,1000)  5.0214E-03 (2003,036,0900)  5.0186E-03 (2003,036,1100)  2.9995E-03 (2003,036,1200)
   1206     -351.249  -461.735   5.7475E-03 (2003,036,1000)  5.0412E-03 (2003,036,1100)  4.9102E-03 (2003,036,0900)  3.0609E-03 (2003,036,1200)
   1207     -348.992  -461.833   5.6748E-03 (2003,036,1000)  5.0323E-03 (2003,036,1100)  4.7865E-03 (2003,036,0900)  3.1041E-03 (2003,036,1200)
   1208     -366.923  -458.247   5.6259E-03 (2003,036,1000)  5.4630E-03 (2003,036,0900)  4.4059E-03 (2003,036,1100)  2.8073E-03 (2003,036,0800)
   1209     -364.667  -458.350   5.8185E-03 (2003,036,1000)  5.6011E-03 (2003,036,0900)  4.6100E-03 (2003,036,1100)  2.8964E-03 (2003,036,0800)
   1210     -362.410  -458.452   5.9756E-03 (2003,036,1000)  5.6662E-03 (2003,036,0900)  4.7880E-03 (2003,036,1100)  2.8874E-03 (2003,036,0800)
   1211     -360.154  -458.553   6.0942E-03 (2003,036,1000)  5.7244E-03 (2003,036,0900)  4.9381E-03 (2003,036,1100)  2.9304E-03 (2003,036,0800)
   1212     -357.897  -458.654   6.1727E-03 (2003,036,1000)  5.7267E-03 (2003,036,0900)  5.0574E-03 (2003,036,1100)  2.9154E-03 (2003,036,0800)
   1213     -355.641  -458.754   6.2109E-03 (2003,036,1000)  5.6902E-03 (2003,036,0900)  5.1458E-03 (2003,036,1100)  2.9862E-03 (2003,036,1200)
   1214     -353.384  -458.853   6.2075E-03 (2003,036,1000)  5.6164E-03 (2003,036,0900)  5.1999E-03 (2003,036,1100)  3.0638E-03 (2003,036,1200)
   1215     -351.128  -458.952   6.1642E-03 (2003,036,1000)  5.5057E-03 (2003,036,0900)  5.2208E-03 (2003,036,1100)  3.1234E-03 (2003,036,1200)
   1216     -348.871  -459.050   6.0823E-03 (2003,036,1000)  5.3614E-03 (2003,036,0900)  5.2082E-03 (2003,036,1100)  3.1642E-03 (2003,036,1200)
   1217     -346.614  -459.148   5.9640E-03 (2003,036,1000)  5.1701E-03 (2003,036,0900)  5.1633E-03 (2003,036,1100)  3.1851E-03 (2003,036,1200)
   1218     -373.563  -455.154   5.4842E-03 (2003,036,0900)  5.1892E-03 (2003,036,1000)  3.7895E-03 (2003,036,1100)  3.0124E-03 (2003,036,0800)
   1219     -366.796  -455.465   6.0907E-03 (2003,036,0900)  6.0007E-03 (2003,036,1000)  4.5406E-03 (2003,036,1100)  3.2852E-03 (2003,036,0800)
   1220     -364.541  -455.568   6.2429E-03 (2003,036,0900)  6.2071E-03 (2003,036,1000)  4.7506E-03 (2003,036,1100)  3.3915E-03 (2003,036,0800)
   1221     -362.285  -455.670   6.3750E-03 (2003,036,1000)  6.3312E-03 (2003,036,0900)  4.9337E-03 (2003,036,1100)  3.4221E-03 (2003,036,0800)
   1222     -360.029  -455.771   6.5007E-03 (2003,036,1000)  6.3746E-03 (2003,036,0900)  5.0894E-03 (2003,036,1100)  3.4278E-03 (2003,036,0800)
   1223     -357.774  -455.872   6.5833E-03 (2003,036,1000)  6.3733E-03 (2003,036,0900)  5.2122E-03 (2003,036,1100)  3.4088E-03 (2003,036,0800)
   1224     -355.518  -455.972   6.6220E-03 (2003,036,1000)  6.3289E-03 (2003,036,0900)  5.3005E-03 (2003,036,1100)  3.3666E-03 (2003,036,0800)
   1225     -353.262  -456.071   6.6155E-03 (2003,036,1000)  6.2420E-03 (2003,036,0900)  5.3542E-03 (2003,036,1100)  3.3015E-03 (2003,036,0800)
   1226     -351.006  -456.170   6.5656E-03 (2003,036,1000)  6.1153E-03 (2003,036,0900)  5.3731E-03 (2003,036,1100)  3.2125E-03 (2003,036,0800)
   1227     -348.750  -456.268   6.4737E-03 (2003,036,1000)  5.9312E-03 (2003,036,0900)  5.3576E-03 (2003,036,1100)  3.2126E-03 (2003,036,1200)
   1228     -346.494  -456.366   6.3423E-03 (2003,036,1000)  5.7317E-03 (2003,036,0900)  5.3089E-03 (2003,036,1100)  3.2313E-03 (2003,036,1200)
   1229     -375.689  -452.267   5.7469E-03 (2003,036,0900)  5.1512E-03 (2003,036,1000)  3.5979E-03 (2003,036,1100)  3.3160E-03 (2003,036,0800)
   1230     -373.434  -452.372   6.0546E-03 (2003,036,0900)  5.4923E-03 (2003,036,1000)  3.8801E-03 (2003,036,1100)  3.4848E-03 (2003,036,0800)
   1231     -371.179  -452.476   6.3227E-03 (2003,036,0900)  5.8113E-03 (2003,036,1000)  4.1528E-03 (2003,036,1100)  3.6080E-03 (2003,036,0800)
   1232     -368.924  -452.580   6.5793E-03 (2003,036,0900)  6.1023E-03 (2003,036,1000)  4.4118E-03 (2003,036,1100)  3.7876E-03 (2003,036,0800)
   1233     -366.670  -452.683   6.7693E-03 (2003,036,0900)  6.3594E-03 (2003,036,1000)  4.6514E-03 (2003,036,1100)  3.8798E-03 (2003,036,0800)
   1234     -364.415  -452.786   6.8920E-03 (2003,036,0900)  6.5779E-03 (2003,036,1000)  4.8673E-03 (2003,036,1100)  3.8868E-03 (2003,036,0800)
   1235     -362.160  -452.888   7.0095E-03 (2003,036,0900)  6.7550E-03 (2003,036,1000)  5.0546E-03 (2003,036,1100)  3.9781E-03 (2003,036,0800)
   1236     -359.905  -452.989   7.0547E-03 (2003,036,0900)  6.8880E-03 (2003,036,1000)  5.2113E-03 (2003,036,1100)  3.9837E-03 (2003,036,0800)
   1237     -357.650  -453.089   7.0502E-03 (2003,036,0900)  6.9734E-03 (2003,036,1000)  5.3358E-03 (2003,036,1100)  3.9597E-03 (2003,036,0800)
   1238     -353.140  -453.289   7.0014E-03 (2003,036,1000)  6.8959E-03 (2003,036,0900)  5.4773E-03 (2003,036,1100)  3.8297E-03 (2003,036,0800)
   1239     -350.885  -453.388   6.9454E-03 (2003,036,1000)  6.7507E-03 (2003,036,0900)  5.4940E-03 (2003,036,1100)  3.7248E-03 (2003,036,0800)
   1240     -348.630  -453.486   6.8440E-03 (2003,036,1000)  6.5647E-03 (2003,036,0900)  5.4752E-03 (2003,036,1100)  3.5662E-03 (2003,036,0800)
   1241     -346.375  -453.583   6.7011E-03 (2003,036,1000)  6.3423E-03 (2003,036,0900)  5.4220E-03 (2003,036,1100)  3.4469E-03 (2003,036,0800)
   1242     -377.813  -449.379   5.9474E-03 (2003,036,0900)  5.0331E-03 (2003,036,1000)  3.6150E-03 (2003,036,0800)  3.3726E-03 (2003,036,1100)
   1243     -375.559  -449.485   6.3187E-03 (2003,036,0900)  5.4114E-03 (2003,036,1000)  3.8290E-03 (2003,036,0800)  3.6653E-03 (2003,036,1100)
   1244     -373.305  -449.590   6.6548E-03 (2003,036,0900)  5.7723E-03 (2003,036,1000)  3.9977E-03 (2003,036,0800)  3.9521E-03 (2003,036,1100)
   1245     -371.051  -449.694   6.9566E-03 (2003,036,0900)  6.1100E-03 (2003,036,1000)  4.2292E-03 (2003,036,1100)  4.1623E-03 (2003,036,0800)
   1246     -368.797  -449.798   7.2385E-03 (2003,036,0900)  6.4183E-03 (2003,036,1000)  4.4913E-03 (2003,036,1100)  4.3650E-03 (2003,036,0800)
   1247     -366.543  -449.901   7.4480E-03 (2003,036,0900)  6.6904E-03 (2003,036,1000)  4.7348E-03 (2003,036,1100)  4.4688E-03 (2003,036,0800)
   1248     -364.289  -450.004   7.6077E-03 (2003,036,0900)  6.9212E-03 (2003,036,1000)  4.9554E-03 (2003,036,1100)  4.4915E-03 (2003,036,0800)
   1249     -362.034  -450.105   7.7110E-03 (2003,036,0900)  7.1077E-03 (2003,036,1000)  5.1456E-03 (2003,036,1100)  4.5321E-03 (2003,036,0800)
   1250     -359.780  -450.207   7.7585E-03 (2003,036,0900)  7.2470E-03 (2003,036,1000)  5.3052E-03 (2003,036,1100)  4.5905E-03 (2003,036,0800)
   1251     -357.526  -450.307   7.7502E-03 (2003,036,0900)  7.3355E-03 (2003,036,1000)  5.4308E-03 (2003,036,1100)  4.5623E-03 (2003,036,0800)
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| 1352 | -374.779 | -432.795 | 9.5386E-03 (2003,036,0900) | 7.7927E-03 (2003,036,0800) | 6.2464E-03 (2003,036,1000) | 3.7191E-03 (2003,036,1100) |
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| 1354 | -368.031 | -433.108 | 1.1000E-02 (2003,036,0900) | 8.8469E-03 (2003,036,0800) | 7.4773E-03 (2003,036,1000) | 4.5298E-03 (2003,036,1100) |
| 1355 | -365.781 | -433.211 | 1.1338E-02 (2003,036,0900) | 9.0739E-03 (2003,036,0800) | 7.8093E-03 (2003,036,1000) | 4.7637E-03 (2003,036,1100) |
| 1356 | -363.532 | -433.313 | 1.1588E-02 (2003,036,0900) | 9.2309E-03 (2003,036,0800) | 8.0936E-03 (2003,036,1000) | 4.9748E-03 (2003,036,1100) |
| 1357 | -361.282 | -433.415 | 1.1749E-02 (2003,036,0900) | 9.3133E-03 (2003,036,0800) | 8.3194E-03 (2003,036,1000) | 5.1540E-03 (2003,036,1100) |
| 1358 | -359.033 | -433.516 | 1.1815E-02 (2003,036,0900) | 9.3197E-03 (2003,036,0800) | 8.4844E-03 (2003,036,1000) | 5.3015E-03 (2003,036,1100) |
| 1359 | -354.534 | -433.716 | 1.1667E-02 (2003,036,0900) | 9.1125E-03 (2003,036,0800) | 8.6180E-03 (2003,036,1000) | 5.4857E-03 (2003,036,1100) |
| 1360 | -352.284 | -433.815 | 1.1459E-02 (2003,036,0900) | 8.9029E-03 (2003,036,0800) | 8.5879E-03 (2003,036,1000) | 5.5203E-03 (2003,036,1100) |
| 1361 | -350.035 | -433.914 | 1.1170E-02 (2003,036,0900) | 8.6303E-03 (2003,036,0800) | 8.4929E-03 (2003,036,1000) | 5.5159E-03 (2003,036,1100) |
| 1362 | -347.785 | -434.012 | 1.0806E-02 (2003,036,0900) | 8.3372E-03 (2003,036,1000) | 8.1755E-03 (2003,036,0800) | 5.4731E-03 (2003,036,1100) |
| 1363 | -246.527 | -437.763 | 7.7549E-03 (2003,284,0600) | 7.7051E-03 (2003,284,0700) | 5.7092E-03 (2003,297,0500) | 4.8435E-03 (2003,297,0400) |
| 1364 | -244.276 | -437.832 | 8.3722E-03 (2003,284,0600) | 7.6021E-03 (2003,284,0700) | 6.7429E-03 (2003,297,0500) | 5.5975E-03 (2003,297,0400) |
| 1365 | -242.026 | -437.900 | 8.9604E-03 (2003,284,0600) | 7.8955E-03 (2003,297,0500) | 7.4194E-03 (2003,284,0700) | 6.3864E-03 (2003,297,0400) |
| 1366 | -239.775 | -437.967 | 9.5037E-03 (2003,284,0600) | 9.1578E-03 (2003,297,0500) | 7.2125E-03 (2003,297,0400) | 7.1591E-03 (2003,284,0700) |
| 1367 | -237.524 | -438.034 | 1.0513E-02 (2003,297,0500) | 9.9869E-03 (2003,284,0600) | 8.0673E-03 (2003,297,0400) | 7.2097E-03 (2003,284,0500) |
| 1368 | -235.273 | -438.101 | 1.1969E-02 (2003,297,0500) | 1.0393E-02 (2003,284,0600) | 8.9125E-03 (2003,297,0400) | 8.3847E-03 (2003,297,0600) |
| 1369 | -233.022 | -438.166 | 1.3484E-02 (2003,297,0500) | 1.0705E-02 (2003,284,0600) | 9.8235E-03 (2003,297,0600) | 9.7579E-03 (2003,297,0400) |
| 1370 | -230.772 | -438.231 | 1.5069E-02 (2003,297,0500) | 1.1415E-02 (2003,297,0600) | 1.0909E-02 (2003,284,0600) | 1.0558E-02 (2003,297,0400) |
| 1371 | -228.521 | -438.296 | 1.0611E-02 (2003,297,0500) | 8.6263E-03 (2003,284,0600) | 8.1913E-03 (2003,284,0500) | 8.1815E-03 (2003,297,0400) |
| 1372 | -226.270 | -438.360 | 1.0569E-02 (2003,297,0500) | 8.1648E-03 (2003,297,0400) | 8.0854E-03 (2003,284,0500) | 7.9325E-03 (2003,284,0600) |
| 1373 | -224.019 | -438.423 | 7.8244E-03 (2003,284,0500) | 7.5641E-03 (2003,297,0500) | 7.1990E-03 (2003,284,0600) | 6.7857E-03 (2003,297,0400) |
| 1374 | -221.768 | -438.485 | 7.2138E-03 (2003,284,0500) | 6.7555E-03 (2003,297,0500) | 6.6019E-03 (2003,078,0300) | 6.2985E-03 (2003,297,0400) |
| 1375 | -219.517 | -438.547 | 7.5068E-03 (2003,284,0500) | 7.4638E-03 (2003,078,0300) | 6.7503E-03 (2003,297,0500) | 6.4063E-03 (2003,297,0400) |
| 1376 | -217.267 | -438.609 | 9.8729E-03 (2003,297,0500) | 9.5244E-03 (2003,284,0500) | 8.3352E-03 (2003,078,0300) | 8.2947E-03 (2003,297,0400) |
| 1377 | -215.016 | -438.669 | 1.6948E-02 (2003,297,0500) | 1.4211E-02 (2003,297,0600) | 1.3796E-02 (2003,284,0500) | 1.1153E-02 (2003,297,0400) |
| 1378 | -212.765 | -438.729 | 1.7046E-02 (2003,297,0500) | 1.4884E-02 (2003,297,0600) | 1.3907E-02 (2003,284,0500) | 1.1039E-02 (2003,297,0400) |
| 1379 | -210.514 | -438.789 | 2.7189E-02 (2003,297,0600) | 2.5204E-02 (2003,297,0500) | 1.5614E-02 (2003,297,0700) | 1.4784E-02 (2003,284,0500) |
| 1380 | -208.263 | -438.847 | 2.8130E-02 (2003,297,0600) | 2.5144E-02 (2003,297,0500) | 1.6765E-02 (2003,297,0700) | 1.4527E-02 (2003,284,0500) |
| 1381 | -206.012 | -438.905 | 2.8701E-02 (2003,297,0600) | 2.4758E-02 (2003,297,0500) | 1.7791E-02 (2003,297,0700) | 1.4085E-02 (2003,284,0500) |
| 1382 | -203.761 | -438.963 | 2.8887E-02 (2003,297,0600) | 2.4057E-02 (2003,297,0500) | 1.8641E-02 (2003,297,0700) | 1.3477E-02 (2003,284,0500) |
| 1383 | -401.629 | -428.708 | 7.4196E-03 (2003,261,0300) | 5.9434E-03 (2003,006,0100) | 5.5699E-03 (2003,006,0200) | 5.1949E-03 (2003,261,0400) |
| 1384 | -399.380 | -428.820 | 6.9747E-03 (2003,261,0300) | 6.1203E-03 (2003,006,0100) | 5.1684E-03 (2003,006,0200) | 5.0983E-03 (2003,261,0200) |
| 1385 | -397.132 | -428.932 | 6.2521E-03 (2003,261,0300) | 6.0917E-03 (2003,006,0100) | 5.0422E-03 (2003,261,0200) | 4.6971E-03 (2003,006,0200) |
| 1386 | -392.636 | -429.153 | 5.5499E-03 (2003,006,0100) | 4.4907E-03 (2003,036,0900) | 3.9972E-03 (2003,036,0800) | 3.4156E-03 (2003,006,0000) |
| 1387 | -390.387 | -429.263 | 5.1858E-03 (2003,006,0100) | 5.1219E-03 (2003,036,0900) | 4.5268E-03 (2003,036,0800) | 3.6656E-03 (2003,006,0000) |
| 1388 | -388.139 | -429.372 | 5.7899E-03 (2003,036,0900) | 5.0963E-03 (2003,036,0800) | 4.7495E-03 (2003,006,0100) | 4.1813E-03 (2003,261,0200) |
| 1389 | -385.891 | -429.481 | 6.5062E-03 (2003,036,0900) | 5.7737E-03 (2003,036,0800) | 4.3408E-03 (2003,261,0200) | 4.2981E-03 (2003,006,0100) |
| 1390 | -383.642 | -429.589 | 7.2125E-03 (2003,036,0900) | 6.3528E-03 (2003,036,0800) | 4.3825E-03 (2003,036,1000) | 4.1552E-03 (2003,006,0000) |
| 1391 | -381.394 | -429.696 | 7.9195E-03 (2003,036,0900) | 6.9309E-03 (2003,036,0800) | 4.8465E-03 (2003,036,1000) | 3.9903E-03 (2003,006,0000) |
| 1392 | -379.146 | -429.803 | 8.6163E-03 (2003,036,0900) | 7.4888E-03 (2003,036,0800) | 5.3171E-03 (2003,036,1000) | 3.7311E-03 (2003,006,0000) |
| 1393 | -376.897 | -429.909 | 9.2900E-03 (2003,036,0900) | 8.0259E-03 (2003,036,0800) | 5.7883E-03 (2003,036,1000) | 3.5948E-03 (2003,299,0800) |
| 1394 | -374.649 | -430.014 | 9.9243E-03 (2003,036,0900) | 8.5271E-03 (2003,036,0800) | 6.2485E-03 (2003,036,1000) | 3.7813E-03 (2003,036,0700) |
| 1395 | -367.903 | -430.327 | 1.1472E-02 (2003,036,0900) | 9.7026E-03 (2003,036,0800) | 7.4870E-03 (2003,036,1000) | 4.4918E-03 (2003,036,1100) |
| 1396 | -365.654 | -430.430 | 1.1831E-02 (2003,036,0900) | 9.9585E-03 (2003,036,0800) | 7.8230E-03 (2003,036,1000) | 4.7215E-03 (2003,036,1100) |
| 1397 | -358.908 | -430.734 | 1.2338E-02 (2003,036,0900) | 1.0239E-02 (2003,036,0800) | 8.5034E-03 (2003,036,1000) | 5.2436E-03 (2003,036,1100) |
| 1398 | -352.162 | -431.034 | 1.1960E-02 (2003,036,0900) | 9.7750E-03 (2003,036,0800) | 8.6062E-03 (2003,036,1000) | 5.4510E-03 (2003,036,1100) |
| 1399 | -349.913 | -431.132 | 1.1653E-02 (2003,036,0900) | 9.4717E-03 (2003,036,0800) | 8.5083E-03 (2003,036,1000) | 5.4419E-03 (2003,036,1100) |
| 1400 | -347.664 | -431.230 | 1.1268E-02 (2003,036,0900) | 9.1048E-03 (2003,036,0800) | 8.3487E-03 (2003,036,1000) | 5.3947E-03 (2003,036,1100) |
| 1401 | -248.691 | -434.910 | 7.3831E-03 (2003,284,0700) | 6.8341E-03 (2003,284,0600) | 4.5702E-03 (2003,256,0600) | 4.4737E-03 (2003,297,0500) |
| 1402 | -246.441 | -434.980 | 7.4487E-03 (2003,284,0600) | 7.3671E-03 (2003,284,0700) | 5.3976E-03 (2003,297,0500) | 5.2231E-03 (2003,297,0400) |
| 1403 | -244.191 | -435.049 | 8.0540E-03 (2003,284,0600) | 7.2714E-03 (2003,284,0700) | 6.4391E-03 (2003,297,0500) | 6.0513E-03 (2003,297,0400) |
| 1404 | -241.942 | -435.117 | 8.6337E-03 (2003,284,0600) | 7.6098E-03 (2003,297,0500) | 7.0959E-03 (2003,284,0700) | 6.9429E-03 (2003,297,0400) |
| 1405 | -239.692 | -435.184 | 9.1655E-03 (2003,284,0600) | 8.8884E-03 (2003,297,0500) | 7.8765E-03 (2003,297,0400) | 6.8517E-03 (2003,284,0700) |
| 1406 | -237.442 | -435.251 | 1.0296E-02 (2003,297,0500) | 9.6395E-03 (2003,284,0600) | 8.8319E-03 (2003,297,0400) | 7.3332E-03 (2003,284,0500) |
| 1407 | -235.192 | -435.318 | 1.1813E-02 (2003,297,0500) | 1.0038E-02 (2003,284,0600) | 9.8028E-03 (2003,297,0400) | 8.2811E-03 (2003,284,0500) |
| 1408 | -232.942 | -435.383 | 1.3421E-02 (2003,297,0500) | 1.0754E-02 (2003,297,0400) | 1.0346E-02 (2003,284,0600) | 9.2531E-03 (2003,284,0500) |
| 1409 | -230.692 | -435.448 | 1.0652E-02 (2003,297,0500) | 9.8685E-03 (2003,284,0600) | 9.3333E-03 (2003,284,0500) | 9.1128E-03 (2003,297,0400) |
| 1410 | -228.442 | -435.513 | 7.2310E-03 (2003,284,0600) | 6.9609E-03 (2003,284,0500) | 6.6773E-03 (2003,297,0500) | 6.6229E-03 (2003,297,0400) |
| 1411 | -226.192 | -435.577 | 8.4665E-03 (2003,297,0500) | 7.9240E-03 (2003,297,0400) | 7.9053E-03 (2003,284,0500) | 7.4851E-03 (2003,284,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1412 | -223.941 | -435.640 | 7.2018E-03 (2003,284,0500) | 6.6568E-03 (2003,297,0400) | 6.5278E-03 (2003,297,0500) | 6.4319E-03 (2003,284,0600) |
| 1413 | -221.691 | -435.702 | 1.1292E-02 (2003,297,0500) | 9.5763E-03 (2003,297,0400) | 9.3689E-03 (2003,284,0500) | 7.4242E-03 (2003,284,0600) |
| 1414 | -219.441 | -435.764 | 8.8385E-03 (2003,284,0500) | 7.7973E-03 (2003,078,0300) | 7.5604E-03 (2003,297,0400) | 7.5218E-03 (2003,297,0500) |
| 1415 | -217.191 | -435.825 | 1.3349E-02 (2003,297,0500) | 1.1222E-02 (2003,284,0500) | 1.0653E-02 (2003,297,0400) | 8.6958E-03 (2003,078,0300) |
| 1416 | -214.941 | -435.886 | 9.1877E-03 (2003,078,0300) | 6.9403E-03 (2003,284,0500) | 6.8472E-03 (2003,078,0400) | 6.4054E-03 (2003,297,0400) |
| 1417 | -212.691 | -435.946 | 1.1734E-02 (2003,297,0500) | 1.0316E-02 (2003,284,0500) | 9.8357E-03 (2003,078,0300) | 9.7075E-03 (2003,297,0400) |
| 1418 | -210.441 | -436.005 | 2.2299E-02 (2003,297,0500) | 2.1265E-02 (2003,297,0600) | 1.4776E-02 (2003,284,0500) | 1.3491E-02 (2003,297,0400) |
| 1419 | -208.190 | -436.064 | 2.7913E-02 (2003,297,0600) | 2.6786E-02 (2003,297,0500) | 1.5433E-02 (2003,297,0700) | 1.4930E-02 (2003,284,0500) |
| 1420 | -205.940 | -436.122 | 2.8586E-02 (2003,297,0600) | 2.6463E-02 (2003,297,0500) | 1.6502E-02 (2003,297,0700) | 1.4461E-02 (2003,284,0500) |
| 1421 | -203.690 | -436.179 | 2.8859E-02 (2003,297,0600) | 2.5786E-02 (2003,297,0500) | 1.7417E-02 (2003,297,0700) | 1.3815E-02 (2003,284,0500) |
| 1422 | -401.489 | -425.927 | 7.7930E-03 (2003,261,0300) | 6.2189E-03 (2003,006,0100) | 5.5940E-03 (2003,006,0200) | 5.5479E-03 (2003,261,0400) |
| 1423 | -399.242 | -426.039 | 7.3320E-03 (2003,261,0300) | 6.4283E-03 (2003,006,0100) | 5.5855E-03 (2003,261,0200) | 5.2465E-03 (2003,006,0200) |
| 1424 | -396.994 | -426.151 | 6.5486E-03 (2003,261,0300) | 6.4067E-03 (2003,006,0100) | 5.4581E-03 (2003,261,0200) | 4.8152E-03 (2003,006,0200) |
| 1425 | -394.747 | -426.262 | 6.2157E-03 (2003,006,0100) | 4.3342E-03 (2003,006,0200) | 4.0585E-03 (2003,006,0400) | 3.9729E-03 (2003,036,0900) |
| 1426 | -392.499 | -426.372 | 6.0747E-03 (2003,006,0100) | 5.6827E-03 (2003,261,0200) | 5.3154E-03 (2003,261,0300) | 4.7608E-03 (2003,299,0800) |
| 1427 | -390.252 | -426.482 | 5.6467E-03 (2003,006,0100) | 5.2689E-03 (2003,261,0200) | 5.2602E-03 (2003,036,0900) | 4.9740E-03 (2003,036,0800) |
| 1428 | -388.004 | -426.591 | 5.9494E-03 (2003,036,0900) | 5.5866E-03 (2003,036,0800) | 5.1766E-03 (2003,006,0100) | 5.1648E-03 (2003,261,0200) |
| 1429 | -385.757 | -426.700 | 6.6684E-03 (2003,036,0900) | 6.2163E-03 (2003,036,0800) | 4.8235E-03 (2003,261,0200) | 4.6082E-03 (2003,006,0100) |
| 1430 | -383.509 | -426.808 | 7.4015E-03 (2003,036,0900) | 6.8516E-03 (2003,036,0800) | 4.4175E-03 (2003,261,0200) | 4.3497E-03 (2003,036,1000) |
| 1431 | -381.262 | -426.915 | 8.1397E-03 (2003,036,0900) | 7.4834E-03 (2003,036,0800) | 4.8136E-03 (2003,036,1000) | 4.1162E-03 (2003,006,0000) |
| 1432 | -379.014 | -427.022 | 8.8669E-03 (2003,036,0900) | 8.1061E-03 (2003,036,0800) | 5.2834E-03 (2003,036,1000) | 4.0458E-03 (2003,299,0800) |
| 1433 | -376.766 | -427.128 | 9.5707E-03 (2003,036,0900) | 8.6971E-03 (2003,036,0800) | 5.7511E-03 (2003,036,1000) | 4.0317E-03 (2003,036,0700) |
| 1434 | -374.519 | -427.233 | 1.0237E-02 (2003,036,0900) | 9.2489E-03 (2003,036,0800) | 6.2127E-03 (2003,036,1000) | 4.3437E-03 (2003,036,0700) |
| 1435 | -365.527 | -427.648 | 1.2243E-02 (2003,036,0900) | 1.0842E-02 (2003,036,0800) | 7.7887E-03 (2003,036,1000) | 5.3609E-03 (2003,036,0700) |
| 1436 | -349.792 | -428.351 | 1.2068E-02 (2003,036,0900) | 1.0315E-02 (2003,036,0800) | 8.4740E-03 (2003,036,1000) | 5.5310E-03 (2003,036,0700) |
| 1437 | -347.544 | -428.448 | 1.1664E-02 (2003,036,0900) | 9.9099E-03 (2003,036,0800) | 8.3124E-03 (2003,036,1000) | 5.3597E-03 (2003,036,0700) |
| 1438 | -345.296 | -428.546 | 1.1188E-02 (2003,036,0900) | 9.4447E-03 (2003,036,0800) | 8.0924E-03 (2003,036,1000) | 5.2257E-03 (2003,036,1100) |
| 1439 | -250.854 | -432.057 | 6.9732E-03 (2003,284,0700) | 5.9209E-03 (2003,284,0600) | 5.1513E-03 (2003,256,0600) | 3.9347E-03 (2003,297,0400) |
| 1440 | -248.605 | -432.128 | 7.0364E-03 (2003,284,0700) | 6.5157E-03 (2003,284,0600) | 5.0814E-03 (2003,256,0600) | 4.6930E-03 (2003,297,0400) |
| 1441 | -246.356 | -432.197 | 7.1098E-03 (2003,284,0600) | 7.0337E-03 (2003,284,0700) | 5.5337E-03 (2003,297,0400) | 5.0395E-03 (2003,256,0600) |
| 1442 | -244.107 | -432.266 | 4.6357E-03 (2003,284,0600) | 4.6107E-03 (2003,284,0700) | 3.0460E-03 (2003,297,0400) | 2.8568E-03 (2003,297,0500) |
| 1443 | -241.858 | -432.334 | 4.9063E-03 (2003,284,0600) | 4.4678E-03 (2003,284,0700) | 3.4296E-03 (2003,297,0400) | 3.2025E-03 (2003,297,0500) |
| 1444 | -239.608 | -432.401 | 6.2797E-03 (2003,284,0600) | 5.0196E-03 (2003,284,0700) | 4.9428E-03 (2003,297,0400) | 4.5275E-03 (2003,297,0500) |
| 1445 | -237.359 | -432.468 | 8.9824E-03 (2003,284,0600) | 8.7244E-03 (2003,297,0500) | 8.6533E-03 (2003,297,0400) | 7.1199E-03 (2003,284,0500) |
| 1446 | -235.110 | -432.535 | 6.5971E-03 (2003,284,0600) | 5.4876E-03 (2003,297,0400) | 5.1842E-03 (2003,284,0500) | 4.9242E-03 (2003,297,0500) |
| 1447 | -232.861 | -432.600 | 9.2463E-03 (2003,284,0600) | 9.1632E-03 (2003,297,0500) | 8.9761E-03 (2003,297,0400) | 8.4865E-03 (2003,284,0500) |
| 1448 | -230.612 | -432.665 | 7.0429E-03 (2003,284,0600) | 6.6214E-03 (2003,297,0400) | 6.5273E-03 (2003,284,0500) | 5.9402E-03 (2003,297,0500) |
| 1449 | -228.362 | -432.730 | 5.8287E-03 (2003,297,0400) | 5.7107E-03 (2003,284,0600) | 5.3201E-03 (2003,284,0500) | 5.0936E-03 (2003,297,0500) |
| 1450 | -226.113 | -432.793 | 7.7326E-03 (2003,284,0500) | 7.4406E-03 (2003,297,0400) | 7.0801E-03 (2003,284,0600) | 6.7000E-03 (2003,297,0500) |
| 1451 | -223.864 | -432.857 | 1.1533E-02 (2003,297,0500) | 1.0695E-02 (2003,297,0400) | 9.9568E-03 (2003,284,0500) | 8.0404E-03 (2003,284,0600) |
| 1452 | -221.614 | -432.919 | 1.1972E-02 (2003,297,0500) | 1.0954E-02 (2003,297,0400) | 1.0463E-02 (2003,284,0500) | 7.7692E-03 (2003,284,0600) |
| 1453 | -219.365 | -432.981 | 2.4025E-02 (2003,297,0500) | 1.9293E-02 (2003,297,0600) | 1.6632E-02 (2003,297,0400) | 1.4637E-02 (2003,284,0500) |
| 1454 | -217.116 | -433.042 | 1.5418E-02 (2003,297,0500) | 1.3819E-02 (2003,284,0500) | 1.2592E-02 (2003,297,0400) | 1.0296E-02 (2003,297,0600) |
| 1455 | -214.866 | -433.103 | 9.4292E-03 (2003,078,0300) | 6.7337E-03 (2003,078,0200) | 6.5333E-03 (2003,078,0400) | 6.3242E-03 (2003,284,0500) |
| 1456 | -212.617 | -433.163 | 9.8839E-03 (2003,078,0300) | 7.2242E-03 (2003,078,0400) | 6.9089E-03 (2003,078,0200) | 5.8713E-03 (2003,284,0500) |
| 1457 | -210.368 | -433.222 | 1.0224E-02 (2003,078,0300) | 7.9809E-03 (2003,078,0400) | 7.2190E-03 (2003,284,0500) | 7.0924E-03 (2003,078,0200) |
| 1458 | -208.118 | -433.281 | 1.2515E-02 (2003,297,0500) | 1.1240E-02 (2003,284,0500) | 1.0468E-02 (2003,078,0300) | 1.0377E-02 (2003,297,0400) |
| 1459 | -205.869 | -433.339 | 2.8261E-02 (2003,297,0600) | 2.8043E-02 (2003,297,0500) | 1.5483E-02 (2003,297,0400) | 1.5161E-02 (2003,297,0700) |
| 1460 | -203.619 | -433.396 | 2.8626E-02 (2003,297,0600) | 2.7397E-02 (2003,297,0500) | 1.6137E-02 (2003,297,0700) | 1.4680E-02 (2003,297,0400) |
| 1461 | -401.350 | -423.146 | 6.4787E-03 (2003,006,0100) | 5.3837E-03 (2003,006,0200) | 5.3163E-03 (2003,006,0400) | 5.0849E-03 (2003,006,0500) |
| 1462 | -399.103 | -423.258 | 7.6467E-03 (2003,261,0300) | 6.7256E-03 (2003,006,0100) | 6.0312E-03 (2003,261,0200) | 5.2786E-03 (2003,261,0400) |
| 1463 | -396.857 | -423.370 | 6.8839E-03 (2003,261,0300) | 6.7400E-03 (2003,006,0100) | 5.9786E-03 (2003,261,0200) | 4.8963E-03 (2003,006,0400) |
| 1464 | -394.610 | -423.481 | 6.7214E-03 (2003,006,0100) | 6.4614E-03 (2003,261,0300) | 6.4493E-03 (2003,261,0200) | 5.0136E-03 (2003,299,0800) |
| 1465 | -392.363 | -423.592 | 6.4572E-03 (2003,006,0100) | 6.3143E-03 (2003,261,0200) | 5.6940E-03 (2003,261,0300) | 4.9898E-03 (2003,299,0800) |
| 1466 | -390.117 | -423.701 | 6.0521E-03 (2003,006,0100) | 6.0364E-03 (2003,261,0200) | 5.3297E-03 (2003,036,0900) | 5.2849E-03 (2003,036,0800) |
| 1467 | -387.870 | -423.810 | 6.0367E-03 (2003,036,0900) | 5.9442E-03 (2003,036,0800) | 5.6895E-03 (2003,261,0200) | 5.5376E-03 (2003,006,0100) |
| 1468 | -385.623 | -423.919 | 6.7746E-03 (2003,036,0900) | 6.6263E-03 (2003,036,0800) | 5.3724E-03 (2003,261,0200) | 4.9533E-03 (2003,006,0100) |
| 1469 | -383.376 | -424.027 | 7.5301E-03 (2003,036,0900) | 7.3244E-03 (2003,036,0800) | 4.9110E-03 (2003,261,0200) | 4.5398E-03 (2003,299,0800) |
| 1470 | -381.129 | -424.134 | 8.2917E-03 (2003,036,0900) | 8.0132E-03 (2003,036,0800) | 4.7530E-03 (2003,036,1000) | 4.5468E-03 (2003,261,0200) |
| 1471 | -378.882 | -424.241 | 9.0467E-03 (2003,036,0900) | 8.6908E-03 (2003,036,0800) | 5.2206E-03 (2003,036,1000) | 4.3959E-03 (2003,299,0800) |
| 1472 | -376.636 | -424.347 | 9.7763E-03 (2003,036,0900) | 9.3412E-03 (2003,036,0800) | 5.6862E-03 (2003,036,1000) | 4.5856E-03 (2003,036,0700) |
| 1473 | -347.423 | -425.667 | 1.1980E-02 (2003,036,0900) | 1.0419E-02 (2003,036,0800) | 8.2324E-03 (2003,036,1000) | 5.8880E-03 (2003,036,0700) |
| 1474 | -345.176 | -425.764 | 1.1487E-02 (2003,036,0900) | 9.9093E-03 (2003,036,0800) | 8.0118E-03 (2003,036,1000) | 5.6459E-03 (2003,036,0700) |
| 1475 | -342.929 | -425.860 | 1.0861E-02 (2003,036,0900) | 9.2417E-03 (2003,036,0800) | 7.7384E-03 (2003,036,1000) | 5.0246E-03 (2003,036,1100) |
| 1476 | -340.681 | -425.956 | 1.0254E-02 (2003,036,0900) | 8.5938E-03 (2003,036,0800) | 7.4186E-03 (2003,036,1000) | 4.8666E-03 (2003,036,1100) |
| 1477 | -336.186 | -426.146 | 9.0105E-03 (2003,036,0900) | 7.4790E-03 (2003,036,0800) | 6.6711E-03 (2003,036,1000) | 4.4736E-03 (2003,036,1100) |
| 1478 | -255.264 | -429.133 | 6.3161E-03 (2003,284,0700) | 6.0202E-03 (2003,256,0600) | 4.4980E-03 (2003,284,0600) | 4.1659E-03 (2003,284,0800) |
| 1479 | -253.015 | -429.204 | 6.5036E-03 (2003,284,0700) | 5.8485E-03 (2003,256,0600) | 5.0372E-03 (2003,284,0600) | 3.9706E-03 (2003,284,0800) |
| 1480 | -250.767 | -429.275 | 6.6355E-03 (2003,284,0700) | 5.6923E-03 (2003,256,0600) | 5.5993E-03 (2003,284,0600) | 4.0428E-03 (2003,297,0400) |
| 1481 | -248.519 | -429.345 | 4.6690E-03 (2003,284,0700) | 3.9642E-03 (2003,284,0600) | 2.8479E-03 (2003,284,0800) | 2.5922E-03 (2003,037,0900) |
| 1482 | -246.270 | -429.414 | 4.2602E-03 (2003,284,0700) | 3.7910E-03 (2003,284,0600) | 2.6660E-03 (2003,037,0900) | 2.5352E-03 (2003,284,0800) |
| 1483 | -244.022 | -429.483 | 3.9047E-03 (2003,284,0700) | 3.7159E-03 (2003,284,0600) | 2.8162E-03 (2003,086,0800) | 2.7349E-03 (2003,037,0900) |
| 1484 | -241.774 | -429.551 | 4.9109E-03 (2003,284,0600) | 4.4561E-03 (2003,284,0700) | 3.5502E-03 (2003,297,0400) | 3.2548E-03 (2003,086,0800) |
| 1485 | -239.525 | -429.619 | 3.7227E-03 (2003,284,0600) | 3.5856E-03 (2003,086,0800) | 3.3673E-03 (2003,284,0700) | 3.0225E-03 (2003,087,0100) |
| 1486 | -237.277 | -429.685 | 4.6120E-03 (2003,284,0600) | 4.0060E-03 (2003,086,0800) | 3.6467E-03 (2003,284,0700) | 3.5061E-03 (2003,297,0400) |
| 1487 | -235.028 | -429.752 | 5.1463E-03 (2003,284,0600) | 4.6441E-03 (2003,297,0400) | 4.3850E-03 (2003,086,0800) | 3.8355E-03 (2003,284,0500) |
| 1488 | -232.780 | -429.817 | 5.2561E-03 (2003,284,0600) | 5.0383E-03 (2003,297,0400) | 4.7072E-03 (2003,086,0800) | 4.2130E-03 (2003,284,0500) |
| 1489 | -230.532 | -429.882 | 6.9812E-03 (2003,297,0400) | 6.8826E-03 (2003,284,0600) | 6.6558E-03 (2003,284,0500) | 5.5499E-03 (2003,297,0500) |
| 1490 | -228.283 | -429.947 | 8.3486E-03 (2003,297,0400) | 7.4967E-03 (2003,284,0500) | 7.0842E-03 (2003,284,0600) | 7.0207E-03 (2003,297,0500) |
| 1491 | -226.035 | -430.010 | 8.7897E-03 (2003,297,0400) | 8.0944E-03 (2003,284,0500) | 7.4452E-03 (2003,297,0500) | 7.0436E-03 (2003,284,0600) |
| 1492 | -223.786 | -430.073 | 9.1870E-03 (2003,297,0400) | 8.6735E-03 (2003,284,0500) | 7.8602E-03 (2003,297,0500) | 6.9350E-03 (2003,284,0600) |
| 1493 | -221.538 | -430.136 | 1.4324E-02 (2003,297,0500) | 1.3364E-02 (2003,297,0400) | 1.2921E-02 (2003,284,0500) | 8.7166E-03 (2003,284,0600) |
| 1494 | -219.289 | -430.198 | 2.4521E-02 (2003,297,0500) | 1.8390E-02 (2003,297,0600) | 1.8325E-02 (2003,297,0400) | 1.4761E-02 (2003,284,0500) |
| 1495 | -217.040 | -430.259 | 9.8585E-03 (2003,284,0500) | 9.6582E-03 (2003,297,0400) | 9.1606E-03 (2003,078,0300) | 8.5206E-03 (2003,297,0500) |
| 1496 | -214.792 | -430.320 | 1.4747E-02 (2003,297,0500) | 1.4014E-02 (2003,284,0500) | 1.3045E-02 (2003,297,0400) | 9.9521E-03 (2003,078,0300) |
| 1497 | -212.543 | -430.379 | 1.2823E-02 (2003,297,0500) | 1.1831E-02 (2003,297,0400) | 1.1696E-02 (2003,284,0500) | 1.0389E-02 (2003,078,0300) |
| 1498 | -210.295 | -430.439 | 1.0480E-02 (2003,078,0300) | 8.9621E-03 (2003,284,0500) | 7.7323E-03 (2003,078,0400) | 7.5145E-03 (2003,078,0200) |
| 1499 | -208.046 | -430.497 | 1.0416E-02 (2003,078,0300) | 8.1257E-03 (2003,078,0400) | 7.2862E-03 (2003,078,0200) | 6.9070E-03 (2003,284,0500) |
| 1500 | -205.797 | -430.556 | 2.9479E-02 (2003,297,0500) | 2.7746E-02 (2003,297,0600) | 1.7150E-02 (2003,297,0400) | 1.4777E-02 (2003,284,0500) |
| 1501 | -203.549 | -430.613 | 2.6979E-02 (2003,297,0500) | 2.6258E-02 (2003,297,0600) | 1.5553E-02 (2003,297,0400) | 1.4208E-02 (2003,284,0400) |
| 1502 | -396.719 | -420.589 | 7.1044E-03 (2003,261,0300) | 7.0912E-03 (2003,006,0100) | 6.5793E-03 (2003,261,0200) | 5.4298E-03 (2003,006,0400) |
| 1503 | -394.473 | -420.700 | 7.0878E-03 (2003,006,0100) | 7.0726E-03 (2003,261,0200) | 6.8681E-03 (2003,261,0300) | 5.1079E-03 (2003,006,0400) |
| 1504 | -392.227 | -420.811 | 6.9287E-03 (2003,261,0200) | 6.8416E-03 (2003,006,0100) | 6.0824E-03 (2003,261,0300) | 4.9938E-03 (2003,299,0800) |
| 1505 | -389.981 | -420.921 | 6.5677E-03 (2003,261,0200) | 6.4355E-03 (2003,006,0100) | 5.5533E-03 (2003,036,0800) | 5.3534E-03 (2003,036,0900) |
| 1506 | -387.735 | -421.030 | 6.2675E-03 (2003,036,0800) | 6.1248E-03 (2003,261,0200) | 6.0726E-03 (2003,036,0900) | 5.9058E-03 (2003,006,0100) |
| 1507 | -385.489 | -421.138 | 7.0019E-03 (2003,036,0800) | 6.8225E-03 (2003,036,0900) | 5.9067E-03 (2003,261,0200) | 5.3168E-03 (2003,006,0100) |
| 1508 | -383.243 | -421.246 | 7.7501E-03 (2003,036,0800) | 7.5951E-03 (2003,036,0900) | 5.6103E-03 (2003,261,0200) | 4.9845E-03 (2003,299,0800) |
| 1509 | -380.997 | -421.353 | 8.4993E-03 (2003,036,0800) | 8.3753E-03 (2003,036,0900) | 5.0083E-03 (2003,261,0200) | 4.8251E-03 (2003,299,0700) |
| 1510 | -345.056 | -422.982 | 1.1706E-02 (2003,036,0900) | 1.0915E-02 (2003,036,0800) | 7.9007E-03 (2003,036,1000) | 6.7687E-03 (2003,036,0700) |
| 1511 | -333.823 | -423.459 | 8.3862E-03 (2003,036,0900) | 7.1645E-03 (2003,036,0800) | 6.1464E-03 (2003,036,1000) | 4.2712E-03 (2003,036,0700) |
| 1512 | -259.670 | -426.206 | 7.1364E-03 (2003,256,0600) | 5.4856E-03 (2003,284,0700) | 4.9520E-03 (2003,256,0700) | 4.2934E-03 (2003,284,0800) |
| 1513 | -257.422 | -426.278 | 6.8964E-03 (2003,256,0600) | 5.7567E-03 (2003,284,0700) | 4.5824E-03 (2003,256,0700) | 4.2513E-03 (2003,256,0500) |
| 1514 | -255.175 | -426.350 | 4.4888E-03 (2003,284,0700) | 3.4300E-03 (2003,284,0800) | 2.9865E-03 (2003,284,0600) | 2.7371E-03 (2003,087,0200) |
| 1515 | -252.927 | -426.421 | 5.2680E-03 (2003,284,0700) | 3.8918E-03 (2003,284,0600) | 3.6473E-03 (2003,284,0800) | 2.8672E-03 (2003,256,0600) |
| 1516 | -250.680 | -426.492 | 4.2669E-03 (2003,284,0700) | 3.2516E-03 (2003,284,0600) | 2.9833E-03 (2003,284,0800) | 2.6764E-03 (2003,037,0900) |
| 1517 | -248.432 | -426.562 | 4.0694E-03 (2003,284,0700) | 3.2790E-03 (2003,284,0600) | 2.7557E-03 (2003,037,0900) | 2.7289E-03 (2003,284,0800) |
| 1518 | -246.185 | -426.631 | 3.6010E-03 (2003,284,0700) | 3.0676E-03 (2003,284,0600) | 2.8302E-03 (2003,037,0900) | 2.6534E-03 (2003,086,0800) |
| 1519 | -243.937 | -426.700 | 6.3419E-03 (2003,284,0600) | 5.8506E-03 (2003,284,0700) | 5.1020E-03 (2003,297,0400) | 4.1396E-03 (2003,284,0500) |
| 1520 | -241.690 | -426.768 | 6.9096E-03 (2003,284,0600) | 6.2314E-03 (2003,297,0400) | 5.8148E-03 (2003,284,0700) | 4.9469E-03 (2003,284,0500) |
| 1521 | -239.442 | -426.836 | 5.1482E-03 (2003,284,0600) | 4.2918E-03 (2003,284,0700) | 4.1747E-03 (2003,297,0400) | 3.9848E-03 (2003,086,0800) |
| 1522 | -237.195 | -426.903 | 8.5358E-03 (2003,297,0400) | 7.8755E-03 (2003,284,0600) | 6.7195E-03 (2003,284,0500) | 6.5987E-03 (2003,297,0500) |
| 1523 | -234.947 | -426.969 | 5.9972E-03 (2003,284,0600) | 5.4497E-03 (2003,297,0400) | 4.9975E-03 (2003,284,0500) | 4.7572E-03 (2003,086,0800) |
| 1524 | -232.699 | -427.034 | 8.8086E-03 (2003,297,0400) | 7.0540E-03 (2003,284,0600) | 6.9036E-03 (2003,297,0500) | 6.7151E-03 (2003,284,0500) |
| 1525 | -230.452 | -427.099 | 9.8156E-03 (2003,297,0400) | 7.8931E-03 (2003,297,0500) | 7.8071E-03 (2003,284,0500) | 7.4613E-03 (2003,284,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1526 | -228.204 | -427.164 | 1.6321E-02 (2003,297,0500) | 1.6103E-02 (2003,297,0400) | 1.1372E-02 (2003,284,0500) | 9.6625E-03 (2003,297,0600) |
| 1527 | -225.956 | -427.227 | 9.0905E-03 (2003,297,0400) | 8.1190E-03 (2003,284,0500) | 6.8450E-03 (2003,297,0500) | 6.8004E-03 (2003,284,0600) |
| 1528 | -223.708 | -427.290 | 1.1826E-02 (2003,297,0400) | 1.0253E-02 (2003,297,0500) | 9.9790E-03 (2003,284,0500) | 7.3806E-03 (2003,284,0600) |
| 1529 | -221.461 | -427.353 | 2.2795E-02 (2003,297,0500) | 1.9317E-02 (2003,297,0400) | 1.5339E-02 (2003,297,0600) | 1.4074E-02 (2003,284,0500) |
| 1530 | -219.213 | -427.415 | 2.4836E-02 (2003,297,0500) | 2.0036E-02 (2003,297,0400) | 1.7400E-02 (2003,297,0600) | 1.4744E-02 (2003,284,0500) |
| 1531 | -216.965 | -427.476 | 2.6683E-02 (2003,297,0500) | 2.0503E-02 (2003,297,0400) | 1.9451E-02 (2003,297,0600) | 1.5249E-02 (2003,284,0500) |
| 1532 | -214.717 | -427.536 | 2.8271E-02 (2003,297,0500) | 2.1427E-02 (2003,297,0600) | 2.0714E-02 (2003,297,0400) | 1.5566E-02 (2003,284,0500) |
| 1533 | -212.469 | -427.596 | 1.3923E-02 (2003,297,0500) | 1.3898E-02 (2003,284,0500) | 1.3248E-02 (2003,297,0400) | 1.1309E-02 (2003,284,0400) |
| 1534 | -210.222 | -427.656 | 1.0591E-02 (2003,078,0300) | 7.9267E-03 (2003,284,0500) | 7.7761E-03 (2003,078,0200) | 7.2939E-03 (2003,078,0400) |
| 1535 | -207.974 | -427.714 | 1.0503E-02 (2003,078,0300) | 7.7035E-03 (2003,078,0400) | 7.4818E-03 (2003,078,0200) | 6.4258E-03 (2003,284,0500) |
| 1536 | -205.726 | -427.772 | 3.0719E-02 (2003,297,0500) | 2.7043E-02 (2003,297,0600) | 1.8936E-02 (2003,297,0400) | 1.5531E-02 (2003,284,0400) |
| 1537 | -203.478 | -427.830 | 2.7143E-02 (2003,297,0500) | 2.4737E-02 (2003,297,0600) | 1.6706E-02 (2003,297,0400) | 1.5473E-02 (2003,284,0400) |
| 1538 | -385.355 | -418.357 | 7.3207E-03 (2003,036,0800) | 6.8159E-03 (2003,036,0900) | 6.5671E-03 (2003,261,0200) | 5.7050E-03 (2003,006,0100) |
| 1539 | -347.182 | -420.104 | 1.2361E-02 (2003,036,0900) | 1.1921E-02 (2003,036,0800) | 7.9837E-03 (2003,036,1000) | 7.8514E-03 (2003,036,0700) |
| 1540 | -266.320 | -423.202 | 8.6494E-03 (2003,256,0600) | 6.3763E-03 (2003,256,0700) | 5.8130E-03 (2003,087,0800) | 5.6232E-03 (2003,087,0700) |
| 1541 | -264.073 | -423.276 | 6.5348E-03 (2003,256,0600) | 5.0196E-03 (2003,087,0800) | 5.0023E-03 (2003,256,0700) | 4.9780E-03 (2003,087,0700) |
| 1542 | -261.826 | -423.350 | 8.1333E-03 (2003,256,0600) | 5.4803E-03 (2003,256,0700) | 5.3041E-03 (2003,256,0500) | 5.0094E-03 (2003,087,0800) |
| 1543 | -259.580 | -423.423 | 7.8471E-03 (2003,256,0600) | 5.2660E-03 (2003,256,0500) | 5.2049E-03 (2003,284,0700) | 5.0340E-03 (2003,256,0700) |
| 1544 | -257.333 | -423.496 | 7.5474E-03 (2003,256,0600) | 5.4724E-03 (2003,284,0700) | 5.2031E-03 (2003,256,0500) | 4.6190E-03 (2003,256,0700) |
| 1545 | -255.086 | -423.568 | 6.8320E-03 (2003,256,0600) | 5.6581E-03 (2003,284,0700) | 4.7421E-03 (2003,256,0500) | 4.0495E-03 (2003,256,0700) |
| 1546 | -252.840 | -423.639 | 4.0197E-03 (2003,284,0700) | 3.1250E-03 (2003,284,0800) | 2.7856E-03 (2003,284,0600) | 2.7530E-03 (2003,037,0900) |
| 1547 | -250.593 | -423.709 | 3.9362E-03 (2003,284,0700) | 2.9179E-03 (2003,284,0800) | 2.8956E-03 (2003,284,0600) | 2.8362E-03 (2003,037,0900) |
| 1548 | -248.346 | -423.779 | 3.8598E-03 (2003,284,0700) | 3.0562E-03 (2003,284,0600) | 2.9179E-03 (2003,037,0900) | 2.6734E-03 (2003,037,0800) |
| 1549 | -246.099 | -423.849 | 5.2723E-03 (2003,284,0700) | 4.9618E-03 (2003,284,0600) | 4.1767E-03 (2003,297,0400) | 3.1032E-03 (2003,087,0100) |
| 1550 | -243.853 | -423.917 | 4.6352E-03 (2003,284,0600) | 4.6322E-03 (2003,284,0700) | 3.4435E-03 (2003,086,0800) | 3.3828E-03 (2003,297,0400) |
| 1551 | -241.606 | -423.986 | 7.2773E-03 (2003,297,0400) | 6.7692E-03 (2003,284,0600) | 5.7887E-03 (2003,284,0700) | 5.0735E-03 (2003,284,0500) |
| 1552 | -239.359 | -424.053 | 9.5941E-03 (2003,297,0400) | 7.4471E-03 (2003,284,0600) | 6.8136E-03 (2003,297,0500) | 6.1715E-03 (2003,284,0500) |
| 1553 | -237.112 | -424.120 | 7.6830E-03 (2003,297,0400) | 6.5738E-03 (2003,284,0600) | 5.5622E-03 (2003,284,0500) | 5.1241E-03 (2003,297,0500) |
| 1554 | -234.865 | -424.186 | 8.1059E-03 (2003,297,0400) | 6.5319E-03 (2003,284,0600) | 5.9081E-03 (2003,284,0500) | 5.4782E-03 (2003,297,0500) |
| 1555 | -232.618 | -424.252 | 1.0791E-02 (2003,297,0400) | 8.3840E-03 (2003,284,0500) | 7.9801E-03 (2003,284,0600) | 7.9326E-03 (2003,297,0500) |
| 1556 | -230.371 | -424.317 | 9.5680E-03 (2003,297,0400) | 7.2272E-03 (2003,284,0500) | 6.7895E-03 (2003,284,0600) | 6.7147E-03 (2003,297,0500) |
| 1557 | -228.125 | -424.381 | 1.6597E-02 (2003,297,0400) | 1.5173E-02 (2003,297,0500) | 1.1118E-02 (2003,284,0500) | 8.9030E-03 (2003,297,0300) |
| 1558 | -225.878 | -424.445 | 1.8495E-02 (2003,297,0400) | 1.8124E-02 (2003,297,0500) | 1.2201E-02 (2003,284,0500) | 1.0487E-02 (2003,297,0600) |
| 1559 | -223.631 | -424.508 | 2.0443E-02 (2003,297,0500) | 1.9743E-02 (2003,297,0400) | 1.3115E-02 (2003,284,0500) | 1.2340E-02 (2003,297,0600) |
| 1560 | -221.384 | -424.570 | 2.2741E-02 (2003,297,0500) | 2.0844E-02 (2003,297,0400) | 1.4308E-02 (2003,297,0600) | 1.3915E-02 (2003,284,0500) |
| 1561 | -219.137 | -424.632 | 2.4948E-02 (2003,297,0500) | 2.1702E-02 (2003,297,0400) | 1.6340E-02 (2003,297,0600) | 1.4583E-02 (2003,284,0500) |
| 1562 | -216.890 | -424.693 | 2.2323E-02 (2003,297,0500) | 1.9709E-02 (2003,297,0400) | 1.4816E-02 (2003,297,0600) | 1.4635E-02 (2003,284,0500) |
| 1563 | -214.643 | -424.754 | 1.3105E-02 (2003,297,0400) | 1.1544E-02 (2003,297,0500) | 1.1476E-02 (2003,284,0500) | 1.0287E-02 (2003,078,0300) |
| 1564 | -212.396 | -424.813 | 1.0545E-02 (2003,078,0300) | 8.7753E-03 (2003,284,0500) | 8.2458E-03 (2003,078,0200) | 7.4651E-03 (2003,297,0400) |
| 1565 | -210.149 | -424.873 | 1.0691E-02 (2003,078,0300) | 8.0610E-03 (2003,078,0200) | 7.8605E-03 (2003,284,0500) | 6.8850E-03 (2003,078,0400) |
| 1566 | -207.902 | -424.931 | 1.0515E-02 (2003,078,0300) | 7.6193E-03 (2003,078,0200) | 7.2198E-03 (2003,078,0400) | 5.7453E-03 (2003,284,0500) |
| 1567 | -205.654 | -424.989 | 3.1515E-02 (2003,297,0500) | 2.6063E-02 (2003,297,0600) | 2.0716E-02 (2003,297,0400) | 1.6908E-02 (2003,284,0400) |
| 1568 | -203.407 | -425.047 | 2.9868E-02 (2003,297,0500) | 2.5708E-02 (2003,297,0600) | 1.9068E-02 (2003,297,0400) | 1.7063E-02 (2003,284,0400) |
| 1569 | -349.306 | -417.225 | 1.2978E-02 (2003,036,0800) | 1.2860E-02 (2003,036,0900) | 9.0101E-03 (2003,036,0700) | 7.9898E-03 (2003,036,1000) |
| 1570 | -329.101 | -418.081 | 7.0944E-03 (2003,036,0900) | 6.7992E-03 (2003,036,0800) | 5.0414E-03 (2003,036,1000) | 4.9779E-03 (2003,256,0700) |
| 1571 | -326.856 | -418.173 | 6.4021E-03 (2003,036,0900) | 5.7287E-03 (2003,036,0800) | 4.6142E-03 (2003,036,1000) | 4.5348E-03 (2003,256,0700) |
| 1572 | -302.157 | -419.144 | 1.5802E-02 (2003,256,0600) | 1.4970E-02 (2003,256,0700) | 8.3053E-03 (2003,087,0300) | 8.0801E-03 (2003,087,0400) |
| 1573 | -266.227 | -420.420 | 5.6548E-03 (2003,087,0700) | 5.2517E-03 (2003,087,0800) | 4.8465E-03 (2003,256,0600) | 4.2359E-03 (2003,256,0700) |
| 1574 | -263.981 | -420.494 | 5.2132E-03 (2003,087,0700) | 4.7851E-03 (2003,087,0800) | 4.0857E-03 (2003,256,0600) | 3.8392E-03 (2003,284,0800) |
| 1575 | -261.735 | -420.568 | 6.6659E-03 (2003,256,0600) | 5.1415E-03 (2003,087,0700) | 4.9613E-03 (2003,087,0800) | 4.5616E-03 (2003,256,0700) |
| 1576 | -259.489 | -420.641 | 8.4836E-03 (2003,256,0600) | 6.3482E-03 (2003,256,0500) | 5.0153E-03 (2003,256,0700) | 4.9713E-03 (2003,284,0700) |
| 1577 | -257.244 | -420.713 | 8.1151E-03 (2003,256,0600) | 6.2557E-03 (2003,256,0500) | 5.2316E-03 (2003,284,0700) | 4.5553E-03 (2003,256,0700) |
| 1578 | -254.998 | -420.785 | 3.8972E-03 (2003,284,0700) | 3.2756E-03 (2003,284,0800) | 2.8297E-03 (2003,037,0900) | 2.5409E-03 (2003,037,0800) |
| 1579 | -252.752 | -420.856 | 3.4718E-03 (2003,284,0700) | 2.9433E-03 (2003,284,0800) | 2.8971E-03 (2003,037,0900) | 2.6390E-03 (2003,037,0800) |
| 1580 | -250.506 | -420.927 | 4.2919E-03 (2003,284,0700) | 3.2540E-03 (2003,284,0600) | 3.0056E-03 (2003,284,0800) | 3.0040E-03 (2003,037,0900) |
| 1581 | -248.260 | -420.997 | 5.0080E-03 (2003,284,0700) | 4.2240E-03 (2003,284,0600) | 3.2703E-03 (2003,297,0400) | 3.1199E-03 (2003,037,0900) |
| 1582 | -246.014 | -421.066 | 5.6586E-03 (2003,284,0700) | 5.3875E-03 (2003,284,0600) | 4.9604E-03 (2003,297,0400) | 4.3607E-03 (2003,256,0600) |
| 1583 | -243.768 | -421.135 | 5.6862E-03 (2003,284,0600) | 5.4559E-03 (2003,284,0700) | 5.2864E-03 (2003,297,0400) | 3.9255E-03 (2003,284,0500) |
| 1584 | -241.522 | -421.203 | 5.2122E-03 (2003,297,0400) | 5.2015E-03 (2003,284,0600) | 4.7833E-03 (2003,284,0700) | 4.2526E-03 (2003,086,0800) |
| 1585 | -239.276 | -421.270 | 9.7526E-03 (2003,297,0400) | 7.0420E-03 (2003,284,0600) | 6.5765E-03 (2003,297,0300) | 6.3317E-03 (2003,256,0500) |
| 1586 | -237.030 | -421.337 | 1.1288E-02 (2003,297,0400) | 7.6743E-03 (2003,297,0500) | 7.4345E-03 (2003,284,0600) | 7.4249E-03 (2003,297,0300) |
| 1587 | -234.784 | -421.403 | 1.2899E-02 (2003,297,0400) | 9.2717E-03 (2003,297,0500) | 8.2497E-03 (2003,297,0300) | 7.8964E-03 (2003,284,0500) |
| 1588 | -232.538 | -421.469 | 1.4576E-02 (2003,297,0400) | 1.1103E-02 (2003,297,0500) | 9.0673E-03 (2003,297,0300) | 8.9098E-03 (2003,284,0500) |
| 1589 | -230.291 | -421.534 | 1.6258E-02 (2003,297,0400) | 1.3126E-02 (2003,297,0500) | 9.9379E-03 (2003,284,0500) | 9.8222E-03 (2003,297,0300) |
| 1590 | -228.045 | -421.598 | 1.1184E-02 (2003,297,0400) | 8.4037E-03 (2003,284,0500) | 7.3858E-03 (2003,297,0500) | 7.1486E-03 (2003,297,0300) |
| 1591 | -225.799 | -421.662 | 1.9517E-02 (2003,297,0400) | 1.7678E-02 (2003,297,0500) | 1.1930E-02 (2003,284,0500) | 1.1106E-02 (2003,297,0300) |
| 1592 | -223.553 | -421.725 | 2.0985E-02 (2003,297,0400) | 2.0107E-02 (2003,297,0500) | 1.2832E-02 (2003,284,0500) | 1.1628E-02 (2003,297,0300) |
| 1593 | -221.307 | -421.787 | 2.2552E-02 (2003,297,0500) | 2.2250E-02 (2003,297,0400) | 1.3627E-02 (2003,284,0500) | 1.3228E-02 (2003,297,0600) |
| 1594 | -219.061 | -421.849 | 2.4910E-02 (2003,297,0500) | 2.3300E-02 (2003,297,0400) | 1.5216E-02 (2003,297,0600) | 1.4283E-02 (2003,284,0500) |
| 1595 | -216.814 | -421.910 | 2.3743E-02 (2003,297,0500) | 2.1991E-02 (2003,297,0400) | 1.4980E-02 (2003,297,0600) | 1.4471E-02 (2003,284,0500) |
| 1596 | -214.568 | -421.971 | 1.6018E-02 (2003,297,0400) | 1.4856E-02 (2003,297,0500) | 1.3584E-02 (2003,284,0500) | 1.2514E-02 (2003,284,0400) |
| 1597 | -212.322 | -422.030 | 1.4318E-02 (2003,297,0400) | 1.2793E-02 (2003,297,0500) | 1.1738E-02 (2003,284,0500) | 1.1117E-02 (2003,284,0400) |
| 1598 | -210.076 | -422.090 | 1.6236E-02 (2003,297,0500) | 1.5802E-02 (2003,297,0400) | 1.4459E-02 (2003,284,0400) | 1.3605E-02 (2003,284,0500) |
| 1599 | -207.829 | -422.148 | 1.0523E-02 (2003,078,0300) | 7.8088E-03 (2003,078,0200) | 6.8093E-03 (2003,078,0400) | 5.8480E-03 (2003,284,0500) |
| 1600 | -205.583 | -422.206 | 1.0205E-02 (2003,078,0300) | 7.3182E-03 (2003,078,0200) | 7.2326E-03 (2003,078,0400) | 5.9008E-03 (2003,284,0500) |
| 1601 | -203.337 | -422.264 | 3.0988E-02 (2003,297,0500) | 2.5109E-02 (2003,297,0600) | 2.0997E-02 (2003,297,0400) | 1.8454E-02 (2003,284,0400) |
| 1602 | -326.742 | -415.392 | 6.7993E-03 (2003,256,0700) | 6.3565E-03 (2003,036,0900) | 6.2796E-03 (2003,036,0800) | 4.8590E-03 (2003,036,0700) |
| 1603 | -324.498 | -415.483 | 6.3006E-03 (2003,256,0700) | 5.6908E-03 (2003,036,0900) | 5.5435E-03 (2003,036,0800) | 4.2625E-03 (2003,036,0700) |
| 1604 | -322.253 | -415.574 | 6.1114E-03 (2003,256,0700) | 5.0595E-03 (2003,036,0900) | 4.5423E-03 (2003,036,0800) | 3.6771E-03 (2003,036,1000) |
| 1605 | -302.052 | -416.362 | 1.0221E-02 (2003,256,0700) | 8.8312E-03 (2003,256,0600) | 6.5730E-03 (2003,087,0300) | 5.9728E-03 (2003,087,0400) |
| 1606 | -268.380 | -417.562 | 1.0782E-02 (2003,256,0600) | 7.8781E-03 (2003,256,0500) | 7.3699E-03 (2003,087,0700) | 7.1536E-03 (2003,087,0800) |
| 1607 | -266.134 | -417.637 | 5.3870E-03 (2003,087,0700) | 5.2129E-03 (2003,087,0800) | 3.5339E-03 (2003,256,0600) | 3.4634E-03 (2003,284,0800) |
| 1608 | -263.889 | -417.712 | 3.0559E-03 (2003,284,0800) | 2.7565E-03 (2003,087,0200) | 2.5927E-03 (2003,037,0900) | 2.5866E-03 (2003,087,0800) |
| 1609 | -261.644 | -417.785 | 5.4221E-03 (2003,087,0700) | 4.7981E-03 (2003,087,0800) | 4.5962E-03 (2003,256,0600) | 3.8147E-03 (2003,284,0700) |
| 1610 | -259.399 | -417.858 | 7.3978E-03 (2003,256,0600) | 5.6324E-03 (2003,256,0500) | 5.3725E-03 (2003,087,0700) | 4.9325E-03 (2003,087,0800) |
| 1611 | -257.154 | -417.931 | 4.6958E-03 (2003,256,0600) | 4.5990E-03 (2003,284,0700) | 4.5419E-03 (2003,087,0700) | 3.9655E-03 (2003,087,0800) |
| 1612 | -254.909 | -418.003 | 3.1965E-03 (2003,284,0700) | 3.0204E-03 (2003,284,0800) | 2.9545E-03 (2003,037,0900) | 2.7092E-03 (2003,037,0800) |
| 1613 | -252.664 | -418.074 | 4.2351E-03 (2003,284,0700) | 3.2298E-03 (2003,284,0800) | 3.0846E-03 (2003,037,0900) | 2.9239E-03 (2003,037,0800) |
| 1614 | -250.419 | -418.144 | 4.5242E-03 (2003,284,0700) | 3.3955E-03 (2003,284,0600) | 3.1738E-03 (2003,037,0900) | 3.1466E-03 (2003,284,0800) |
| 1615 | -248.174 | -418.214 | 6.9039E-03 (2003,256,0500) | 6.8134E-03 (2003,256,0600) | 5.7102E-03 (2003,284,0700) | 4.8488E-03 (2003,284,0600) |
| 1616 | -245.928 | -418.284 | 5.4107E-03 (2003,284,0700) | 5.0173E-03 (2003,284,0600) | 4.5668E-03 (2003,297,0400) | 4.0098E-03 (2003,256,0600) |
| 1617 | -243.683 | -418.352 | 6.8895E-03 (2003,256,0500) | 6.8485E-03 (2003,297,0400) | 6.1856E-03 (2003,256,0600) | 5.7880E-03 (2003,284,0600) |
| 1618 | -241.438 | -418.420 | 7.7511E-03 (2003,297,0400) | 6.2118E-03 (2003,297,0300) | 6.1427E-03 (2003,284,0600) | 5.8576E-03 (2003,256,0500) |
| 1619 | -239.193 | -418.488 | 7.1434E-03 (2003,297,0400) | 6.1659E-03 (2003,284,0600) | 5.6023E-03 (2003,297,0300) | 5.2039E-03 (2003,284,0500) |
| 1620 | -236.947 | -418.555 | 1.1315E-02 (2003,297,0400) | 8.4510E-03 (2003,297,0300) | 7.3690E-03 (2003,256,0500) | 7.0357E-03 (2003,297,0500) |
| 1621 | -234.702 | -418.621 | 1.3042E-02 (2003,297,0400) | 9.4154E-03 (2003,297,0300) | 8.6223E-03 (2003,297,0500) | 7.6579E-03 (2003,256,0500) |
| 1622 | -232.457 | -418.686 | 1.4858E-02 (2003,297,0400) | 1.0443E-02 (2003,297,0500) | 1.0347E-02 (2003,297,0300) | 8.6278E-03 (2003,284,0500) |
| 1623 | -230.211 | -418.751 | 1.6724E-02 (2003,297,0400) | 1.2492E-02 (2003,297,0500) | 1.1246E-02 (2003,297,0300) | 9.6375E-03 (2003,284,0500) |
| 1624 | -227.966 | -418.815 | 1.8573E-02 (2003,297,0400) | 1.4738E-02 (2003,297,0500) | 1.2050E-02 (2003,297,0300) | 1.0635E-02 (2003,284,0500) |
| 1625 | -225.721 | -418.879 | 2.0377E-02 (2003,297,0400) | 1.7161E-02 (2003,297,0500) | 1.2745E-02 (2003,297,0300) | 1.1592E-02 (2003,284,0500) |
| 1626 | -223.475 | -418.942 | 2.2058E-02 (2003,297,0400) | 1.9674E-02 (2003,297,0500) | 1.3304E-02 (2003,297,0300) | 1.2475E-02 (2003,284,0500) |
| 1627 | -221.230 | -419.004 | 2.3541E-02 (2003,297,0400) | 2.2225E-02 (2003,297,0500) | 1.3752E-02 (2003,297,0300) | 1.3251E-02 (2003,284,0500) |
| 1628 | -218.984 | -419.066 | 2.4792E-02 (2003,297,0400) | 2.4737E-02 (2003,297,0500) | 1.4046E-02 (2003,297,0600) | 1.4036E-02 (2003,297,0300) |
| 1629 | -216.739 | -419.127 | 2.5095E-02 (2003,297,0500) | 2.4367E-02 (2003,297,0400) | 1.4877E-02 (2003,297,0600) | 1.4184E-02 (2003,284,0500) |
| 1630 | -214.494 | -419.188 | 2.8477E-02 (2003,297,0500) | 2.5861E-02 (2003,297,0400) | 1.7628E-02 (2003,297,0600) | 1.5720E-02 (2003,284,0400) |
| 1631 | -212.248 | -419.248 | 2.4951E-02 (2003,297,0500) | 2.2810E-02 (2003,297,0400) | 1.6172E-02 (2003,284,0400) | 1.6018E-02 (2003,297,0600) |
| 1632 | -210.003 | -419.307 | 1.6186E-02 (2003,297,0400) | 1.5402E-02 (2003,297,0500) | 1.5204E-02 (2003,284,0400) | 1.3064E-02 (2003,284,0500) |
| 1633 | -207.757 | -419.365 | 1.0456E-02 (2003,078,0300) | 7.9463E-03 (2003,078,0200) | 6.3467E-03 (2003,078,0400) | 5.6218E-03 (2003,284,0500) |
| 1634 | -205.512 | -419.423 | 1.8910E-02 (2003,297,0500) | 1.7237E-02 (2003,284,0400) | 1.6809E-02 (2003,297,0400) | 1.3832E-02 (2003,297,0600) |
| 1635 | -203.266 | -419.481 | 3.2182E-02 (2003,297,0500) | 2.4537E-02 (2003,297,0600) | 2.3169E-02 (2003,297,0400) | 1.9834E-02 (2003,284,0400) |
| 1636 | -328.872 | -412.519 | 7.9774E-03 (2003,256,0700) | 7.2776E-03 (2003,036,0800) | 6.9817E-03 (2003,036,0900) | 6.6437E-03 (2003,256,0600) |
| 1637 | -326.629 | -412.611 | 8.0753E-03 (2003,256,0700) | 6.5456E-03 (2003,256,0600) | 6.4671E-03 (2003,036,0800) | 6.2860E-03 (2003,036,0900) |
| 1638 | -324.385 | -412.702 | 7.8859E-03 (2003,256,0700) | 5.9824E-03 (2003,256,0600) | 5.7013E-03 (2003,036,0800) | 5.6212E-03 (2003,036,0900) |
| 1639 | -322.141 | -412.793 | 8.4433E-03 (2003,256,0700) | 6.5031E-03 (2003,256,0600) | 4.9927E-03 (2003,036,0900) | 4.9879E-03 (2003,036,0800) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1640 | -319.898 | -412.883 | 9.5971E-03 (2003,256,0700) | 7.9469E-03 (2003,256,0600) | 4.4032E-03 (2003,036,0900) | 4.3325E-03 (2003,036,0800) |
| 1641 | -317.654 | -412.972 | 4.4771E-03 (2003,256,0700) | 3.7997E-03 (2003,036,0900) | 3.2565E-03 (2003,036,0800) | 2.9945E-03 (2003,256,0800) |
| 1642 | -301.947 | -413.580 | 8.0707E-03 (2003,256,0700) | 6.3117E-03 (2003,256,0600) | 5.6331E-03 (2003,087,0300) | 4.8867E-03 (2003,087,0400) |
| 1643 | -272.775 | -414.628 | 6.3720E-03 (2003,087,0700) | 6.2552E-03 (2003,087,0800) | 4.5949E-03 (2003,256,0600) | 4.5947E-03 (2003,087,0600) |
| 1644 | -270.530 | -414.705 | 7.1923E-03 (2003,087,0700) | 6.4883E-03 (2003,087,0800) | 5.9630E-03 (2003,256,0600) | 4.8692E-03 (2003,256,0700) |
| 1645 | -268.286 | -414.780 | 6.2588E-03 (2003,087,0700) | 6.0314E-03 (2003,087,0800) | 4.7527E-03 (2003,256,0600) | 4.0450E-03 (2003,256,0700) |
| 1646 | -266.042 | -414.855 | 4.1179E-03 (2003,087,0800) | 3.0977E-03 (2003,284,0800) | 3.0931E-03 (2003,087,0200) | 2.7059E-03 (2003,087,0700) |
| 1647 | -263.798 | -414.929 | 7.0965E-03 (2003,256,0600) | 6.7596E-03 (2003,087,0700) | 5.9996E-03 (2003,087,0800) | 5.3007E-03 (2003,256,0500) |
| 1648 | -261.553 | -415.003 | 3.9414E-03 (2003,087,0800) | 3.3274E-03 (2003,284,0800) | 3.1814E-03 (2003,087,0700) | 3.0054E-03 (2003,284,0700) |
| 1649 | -259.309 | -415.076 | 5.5812E-03 (2003,087,0700) | 4.8976E-03 (2003,256,0600) | 4.6655E-03 (2003,087,0800) | 4.1248E-03 (2003,284,0700) |
| 1650 | -257.065 | -415.149 | 3.6835E-03 (2003,284,0700) | 3.6739E-03 (2003,087,0700) | 3.5899E-03 (2003,087,0800) | 3.3835E-03 (2003,284,0800) |
| 1651 | -254.820 | -415.220 | 3.0790E-03 (2003,037,0900) | 2.8931E-03 (2003,037,0800) | 2.8477E-03 (2003,284,0800) | 2.8062E-03 (2003,284,0700) |
| 1652 | -252.576 | -415.292 | 4.0798E-03 (2003,284,0700) | 3.2329E-03 (2003,037,0900) | 3.2099E-03 (2003,284,0800) | 3.1637E-03 (2003,037,0800) |
| 1653 | -250.332 | -415.362 | 7.9405E-03 (2003,256,0500) | 7.2551E-03 (2003,256,0600) | 5.4740E-03 (2003,284,0700) | 4.1510E-03 (2003,284,0600) |
| 1654 | -248.087 | -415.432 | 7.6666E-03 (2003,256,0500) | 6.7100E-03 (2003,256,0600) | 5.5661E-03 (2003,284,0700) | 4.5893E-03 (2003,284,0600) |
| 1655 | -245.843 | -415.501 | 7.7169E-03 (2003,256,0500) | 6.3777E-03 (2003,256,0600) | 5.6319E-03 (2003,284,0700) | 5.3621E-03 (2003,297,0400) |
| 1656 | -243.598 | -415.570 | 7.6934E-03 (2003,256,0500) | 6.5690E-03 (2003,297,0400) | 6.2566E-03 (2003,297,0300) | 6.0281E-03 (2003,256,0600) |
| 1657 | -241.354 | -415.638 | 7.9416E-03 (2003,297,0400) | 7.7540E-03 (2003,256,0500) | 7.2817E-03 (2003,297,0300) | 5.9271E-03 (2003,284,0600) |
| 1658 | -239.109 | -415.705 | 8.4304E-03 (2003,297,0400) | 7.5801E-03 (2003,297,0300) | 6.1466E-03 (2003,284,0600) | 5.6506E-03 (2003,256,0500) |
| 1659 | -236.865 | -415.772 | 1.1173E-02 (2003,297,0400) | 9.4802E-03 (2003,297,0300) | 8.0723E-03 (2003,256,0500) | 6.6824E-03 (2003,284,0600) |
| 1660 | -234.620 | -415.838 | 1.3016E-02 (2003,297,0400) | 1.0613E-02 (2003,297,0300) | 8.3684E-03 (2003,256,0500) | 7.9899E-03 (2003,297,0500) |
| 1661 | -232.376 | -415.904 | 1.4956E-02 (2003,297,0400) | 1.1697E-02 (2003,297,0300) | 9.7877E-03 (2003,297,0500) | 8.7254E-03 (2003,256,0500) |
| 1662 | -230.131 | -415.969 | 1.6991E-02 (2003,297,0400) | 1.2711E-02 (2003,297,0300) | 1.1843E-02 (2003,297,0500) | 9.2729E-03 (2003,284,0500) |
| 1663 | -227.887 | -416.033 | 1.9022E-02 (2003,297,0400) | 1.4116E-02 (2003,297,0500) | 1.3668E-02 (2003,297,0300) | 1.0244E-02 (2003,284,0500) |
| 1664 | -225.642 | -416.096 | 2.1030E-02 (2003,297,0400) | 1.6582E-02 (2003,297,0500) | 1.4479E-02 (2003,297,0300) | 1.1173E-02 (2003,284,0500) |
| 1665 | -223.398 | -416.159 | 2.2949E-02 (2003,297,0400) | 1.9180E-02 (2003,297,0500) | 1.5132E-02 (2003,297,0300) | 1.2029E-02 (2003,284,0500) |
| 1666 | -221.153 | -416.222 | 2.4682E-02 (2003,297,0400) | 2.1825E-02 (2003,297,0500) | 1.5613E-02 (2003,297,0300) | 1.2779E-02 (2003,284,0500) |
| 1667 | -218.908 | -416.284 | 2.1611E-02 (2003,297,0400) | 1.8627E-02 (2003,297,0500) | 1.4128E-02 (2003,297,0300) | 1.2845E-02 (2003,284,0500) |
| 1668 | -216.664 | -416.345 | 2.7326E-02 (2003,297,0400) | 2.6903E-02 (2003,297,0500) | 1.6009E-02 (2003,297,0300) | 1.5287E-02 (2003,284,0400) |
| 1669 | -214.419 | -416.405 | 1.3530E-02 (2003,297,0400) | 1.0461E-02 (2003,078,0300) | 1.0258E-02 (2003,284,0500) | 1.0157E-02 (2003,284,0400) |
| 1670 | -212.174 | -416.465 | 1.3430E-02 (2003,297,0400) | 1.0967E-02 (2003,284,0400) | 1.0826E-02 (2003,078,0300) | 1.0265E-02 (2003,284,0500) |
| 1671 | -209.930 | -416.524 | 1.2694E-02 (2003,297,0400) | 1.1341E-02 (2003,284,0400) | 1.0906E-02 (2003,078,0300) | 9.9286E-03 (2003,284,0500) |
| 1672 | -207.685 | -416.583 | 3.3241E-02 (2003,297,0500) | 2.7863E-02 (2003,297,0400) | 2.1619E-02 (2003,297,0600) | 2.0143E-02 (2003,284,0400) |
| 1673 | -328.758 | -409.737 | 7.7634E-03 (2003,256,0700) | 7.4544E-03 (2003,036,0800) | 7.2066E-03 (2003,256,0600) | 6.8856E-03 (2003,036,0900) |
| 1674 | -326.515 | -409.829 | 8.8586E-03 (2003,256,0700) | 8.6171E-03 (2003,256,0600) | 6.6162E-03 (2003,036,0800) | 6.1968E-03 (2003,036,0900) |
| 1675 | -324.272 | -409.921 | 7.6952E-03 (2003,256,0700) | 6.5153E-03 (2003,256,0600) | 5.8256E-03 (2003,036,0800) | 5.5376E-03 (2003,036,0900) |
| 1676 | -322.029 | -410.011 | 8.2784E-03 (2003,256,0700) | 7.1038E-03 (2003,256,0600) | 5.0931E-03 (2003,036,0800) | 4.9116E-03 (2003,036,0900) |
| 1677 | -319.786 | -410.101 | 9.6712E-03 (2003,256,0700) | 9.1068E-03 (2003,256,0600) | 4.4190E-03 (2003,036,0800) | 4.3300E-03 (2003,036,0900) |
| 1678 | -317.543 | -410.191 | 1.0400E-02 (2003,256,0700) | 1.0097E-02 (2003,256,0600) | 3.9637E-03 (2003,256,0800) | 3.8064E-03 (2003,036,0800) |
| 1679 | -315.300 | -410.279 | 6.3404E-03 (2003,256,0700) | 3.9770E-03 (2003,256,0600) | 3.2954E-03 (2003,036,0900) | 3.1208E-03 (2003,256,0800) |
| 1680 | -313.057 | -410.367 | 1.3658E-02 (2003,256,0600) | 1.2510E-02 (2003,256,0700) | 5.4818E-03 (2003,256,0500) | 4.4410E-03 (2003,256,0800) |
| 1681 | -310.814 | -410.455 | 1.0581E-02 (2003,256,0700) | 1.0070E-02 (2003,256,0600) | 4.0854E-03 (2003,256,0800) | 3.7404E-03 (2003,256,0500) |
| 1682 | -308.571 | -410.542 | 1.0797E-02 (2003,256,0700) | 1.0513E-02 (2003,256,0600) | 4.2042E-03 (2003,256,0800) | 4.0187E-03 (2003,256,0500) |
| 1683 | -301.842 | -410.799 | 1.0062E-02 (2003,256,0700) | 9.8625E-03 (2003,256,0600) | 6.1358E-03 (2003,087,0300) | 5.1245E-03 (2003,087,0400) |
| 1684 | -299.599 | -410.883 | 1.0856E-02 (2003,256,0600) | 1.0405E-02 (2003,256,0700) | 7.2491E-03 (2003,087,0300) | 5.9266E-03 (2003,087,0400) |
| 1685 | -297.356 | -410.967 | 1.2379E-02 (2003,256,0600) | 1.0957E-02 (2003,256,0700) | 8.4734E-03 (2003,087,0300) | 6.8031E-03 (2003,087,0400) |
| 1686 | -295.113 | -411.050 | 1.9737E-02 (2003,256,0600) | 1.4136E-02 (2003,256,0700) | 1.0846E-02 (2003,087,0300) | 1.0798E-02 (2003,256,0500) |
| 1687 | -272.680 | -411.846 | 6.1784E-03 (2003,087,0800) | 5.3986E-03 (2003,087,0700) | 4.5096E-03 (2003,087,0200) | 3.8243E-03 (2003,256,0600) |
| 1688 | -270.436 | -411.922 | 7.8165E-03 (2003,087,0700) | 7.0667E-03 (2003,256,0600) | 7.0607E-03 (2003,087,0800) | 5.1908E-03 (2003,256,0700) |
| 1689 | -268.193 | -411.998 | 7.7007E-03 (2003,087,0700) | 6.7968E-03 (2003,087,0800) | 6.6977E-03 (2003,256,0600) | 4.9047E-03 (2003,256,0500) |
| 1690 | -265.949 | -412.073 | 5.5717E-03 (2003,087,0800) | 5.0177E-03 (2003,087,0700) | 3.4666E-03 (2003,087,0200) | 3.2856E-03 (2003,284,0800) |
| 1691 | -263.706 | -412.147 | 7.8411E-03 (2003,256,0600) | 7.5272E-03 (2003,087,0700) | 6.7408E-03 (2003,256,0500) | 6.4556E-03 (2003,087,0800) |
| 1692 | -261.462 | -412.221 | 4.4107E-03 (2003,087,0800) | 4.2270E-03 (2003,087,0700) | 3.3303E-03 (2003,284,0800) | 3.0678E-03 (2003,037,0900) |
| 1693 | -259.219 | -412.294 | 3.7969E-03 (2003,087,0700) | 3.7334E-03 (2003,087,0800) | 3.3088E-03 (2003,284,0800) | 3.1488E-03 (2003,284,0700) |
| 1694 | -256.975 | -412.366 | 4.8114E-03 (2003,087,0700) | 4.0609E-03 (2003,087,0800) | 3.8660E-03 (2003,284,0700) | 3.5118E-03 (2003,284,0800) |
| 1695 | -254.732 | -412.438 | 3.2440E-03 (2003,037,0900) | 3.1555E-03 (2003,037,0800) | 3.1303E-03 (2003,284,0700) | 3.0439E-03 (2003,284,0800) |
| 1696 | -252.488 | -412.509 | 3.7526E-03 (2003,284,0700) | 3.3755E-03 (2003,037,0800) | 3.3557E-03 (2003,037,0900) | 3.1163E-03 (2003,284,0800) |
| 1697 | -250.245 | -412.580 | 7.2749E-03 (2003,256,0500) | 6.2302E-03 (2003,256,0600) | 5.2558E-03 (2003,284,0700) | 4.2510E-03 (2003,087,0700) |
| 1698 | -248.001 | -412.650 | 8.6451E-03 (2003,256,0500) | 6.5829E-03 (2003,256,0600) | 5.4962E-03 (2003,284,0700) | 4.7527E-03 (2003,297,0300) |
| 1699 | -245.757 | -412.719 | 8.4928E-03 (2003,256,0500) | 6.1098E-03 (2003,256,0600) | 5.7401E-03 (2003,297,0300) | 5.5581E-03 (2003,284,0700) |
| 1700 | -243.514 | -412.788 | 8.4030E-03 (2003,256,0500) | 6.8124E-03 (2003,297,0300) | 6.1775E-03 (2003,297,0400) | 5.6999E-03 (2003,256,0600) |
| 1701 | -241.270 | -412.856 | 8.4158E-03 (2003,256,0500) | 8.0023E-03 (2003,297,0300) | 7.5534E-03 (2003,297,0400) | 5.6771E-03 (2003,284,0600) |
| 1702 | -239.026 | -412.923 | 9.2331E-03 (2003,297,0300) | 9.1067E-03 (2003,297,0400) | 8.5006E-03 (2003,256,0500) | 6.0586E-03 (2003,284,0600) |
| 1703 | -236.783 | -412.990 | 1.0870E-02 (2003,297,0400) | 1.0502E-02 (2003,297,0300) | 8.6813E-03 (2003,256,0500) | 6.3997E-03 (2003,284,0600) |
| 1704 | -234.539 | -413.056 | 1.2787E-02 (2003,297,0400) | 1.1776E-02 (2003,297,0300) | 8.9288E-03 (2003,256,0500) | 7.3714E-03 (2003,297,0500) |
| 1705 | -232.295 | -413.121 | 1.4850E-02 (2003,297,0400) | 1.3043E-02 (2003,297,0300) | 9.2623E-03 (2003,256,0500) | 9.1521E-03 (2003,297,0500) |
| 1706 | -230.051 | -413.186 | 1.7038E-02 (2003,297,0400) | 1.4227E-02 (2003,297,0300) | 1.1186E-02 (2003,297,0500) | 9.6853E-03 (2003,256,0500) |
| 1707 | -227.808 | -413.250 | 1.9283E-02 (2003,297,0400) | 1.5309E-02 (2003,297,0300) | 1.3478E-02 (2003,297,0500) | 1.0170E-02 (2003,256,0500) |
| 1708 | -225.564 | -413.314 | 2.1499E-02 (2003,297,0400) | 1.6252E-02 (2003,297,0300) | 1.5971E-02 (2003,297,0500) | 1.0727E-02 (2003,284,0500) |
| 1709 | -223.320 | -413.377 | 2.3657E-02 (2003,297,0400) | 1.8615E-02 (2003,297,0500) | 1.7024E-02 (2003,297,0300) | 1.1548E-02 (2003,284,0500) |
| 1710 | -221.076 | -413.439 | 2.5640E-02 (2003,297,0400) | 2.1347E-02 (2003,297,0500) | 1.7578E-02 (2003,297,0300) | 1.2726E-02 (2003,284,0400) |
| 1711 | -218.832 | -413.501 | 1.5354E-02 (2003,297,0400) | 1.2342E-02 (2003,297,0300) | 1.1380E-02 (2003,284,0400) | 1.1240E-02 (2003,284,0500) |
| 1712 | -216.588 | -413.562 | 1.2285E-02 (2003,297,0400) | 1.0398E-02 (2003,297,0300) | 1.0034E-02 (2003,078,0200) | 9.7770E-03 (2003,078,0300) |
| 1713 | -214.344 | -413.622 | 1.4732E-02 (2003,297,0400) | 1.1636E-02 (2003,297,0300) | 1.1625E-02 (2003,284,0400) | 1.0530E-02 (2003,284,0500) |
| 1714 | -212.101 | -413.682 | 2.0527E-02 (2003,297,0400) | 1.8172E-02 (2003,297,0500) | 1.6560E-02 (2003,284,0400) | 1.3924E-02 (2003,297,0300) |
| 1715 | -209.857 | -413.741 | 1.2284E-02 (2003,297,0400) | 1.1437E-02 (2003,284,0400) | 1.0789E-02 (2003,078,0300) | 1.0033E-02 (2003,297,0300) |
| 1716 | -207.613 | -413.800 | 1.7263E-02 (2003,284,0400) | 1.6330E-02 (2003,297,0400) | 1.4409E-02 (2003,297,0500) | 1.1556E-02 (2003,297,0300) |
| 1717 | -328.643 | -406.956 | 7.5895E-03 (2003,036,0800) | 7.4136E-03 (2003,256,0600) | 7.1924E-03 (2003,256,0700) | 7.1072E-03 (2003,036,0700) |
| 1718 | -326.401 | -407.048 | 8.9571E-03 (2003,256,0600) | 8.2963E-03 (2003,256,0700) | 6.7333E-03 (2003,036,0800) | 6.2904E-03 (2003,036,0700) |
| 1719 | -324.159 | -407.139 | 7.4295E-03 (2003,256,0700) | 7.1209E-03 (2003,256,0600) | 5.9268E-03 (2003,036,0800) | 5.5090E-03 (2003,036,0700) |
| 1720 | -321.917 | -407.230 | 7.8826E-03 (2003,256,0700) | 7.5374E-03 (2003,256,0600) | 5.1763E-03 (2003,036,0800) | 4.8271E-03 (2003,036,0900) |
| 1721 | -319.675 | -407.320 | 1.0223E-02 (2003,256,0600) | 9.5366E-03 (2003,256,0700) | 4.4876E-03 (2003,036,0800) | 4.2518E-03 (2003,036,0900) |
| 1722 | -317.433 | -407.409 | 1.6287E-02 (2003,256,0600) | 1.2769E-02 (2003,256,0700) | 7.6826E-03 (2003,256,0500) | 4.9918E-03 (2003,256,0800) |
| 1723 | -315.191 | -407.498 | 1.1281E-02 (2003,256,0600) | 1.0399E-02 (2003,256,0700) | 4.8216E-03 (2003,256,0500) | 3.6501E-03 (2003,139,0700) |
| 1724 | -312.949 | -407.586 | 1.9835E-02 (2003,256,0600) | 1.4588E-02 (2003,256,0700) | 9.9777E-03 (2003,256,0500) | 5.3798E-03 (2003,256,0800) |
| 1725 | -310.706 | -407.673 | 1.4920E-02 (2003,256,0600) | 1.2313E-02 (2003,256,0700) | 7.0174E-03 (2003,256,0500) | 4.1547E-03 (2003,256,0800) |
| 1726 | -308.464 | -407.760 | 1.1993E-02 (2003,256,0600) | 1.0922E-02 (2003,256,0700) | 5.3798E-03 (2003,256,0500) | 4.0828E-03 (2003,256,0800) |
| 1727 | -306.222 | -407.847 | 1.0989E-02 (2003,256,0600) | 1.0383E-02 (2003,256,0700) | 4.9023E-03 (2003,256,0500) | 4.1753E-03 (2003,087,0300) |
| 1728 | -303.980 | -407.932 | 1.0615E-02 (2003,256,0600) | 1.0120E-02 (2003,256,0700) | 4.9913E-03 (2003,087,0300) | 4.8057E-03 (2003,256,0500) |
| 1729 | -301.737 | -408.017 | 3.9603E-03 (2003,256,0700) | 3.7487E-03 (2003,087,0300) | 3.0969E-03 (2003,256,0800) | 2.8779E-03 (2003,087,0400) |
| 1730 | -299.495 | -408.101 | 4.0457E-03 (2003,087,0300) | 3.2574E-03 (2003,256,0700) | 2.7290E-03 (2003,256,0800) | 2.4597E-03 (2003,087,0400) |
| 1731 | -297.253 | -408.185 | 9.1754E-03 (2003,256,0600) | 9.0081E-03 (2003,256,0700) | 7.3838E-03 (2003,087,0300) | 5.7639E-03 (2003,087,0400) |
| 1732 | -295.010 | -408.268 | 7.5037E-03 (2003,087,0300) | 7.3164E-03 (2003,256,0700) | 7.0298E-03 (2003,256,0600) | 5.8546E-03 (2003,087,0400) |
| 1733 | -292.768 | -408.351 | 1.0753E-02 (2003,256,0600) | 9.4673E-03 (2003,256,0700) | 9.2679E-03 (2003,087,0300) | 7.1079E-03 (2003,087,0400) |
| 1734 | -286.040 | -408.594 | 1.5801E-02 (2003,256,0600) | 1.1204E-02 (2003,087,0300) | 1.1202E-02 (2003,256,0500) | 1.1055E-02 (2003,256,0700) |
| 1735 | -281.555 | -408.753 | 1.4974E-02 (2003,256,0600) | 1.1737E-02 (2003,256,0500) | 1.0133E-02 (2003,256,0700) | 9.8945E-03 (2003,087,0300) |
| 1736 | -279.313 | -408.832 | 1.5016E-02 (2003,256,0600) | 1.2478E-02 (2003,256,0500) | 9.8108E-03 (2003,256,0700) | 8.9532E-03 (2003,087,0300) |
| 1737 | -274.828 | -408.988 | 1.4232E-02 (2003,256,0600) | 1.2991E-02 (2003,256,0500) | 9.4061E-03 (2003,087,0700) | 9.2307E-03 (2003,087,0800) |
| 1738 | -272.585 | -409.064 | 7.1082E-03 (2003,087,0800) | 7.0822E-03 (2003,087,0700) | 5.5221E-03 (2003,256,0600) | 5.3452E-03 (2003,087,0600) |
| 1739 | -270.342 | -409.141 | 3.5837E-03 (2003,087,0200) | 2.7577E-03 (2003,037,0900) | 2.7447E-03 (2003,005,2000) | 2.5432E-03 (2003,037,1000) |
| 1740 | -268.100 | -409.216 | 8.0169E-03 (2003,087,0700) | 6.8953E-03 (2003,087,0800) | 5.8858E-03 (2003,256,0600) | 5.0860E-03 (2003,087,0600) |
| 1741 | -265.857 | -409.291 | 8.5049E-03 (2003,087,0700) | 8.2955E-03 (2003,256,0600) | 7.6673E-03 (2003,256,0500) | 7.2264E-03 (2003,087,0800) |
| 1742 | -263.614 | -409.365 | 1.1784E-02 (2003,256,0500) | 1.0736E-02 (2003,256,0600) | 9.0560E-03 (2003,087,0700) | 7.5809E-03 (2003,087,0800) |
| 1743 | -261.372 | -409.439 | 1.1492E-02 (2003,256,0500) | 1.0045E-02 (2003,256,0600) | 8.5701E-03 (2003,087,0700) | 6.9383E-03 (2003,087,0800) |
| 1744 | -259.129 | -409.512 | 8.2804E-03 (2003,256,0500) | 7.6342E-03 (2003,256,0600) | 7.4234E-03 (2003,087,0700) | 5.7362E-03 (2003,087,0800) |
| 1745 | -256.886 | -409.584 | 1.0764E-02 (2003,256,0500) | 8.6776E-03 (2003,256,0600) | 7.2642E-03 (2003,087,0700) | 5.4851E-03 (2003,087,0800) |
| 1746 | -254.643 | -409.656 | 4.5388E-03 (2003,087,0700) | 3.8369E-03 (2003,284,0700) | 3.5457E-03 (2003,037,0800) | 3.4743E-03 (2003,087,0800) |
| 1747 | -252.400 | -409.727 | 3.9515E-03 (2003,284,0700) | 3.9074E-03 (2003,087,0700) | 3.6849E-03 (2003,037,0800) | 3.5089E-03 (2003,037,0900) |
| 1748 | -250.158 | -409.798 | 4.2916E-03 (2003,284,0700) | 3.9633E-03 (2003,037,0800) | 3.6977E-03 (2003,087,0100) | 3.6213E-03 (2003,037,0900) |
| 1749 | -247.915 | -409.867 | 4.8789E-03 (2003,284,0700) | 4.2484E-03 (2003,037,0800) | 4.0432E-03 (2003,087,0100) | 3.9174E-03 (2003,086,0800) |
| 1750 | -245.672 | -409.937 | 9.1342E-03 (2003,256,0500) | 6.1015E-03 (2003,297,0300) | 5.6723E-03 (2003,256,0600) | 5.5376E-03 (2003,284,0700) |
| 1751 | -243.429 | -410.005 | 8.9728E-03 (2003,256,0500) | 7.3133E-03 (2003,297,0300) | 5.6995E-03 (2003,297,0400) | 5.5431E-03 (2003,284,0700) |
| 1752 | -241.186 | -410.073 | 8.9238E-03 (2003,256,0500) | 8.6127E-03 (2003,297,0300) | 7.0552E-03 (2003,297,0400) | 5.7199E-03 (2003,086,0800) |
| 1753 | -238.943 | -410.141 | 9.9920E-03 (2003,297,0300) | 8.9556E-03 (2003,256,0500) | 8.6376E-03 (2003,297,0400) | 6.1698E-03 (2003,086,0800) |

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|---|---|---|---|---|---|---|
| 1754 | -236.700 | -410.207 | 1.1449E-02 (2003,297,0300) | 1.0437E-02 (2003,297,0400) | 9.0954E-03 (2003,256,0500) | 6.5340E-03 (2003,086,0800) |
| 1755 | -234.457 | -410.273 | 1.2893E-02 (2003,297,0300) | 1.2416E-02 (2003,297,0400) | 9.3154E-03 (2003,256,0500) | 6.7964E-03 (2003,086,0800) |
| 1756 | -232.214 | -410.339 | 1.4596E-02 (2003,297,0400) | 1.4332E-02 (2003,297,0300) | 9.6164E-03 (2003,256,0500) | 8.5344E-03 (2003,297,0500) |
| 1757 | -229.971 | -410.404 | 1.6908E-02 (2003,297,0400) | 1.5692E-02 (2003,297,0300) | 1.0558E-02 (2003,297,0500) | 9.9959E-03 (2003,256,0500) |
| 1758 | -227.728 | -410.468 | 1.9342E-02 (2003,297,0400) | 1.6950E-02 (2003,297,0300) | 1.2829E-02 (2003,297,0500) | 1.0452E-02 (2003,256,0500) |
| 1759 | -225.485 | -410.531 | 2.1782E-02 (2003,297,0400) | 1.8048E-02 (2003,297,0300) | 1.5345E-02 (2003,297,0500) | 1.0968E-02 (2003,256,0500) |
| 1760 | -223.242 | -410.594 | 2.4167E-02 (2003,297,0400) | 1.8946E-02 (2003,297,0300) | 1.8022E-02 (2003,297,0500) | 1.1533E-02 (2003,256,0500) |
| 1761 | -220.999 | -410.657 | 2.3231E-02 (2003,297,0400) | 1.8073E-02 (2003,297,0300) | 1.7582E-02 (2003,297,0500) | 1.2510E-02 (2003,284,0400) |
| 1762 | -218.756 | -410.718 | 1.6627E-02 (2003,297,0400) | 1.4213E-02 (2003,297,0300) | 1.2086E-02 (2003,284,0400) | 1.1023E-02 (2003,297,0500) |
| 1763 | -216.513 | -410.779 | 1.3030E-02 (2003,297,0400) | 1.1863E-02 (2003,297,0300) | 1.0564E-02 (2003,078,0200) | 9.8523E-03 (2003,284,0400) |
| 1764 | -214.270 | -410.840 | 1.0244E-02 (2003,078,0200) | 1.0109E-02 (2003,078,0300) | 8.2677E-03 (2003,284,0400) | 8.1600E-03 (2003,284,0500) |
| 1765 | -212.027 | -410.900 | 1.0467E-02 (2003,078,0300) | 9.9415E-03 (2003,078,0200) | 9.4287E-03 (2003,284,0400) | 8.3835E-03 (2003,284,0500) |
| 1766 | -209.784 | -410.959 | 3.2027E-02 (2003,297,0500) | 3.1961E-02 (2003,297,0400) | 2.0936E-02 (2003,284,0400) | 1.8773E-02 (2003,297,0300) |
| 1767 | -328.529 | -404.175 | 7.6897E-03 (2003,036,0800) | 7.6134E-03 (2003,036,0700) | 7.4275E-03 (2003,256,0600) | 6.6600E-03 (2003,036,0900) |
| 1768 | -326.288 | -404.267 | 8.9058E-03 (2003,256,0600) | 7.4481E-03 (2003,256,0700) | 6.8200E-03 (2003,036,0800) | 6.7382E-03 (2003,036,0700) |
| 1769 | -324.047 | -404.358 | 8.6271E-03 (2003,256,0600) | 7.4993E-03 (2003,256,0700) | 6.0005E-03 (2003,036,0800) | 5.9042E-03 (2003,036,0700) |
| 1770 | -317.323 | -404.628 | 1.6765E-02 (2003,256,0600) | 1.1891E-02 (2003,256,0700) | 9.1418E-03 (2003,256,0500) | 5.2652E-03 (2003,139,0700) |
| 1771 | -315.081 | -404.717 | 1.8760E-02 (2003,256,0600) | 1.2881E-02 (2003,256,0700) | 1.0547E-02 (2003,256,0500) | 5.3889E-03 (2003,139,0700) |
| 1772 | -312.840 | -404.805 | 2.0595E-02 (2003,256,0600) | 1.3759E-02 (2003,256,0700) | 1.1922E-02 (2003,256,0500) | 5.4673E-03 (2003,139,0700) |
| 1773 | -310.598 | -404.892 | 1.7414E-02 (2003,256,0600) | 1.2469E-02 (2003,256,0700) | 9.7138E-03 (2003,256,0500) | 4.8973E-03 (2003,139,0700) |
| 1774 | -308.357 | -404.979 | 1.4273E-02 (2003,256,0600) | 1.1232E-02 (2003,256,0700) | 7.6538E-03 (2003,256,0500) | 4.4500E-03 (2003,139,0700) |
| 1775 | -306.115 | -405.065 | 1.7624E-02 (2003,256,0600) | 1.2644E-02 (2003,256,0700) | 1.0114E-02 (2003,256,0500) | 4.7418E-03 (2003,139,0700) |
| 1776 | -303.874 | -405.151 | 7.6339E-03 (2003,256,0700) | 7.3597E-03 (2003,256,0600) | 4.0908E-03 (2003,087,0300) | 3.5514E-03 (2003,139,0700) |
| 1777 | -301.632 | -405.236 | 9.2885E-03 (2003,256,0600) | 8.6138E-03 (2003,256,0700) | 5.2787E-03 (2003,087,0300) | 4.7631E-03 (2003,256,0500) |
| 1778 | -299.391 | -405.320 | 2.3590E-02 (2003,256,0600) | 1.5592E-02 (2003,256,0500) | 1.4876E-02 (2003,256,0700) | 8.4978E-03 (2003,087,0300) |
| 1779 | -297.149 | -405.404 | 1.2650E-02 (2003,256,0600) | 1.0372E-02 (2003,256,0700) | 7.8382E-03 (2003,087,0300) | 7.4654E-03 (2003,256,0500) |
| 1780 | -294.907 | -405.487 | 5.7790E-03 (2003,087,0300) | 4.6127E-03 (2003,087,0400) | 4.5174E-03 (2003,256,0700) | 3.8350E-03 (2003,256,0800) |
| 1781 | -292.666 | -405.569 | 6.7761E-03 (2003,087,0300) | 5.3156E-03 (2003,087,0400) | 5.1612E-03 (2003,256,0700) | 4.2008E-03 (2003,256,0600) |
| 1782 | -290.424 | -405.651 | 8.9293E-03 (2003,087,0300) | 8.4840E-03 (2003,256,0600) | 8.1582E-03 (2003,256,0700) | 6.7645E-03 (2003,087,0400) |
| 1783 | -288.182 | -405.732 | 1.0307E-02 (2003,256,0600) | 9.8318E-03 (2003,087,0300) | 8.8699E-03 (2003,256,0700) | 7.4532E-03 (2003,087,0400) |
| 1784 | -285.941 | -405.812 | 8.6985E-03 (2003,087,0300) | 6.8383E-03 (2003,256,0600) | 6.8125E-03 (2003,087,0400) | 6.4975E-03 (2003,256,0700) |
| 1785 | -283.699 | -405.892 | 8.8461E-03 (2003,087,0300) | 7.7821E-03 (2003,256,0600) | 7.3497E-03 (2003,256,0700) | 7.0345E-03 (2003,087,0400) |
| 1786 | -281.457 | -405.972 | 7.3621E-03 (2003,087,0300) | 6.1827E-03 (2003,087,0200) | 6.1515E-03 (2003,087,0400) | 5.6956E-03 (2003,087,0800) |
| 1787 | -279.216 | -406.050 | 1.4888E-02 (2003,256,0600) | 1.3673E-02 (2003,256,0500) | 9.6969E-03 (2003,256,0700) | 9.3868E-03 (2003,087,0300) |
| 1788 | -274.732 | -406.206 | 1.4735E-02 (2003,256,0500) | 1.4421E-02 (2003,256,0600) | 9.9818E-03 (2003,087,0700) | 9.7788E-03 (2003,087,0800) |
| 1789 | -272.490 | -406.282 | 7.2418E-03 (2003,087,0800) | 6.3601E-03 (2003,087,0700) | 5.3411E-03 (2003,087,0200) | 4.7619E-03 (2003,256,0600) |
| 1790 | -270.248 | -406.359 | 9.0960E-03 (2003,087,0700) | 8.4738E-03 (2003,256,0600) | 8.1046E-03 (2003,087,0800) | 8.0368E-03 (2003,256,0500) |
| 1791 | -268.006 | -406.434 | 3.4899E-03 (2003,087,0200) | 3.0663E-03 (2003,087,0800) | 3.0440E-03 (2003,037,0900) | 2.6715E-03 (2003,005,2000) |
| 1792 | -265.764 | -406.509 | 8.9659E-03 (2003,087,0700) | 7.6453E-03 (2003,256,0500) | 7.5604E-03 (2003,256,0600) | 7.3579E-03 (2003,087,0800) |
| 1793 | -263.523 | -406.583 | 8.7128E-03 (2003,087,0700) | 7.5584E-03 (2003,256,0500) | 7.1453E-03 (2003,256,0600) | 6.8572E-03 (2003,087,0800) |
| 1794 | -261.281 | -406.657 | 1.2433E-02 (2003,256,0500) | 9.6287E-03 (2003,256,0600) | 9.3109E-03 (2003,087,0700) | 7.1302E-03 (2003,087,0800) |
| 1795 | -259.039 | -406.730 | 1.2192E-02 (2003,256,0500) | 8.9926E-03 (2003,256,0600) | 8.7880E-03 (2003,087,0700) | 6.4618E-03 (2003,087,0800) |
| 1796 | -256.797 | -406.802 | 1.1711E-02 (2003,256,0500) | 8.2448E-03 (2003,256,0600) | 8.0613E-03 (2003,087,0700) | 5.6779E-03 (2003,087,0800) |
| 1797 | -254.555 | -406.874 | 6.8354E-03 (2003,256,0500) | 6.4924E-03 (2003,087,0700) | 5.3578E-03 (2003,256,0600) | 4.5793E-03 (2003,284,0700) |
| 1798 | -252.313 | -406.945 | 1.0728E-02 (2003,256,0500) | 6.8127E-03 (2003,256,0600) | 6.4298E-03 (2003,087,0700) | 5.2100E-03 (2003,284,0700) |
| 1799 | -250.071 | -407.015 | 1.0281E-02 (2003,256,0500) | 6.1817E-03 (2003,256,0600) | 5.5831E-03 (2003,087,0700) | 5.3785E-03 (2003,284,0700) |
| 1800 | -247.828 | -407.085 | 9.8874E-03 (2003,256,0500) | 5.6052E-03 (2003,256,0600) | 5.5010E-03 (2003,284,0700) | 5.1973E-03 (2003,297,0300) |
| 1801 | -245.586 | -407.154 | 9.5814E-03 (2003,256,0500) | 6.3705E-03 (2003,297,0300) | 5.5676E-03 (2003,284,0700) | 5.0789E-03 (2003,256,0600) |
| 1802 | -243.344 | -407.223 | 9.3449E-03 (2003,256,0500) | 7.6847E-03 (2003,297,0300) | 5.5772E-03 (2003,284,0700) | 5.5101E-03 (2003,086,0800) |
| 1803 | -241.102 | -407.291 | 9.2278E-03 (2003,256,0500) | 9.1173E-03 (2003,297,0300) | 6.5088E-03 (2003,297,0400) | 6.0142E-03 (2003,086,0800) |
| 1804 | -238.860 | -407.358 | 1.0655E-02 (2003,297,0300) | 9.2035E-03 (2003,256,0500) | 8.0916E-03 (2003,297,0400) | 6.4453E-03 (2003,086,0800) |
| 1805 | -236.618 | -407.425 | 1.2251E-02 (2003,297,0300) | 9.8861E-03 (2003,297,0400) | 9.2853E-03 (2003,256,0500) | 6.7797E-03 (2003,086,0800) |
| 1806 | -234.376 | -407.491 | 1.3890E-02 (2003,297,0300) | 1.1920E-02 (2003,297,0400) | 9.4627E-03 (2003,256,0500) | 7.0027E-03 (2003,086,0800) |
| 1807 | -232.133 | -407.557 | 1.5516E-02 (2003,297,0300) | 1.4191E-02 (2003,297,0400) | 9.7211E-03 (2003,256,0500) | 7.9538E-03 (2003,297,0500) |
| 1808 | -229.891 | -407.621 | 1.7086E-02 (2003,297,0300) | 1.6635E-02 (2003,297,0400) | 1.0069E-02 (2003,256,0500) | 9.9361E-03 (2003,297,0500) |
| 1809 | -227.649 | -407.685 | 1.9237E-02 (2003,297,0400) | 1.8544E-02 (2003,297,0300) | 1.2195E-02 (2003,297,0500) | 1.0488E-02 (2003,256,0500) |
| 1810 | -225.407 | -407.749 | 2.1894E-02 (2003,297,0400) | 1.9815E-02 (2003,297,0300) | 1.4691E-02 (2003,297,0500) | 1.0953E-02 (2003,256,0500) |
| 1811 | -223.165 | -407.812 | 2.4522E-02 (2003,297,0400) | 2.0886E-02 (2003,297,0300) | 1.7388E-02 (2003,297,0500) | 1.1648E-02 (2003,284,0400) |
| 1812 | -220.922 | -407.874 | 2.7021E-02 (2003,297,0400) | 2.1677E-02 (2003,297,0300) | 2.0180E-02 (2003,297,0500) | 1.3410E-02 (2003,284,0400) |
| 1813 | -218.680 | -407.936 | 2.9298E-02 (2003,297,0400) | 2.2985E-02 (2003,297,0500) | 2.2177E-02 (2003,297,0300) | 1.5205E-02 (2003,284,0400) |
| 1814 | -216.438 | -407.997 | 3.0040E-02 (2003,297,0400) | 2.4631E-02 (2003,297,0500) | 2.1828E-02 (2003,297,0300) | 1.6771E-02 (2003,284,0400) |
| 1815 | -214.195 | -408.057 | 1.6911E-02 (2003,297,0400) | 1.4789E-02 (2003,284,0400) | 1.4757E-02 (2003,297,0300) | 1.1725E-02 (2003,297,0500) |
| 1816 | -211.953 | -408.117 | 9.9164E-03 (2003,078,0300) | 9.8160E-03 (2003,078,0200) | 6.0076E-03 (2003,078,0100) | 5.5412E-03 (2003,086,0700) |
| 1817 | -317.212 | -401.847 | 1.4006E-02 (2003,256,0600) | 9.6487E-03 (2003,256,0700) | 8.4178E-03 (2003,256,0500) | 5.6011E-03 (2003,139,0700) |
| 1818 | -314.971 | -401.935 | 1.8923E-02 (2003,256,0600) | 1.2300E-02 (2003,256,0500) | 1.1812E-02 (2003,256,0700) | 6.3400E-03 (2003,139,0700) |
| 1819 | -312.731 | -402.023 | 2.0877E-02 (2003,256,0600) | 1.3947E-02 (2003,256,0500) | 1.2705E-02 (2003,256,0700) | 6.4233E-03 (2003,139,0700) |
| 1820 | -310.490 | -402.111 | 2.2537E-02 (2003,256,0600) | 1.5409E-02 (2003,256,0500) | 1.3463E-02 (2003,256,0700) | 6.4590E-03 (2003,139,0700) |
| 1821 | -308.249 | -402.198 | 2.3339E-02 (2003,256,0600) | 1.6205E-02 (2003,256,0500) | 1.3867E-02 (2003,256,0700) | 6.3542E-03 (2003,139,0700) |
| 1822 | -306.009 | -402.284 | 1.2577E-02 (2003,256,0600) | 9.8747E-03 (2003,256,0700) | 7.6272E-03 (2003,256,0500) | 4.8379E-03 (2003,139,0700) |
| 1823 | -303.768 | -402.369 | 6.6781E-03 (2003,256,0700) | 6.4640E-03 (2003,256,0600) | 3.9329E-03 (2003,139,0700) | 3.9069E-03 (2003,139,0800) |
| 1824 | -301.527 | -402.454 | 2.0121E-02 (2003,256,0600) | 1.4159E-02 (2003,256,0500) | 1.2918E-02 (2003,256,0700) | 6.3666E-03 (2003,087,0300) |
| 1825 | -299.286 | -402.538 | 1.2696E-02 (2003,256,0600) | 1.0095E-02 (2003,256,0700) | 8.2568E-03 (2003,256,0500) | 6.4359E-03 (2003,087,0300) |
| 1826 | -297.046 | -402.622 | 2.3645E-02 (2003,256,0600) | 1.8234E-02 (2003,256,0500) | 1.4301E-02 (2003,256,0700) | 9.2552E-03 (2003,087,0300) |
| 1827 | -294.805 | -402.705 | 1.9916E-02 (2003,256,0600) | 1.5285E-02 (2003,256,0500) | 1.2929E-02 (2003,256,0700) | 9.8471E-03 (2003,087,0300) |
| 1828 | -292.564 | -402.787 | 7.8950E-03 (2003,087,0300) | 7.6184E-03 (2003,256,0600) | 7.1704E-03 (2003,256,0700) | 5.8465E-03 (2003,087,0400) |
| 1829 | -290.323 | -402.869 | 9.4114E-03 (2003,256,0600) | 9.0963E-03 (2003,087,0300) | 8.6594E-03 (2003,256,0700) | 6.7058E-03 (2003,087,0400) |
| 1830 | -288.082 | -402.950 | 8.6885E-03 (2003,087,0300) | 7.0393E-03 (2003,256,0600) | 6.7331E-03 (2003,256,0700) | 6.5899E-03 (2003,087,0400) |
| 1831 | -285.841 | -403.031 | 9.3091E-03 (2003,087,0300) | 8.2546E-03 (2003,256,0600) | 7.9425E-03 (2003,256,0700) | 7.1309E-03 (2003,087,0400) |
| 1832 | -283.600 | -403.111 | 6.2038E-03 (2003,087,0300) | 5.6194E-03 (2003,087,0200) | 5.4136E-03 (2003,087,0400) | 4.2360E-03 (2003,087,0500) |
| 1833 | -281.359 | -403.190 | 8.1083E-03 (2003,087,0300) | 7.2474E-03 (2003,087,0800) | 7.0544E-03 (2003,087,0200) | 6.6688E-03 (2003,087,0400) |
| 1834 | -279.118 | -403.269 | 1.2020E-02 (2003,256,0600) | 1.1480E-02 (2003,256,0500) | 9.2289E-03 (2003,087,0300) | 8.8933E-03 (2003,087,0800) |
| 1835 | -276.877 | -403.347 | 1.5965E-02 (2003,256,0500) | 1.4754E-02 (2003,256,0600) | 1.0039E-02 (2003,087,0800) | 9.7896E-03 (2003,087,0700) |
| 1836 | -272.395 | -403.501 | 1.6009E-02 (2003,256,0500) | 1.3454E-02 (2003,256,0600) | 1.0935E-02 (2003,087,0700) | 1.0147E-02 (2003,087,0800) |
| 1837 | -270.154 | -403.577 | 1.5635E-02 (2003,256,0500) | 1.2606E-02 (2003,256,0600) | 1.1227E-02 (2003,087,0700) | 9.9185E-03 (2003,087,0800) |
| 1838 | -267.913 | -403.652 | 7.9559E-03 (2003,087,0700) | 7.3680E-03 (2003,087,0800) | 5.9036E-03 (2003,087,0600) | 5.4901E-03 (2003,256,0600) |
| 1839 | -265.672 | -403.727 | 3.1924E-03 (2003,037,0900) | 2.9270E-03 (2003,087,0200) | 2.7240E-03 (2003,037,0800) | 2.5455E-03 (2003,037,1000) |
| 1840 | -263.431 | -403.801 | 9.3836E-03 (2003,087,0700) | 8.4228E-03 (2003,256,0500) | 7.1136E-03 (2003,087,0800) | 6.9824E-03 (2003,256,0600) |
| 1841 | -261.190 | -403.875 | 1.0497E-02 (2003,256,0500) | 9.4840E-03 (2003,087,0700) | 7.6888E-03 (2003,256,0600) | 6.8628E-03 (2003,087,0800) |
| 1842 | -258.948 | -403.948 | 1.3035E-02 (2003,256,0500) | 9.6300E-03 (2003,087,0700) | 8.3820E-03 (2003,256,0600) | 6.8427E-03 (2003,256,0400) |
| 1843 | -256.707 | -404.020 | 1.2430E-02 (2003,256,0500) | 8.8550E-03 (2003,087,0700) | 7.5936E-03 (2003,256,0600) | 6.6280E-03 (2003,256,0400) |
| 1844 | -254.466 | -404.092 | 1.1814E-02 (2003,256,0500) | 7.9882E-03 (2003,087,0700) | 6.8201E-03 (2003,256,0600) | 6.4330E-03 (2003,256,0400) |
| 1845 | -252.225 | -404.163 | 1.1227E-02 (2003,256,0500) | 7.0656E-03 (2003,087,0700) | 6.2324E-03 (2003,256,0400) | 6.1001E-03 (2003,256,0600) |
| 1846 | -249.984 | -404.233 | 1.0668E-02 (2003,256,0500) | 6.1449E-03 (2003,087,0700) | 6.0989E-03 (2003,256,0400) | 5.4576E-03 (2003,256,0600) |
| 1847 | -247.742 | -404.303 | 1.0182E-02 (2003,256,0500) | 6.0079E-03 (2003,256,0400) | 5.5725E-03 (2003,284,0700) | 5.2725E-03 (2003,297,0300) |
| 1848 | -245.501 | -404.372 | 9.7907E-03 (2003,256,0500) | 6.5156E-03 (2003,297,0300) | 6.0297E-03 (2003,256,0400) | 5.6413E-03 (2003,284,0700) |
| 1849 | -243.260 | -404.441 | 9.4858E-03 (2003,256,0500) | 7.9153E-03 (2003,297,0300) | 6.1227E-03 (2003,256,0400) | 5.8038E-03 (2003,086,0800) |
| 1850 | -241.018 | -404.509 | 9.4513E-03 (2003,297,0300) | 9.2859E-03 (2003,256,0500) | 6.3400E-03 (2003,256,0400) | 6.2909E-03 (2003,086,0800) |
| 1851 | -238.777 | -404.576 | 1.1120E-02 (2003,297,0300) | 9.1975E-03 (2003,256,0500) | 7.4835E-03 (2003,297,0400) | 6.6965E-03 (2003,086,0800) |
| 1852 | -236.536 | -404.643 | 1.2893E-02 (2003,297,0300) | 9.2887E-03 (2003,297,0400) | 9.2244E-03 (2003,256,0500) | 6.9963E-03 (2003,086,0800) |
| 1853 | -234.294 | -404.709 | 1.4722E-02 (2003,297,0300) | 1.1352E-02 (2003,297,0400) | 9.3539E-03 (2003,256,0500) | 7.5363E-03 (2003,297,0200) |
| 1854 | -232.053 | -404.774 | 1.6555E-02 (2003,297,0300) | 1.3695E-02 (2003,297,0400) | 9.5683E-03 (2003,256,0500) | 8.3089E-03 (2003,297,0200) |
| 1855 | -229.811 | -404.839 | 1.8349E-02 (2003,297,0300) | 1.6261E-02 (2003,297,0400) | 9.8592E-03 (2003,256,0500) | 9.3245E-03 (2003,297,0500) |
| 1856 | -211.879 | -405.335 | 1.0013E-02 (2003,078,0200) | 9.6565E-03 (2003,078,0300) | 6.2940E-03 (2003,078,0100) | 5.3011E-03 (2003,086,0700) |
| 1857 | -314.862 | -399.154 | 1.8594E-02 (2003,256,0600) | 1.3993E-02 (2003,256,0500) | 1.0595E-02 (2003,256,0700) | 7.4052E-03 (2003,139,0700) |
| 1858 | -312.622 | -399.242 | 2.0594E-02 (2003,256,0600) | 1.5909E-02 (2003,256,0500) | 1.1510E-02 (2003,256,0700) | 7.4979E-03 (2003,139,0700) |
| 1859 | -310.382 | -399.330 | 2.2103E-02 (2003,256,0600) | 1.7387E-02 (2003,256,0500) | 1.2251E-02 (2003,256,0700) | 7.4768E-03 (2003,139,0700) |
| 1860 | -308.142 | -399.416 | 2.3218E-02 (2003,256,0600) | 1.8586E-02 (2003,256,0500) | 1.2823E-02 (2003,256,0700) | 7.3923E-03 (2003,139,0700) |
| 1861 | -305.902 | -399.502 | 1.6212E-02 (2003,256,0600) | 1.2085E-02 (2003,256,0500) | 1.0614E-02 (2003,256,0700) | 6.1145E-03 (2003,139,0700) |
| 1862 | -303.662 | -399.588 | 1.1016E-02 (2003,256,0600) | 8.8340E-03 (2003,256,0700) | 7.6487E-03 (2003,256,0500) | 5.2489E-03 (2003,139,0700) |
| 1863 | -301.422 | -399.673 | 2.1618E-02 (2003,256,0600) | 1.7685E-02 (2003,256,0500) | 1.2860E-02 (2003,256,0700) | 6.5665E-03 (2003,139,0700) |
| 1864 | -299.182 | -399.757 | 2.4956E-02 (2003,256,0600) | 2.1536E-02 (2003,256,0500) | 1.4221E-02 (2003,256,0700) | 7.6108E-03 (2003,087,0300) |
| 1865 | -296.942 | -399.841 | 2.4663E-02 (2003,256,0600) | 2.1768E-02 (2003,256,0500) | 1.4310E-02 (2003,256,0700) | 8.8904E-03 (2003,087,0300) |
| 1866 | -294.702 | -399.924 | 2.3025E-02 (2003,256,0600) | 2.0612E-02 (2003,256,0500) | 1.3885E-02 (2003,256,0700) | 9.9333E-03 (2003,087,0300) |
| 1867 | -292.462 | -400.006 | 1.7800E-02 (2003,256,0600) | 1.5561E-02 (2003,256,0500) | 1.2092E-02 (2003,256,0700) | 1.0136E-02 (2003,087,0300) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1868 | -290.222 | -400.088 | 1.1120E-02 (2003,256,0600) | 9.5309E-03 (2003,256,0700) | 9.4048E-03 (2003,087,0300) | 9.0861E-03 (2003,256,0500) |
| 1869 | -287.982 | -400.169 | 7.7035E-03 (2003,087,0300) | 6.0614E-03 (2003,087,0200) | 5.8811E-03 (2003,087,0400) | 5.5119E-03 (2003,256,0700) |
| 1870 | -285.742 | -400.249 | 5.7367E-03 (2003,087,0300) | 5.4396E-03 (2003,087,0200) | 4.6656E-03 (2003,087,0400) | 3.1109E-03 (2003,256,0800) |
| 1871 | -283.502 | -400.329 | 5.5613E-03 (2003,087,0200) | 5.3118E-03 (2003,087,0300) | 3.8921E-03 (2003,087,0400) | 3.0364E-03 (2003,256,0800) |
| 1872 | -281.261 | -400.408 | 9.1096E-03 (2003,087,0300) | 8.2445E-03 (2003,256,0600) | 8.1716E-03 (2003,087,0200) | 8.0207E-03 (2003,087,0800) |
| 1873 | -279.021 | -400.487 | 6.9665E-03 (2003,087,0200) | 6.8509E-03 (2003,087,0300) | 6.0154E-03 (2003,087,0400) | 5.8481E-03 (2003,087,0800) |
| 1874 | -276.781 | -400.565 | 9.9824E-03 (2003,256,0500) | 9.5291E-03 (2003,256,0600) | 9.0521E-03 (2003,087,0800) | 8.6333E-03 (2003,087,0700) |
| 1875 | -274.541 | -400.642 | 1.7731E-02 (2003,256,0500) | 1.3944E-02 (2003,256,0600) | 1.1210E-02 (2003,087,0700) | 1.0828E-02 (2003,087,0800) |
| 1876 | -272.300 | -400.719 | 9.4945E-03 (2003,087,0700) | 8.9728E-03 (2003,256,0500) | 8.8429E-03 (2003,087,0800) | 8.0256E-03 (2003,256,0600) |
| 1877 | -270.060 | -400.795 | 1.6802E-02 (2003,256,0500) | 1.2068E-02 (2003,256,0600) | 1.2018E-02 (2003,087,0700) | 1.0348E-02 (2003,087,0800) |
| 1878 | -267.820 | -400.870 | 1.5606E-02 (2003,256,0500) | 1.1832E-02 (2003,087,0700) | 1.0837E-02 (2003,256,0600) | 9.6388E-03 (2003,087,0800) |
| 1879 | -265.579 | -400.945 | 3.3683E-03 (2003,037,0900) | 3.0728E-03 (2003,087,0200) | 2.9302E-03 (2003,037,0800) | 2.5343E-03 (2003,284,0800) |
| 1880 | -263.339 | -401.019 | 4.7464E-03 (2003,087,0700) | 4.6172E-03 (2003,087,0800) | 3.6014E-03 (2003,037,0900) | 3.4013E-03 (2003,037,0800) |
| 1881 | -261.099 | -401.093 | 9.4067E-03 (2003,087,0700) | 7.9241E-03 (2003,256,0500) | 6.4683E-03 (2003,087,0800) | 5.8997E-03 (2003,087,0600) |
| 1882 | -258.858 | -401.166 | 1.2739E-02 (2003,256,0500) | 1.0141E-02 (2003,087,0700) | 7.7758E-03 (2003,256,0400) | 7.2738E-03 (2003,256,0600) |
| 1883 | -256.618 | -401.238 | 1.2847E-02 (2003,256,0500) | 9.6315E-03 (2003,087,0700) | 8.1714E-03 (2003,256,0400) | 6.7804E-03 (2003,256,0600) |
| 1884 | -216.287 | -402.432 | 3.2763E-02 (2003,297,0400) | 2.6840E-02 (2003,297,0300) | 2.4155E-02 (2003,297,0500) | 1.7345E-02 (2003,284,0400) |
| 1885 | -214.046 | -402.493 | 1.0756E-02 (2003,078,0200) | 9.0602E-03 (2003,078,0300) | 6.7093E-03 (2003,078,0100) | 5.4660E-03 (2003,086,0700) |
| 1886 | -211.805 | -402.552 | 2.7489E-02 (2003,297,0400) | 2.1900E-02 (2003,297,0300) | 2.1453E-02 (2003,297,0500) | 1.9029E-02 (2003,284,0400) |
| 1887 | -314.752 | -396.373 | 1.7740E-02 (2003,256,0600) | 1.5507E-02 (2003,256,0500) | 9.3219E-03 (2003,256,0700) | 8.5861E-03 (2003,139,0700) |
| 1888 | -312.513 | -396.461 | 1.9742E-02 (2003,256,0600) | 1.7664E-02 (2003,256,0500) | 1.0239E-02 (2003,256,0700) | 8.6899E-03 (2003,139,0700) |
| 1889 | -310.274 | -396.548 | 2.1374E-02 (2003,256,0600) | 1.9481E-02 (2003,256,0500) | 1.1060E-02 (2003,256,0700) | 8.6733E-03 (2003,139,0700) |
| 1890 | -308.035 | -396.635 | 2.2656E-02 (2003,256,0600) | 2.0961E-02 (2003,256,0500) | 1.1765E-02 (2003,256,0700) | 8.5815E-03 (2003,139,0700) |
| 1891 | -305.796 | -396.721 | 1.4224E-02 (2003,256,0600) | 1.1978E-02 (2003,256,0500) | 9.3180E-03 (2003,256,0700) | 6.7210E-03 (2003,139,0700) |
| 1892 | -303.556 | -396.807 | 2.3570E-02 (2003,256,0600) | 2.2301E-02 (2003,256,0500) | 1.2672E-02 (2003,256,0700) | 8.1513E-03 (2003,139,0700) |
| 1893 | -301.317 | -396.892 | 1.9815E-02 (2003,256,0600) | 1.8278E-02 (2003,256,0500) | 1.1776E-02 (2003,256,0700) | 7.3112E-03 (2003,139,0700) |
| 1894 | -299.078 | -396.976 | 2.4820E-02 (2003,256,0600) | 2.4414E-02 (2003,256,0500) | 1.3788E-02 (2003,256,0700) | 7.9221E-03 (2003,139,0700) |
| 1895 | -296.839 | -397.059 | 2.4335E-02 (2003,256,0600) | 2.4298E-02 (2003,256,0500) | 1.3970E-02 (2003,256,0700) | 8.3081E-03 (2003,087,0300) |
| 1896 | -294.599 | -397.142 | 2.1356E-02 (2003,256,0600) | 2.1191E-02 (2003,256,0500) | 1.3222E-02 (2003,256,0700) | 9.1907E-03 (2003,087,0300) |
| 1897 | -292.360 | -397.225 | 1.3646E-02 (2003,256,0600) | 1.2625E-02 (2003,256,0500) | 1.0646E-02 (2003,256,0700) | 8.9029E-03 (2003,087,0300) |
| 1898 | -290.121 | -397.306 | 1.1785E-02 (2003,256,0600) | 1.0864E-02 (2003,256,0500) | 1.0056E-02 (2003,256,0700) | 9.3530E-03 (2003,087,0300) |
| 1899 | -287.882 | -397.387 | 1.7612E-02 (2003,256,0500) | 1.6961E-02 (2003,256,0600) | 1.2171E-02 (2003,256,0700) | 1.1401E-02 (2003,087,0300) |
| 1900 | -285.642 | -397.468 | 1.2928E-02 (2003,256,0500) | 1.2798E-02 (2003,256,0600) | 1.0819E-02 (2003,087,0300) | 1.0545E-02 (2003,256,0700) |
| 1901 | -283.403 | -397.548 | 9.4012E-03 (2003,087,0300) | 8.4886E-03 (2003,087,0200) | 8.4076E-03 (2003,256,0700) | 7.8335E-03 (2003,256,0600) |
| 1902 | -281.163 | -397.627 | 8.5806E-03 (2003,087,0300) | 8.2861E-03 (2003,087,0200) | 7.8129E-03 (2003,087,0800) | 7.4305E-03 (2003,256,0700) |
| 1903 | -278.924 | -397.705 | 8.6474E-03 (2003,087,0200) | 8.6431E-03 (2003,087,0300) | 8.5057E-03 (2003,087,0800) | 7.6538E-03 (2003,256,0700) |
| 1904 | -276.684 | -397.783 | 8.7427E-03 (2003,087,0800) | 8.4000E-03 (2003,087,0200) | 7.9978E-03 (2003,087,0300) | 7.5463E-03 (2003,256,0500) |
| 1905 | -274.445 | -397.861 | 8.3378E-03 (2003,087,0800) | 7.4512E-03 (2003,087,0200) | 7.0953E-03 (2003,087,0700) | 6.6268E-03 (2003,087,0300) |
| 1906 | -272.206 | -397.937 | 9.7699E-03 (2003,087,0700) | 9.2820E-03 (2003,256,0500) | 9.0824E-03 (2003,087,0800) | 7.5973E-03 (2003,256,0600) |
| 1907 | -269.966 | -398.013 | 7.8766E-03 (2003,087,0800) | 7.7518E-03 (2003,087,0700) | 5.9351E-03 (2003,087,0600) | 5.9124E-03 (2003,087,0200) |
| 1908 | -267.726 | -398.089 | 3.5288E-03 (2003,087,0200) | 3.3558E-03 (2003,037,0900) | 2.7747E-03 (2003,037,0800) | 2.5392E-03 (2003,037,1000) |
| 1909 | -265.487 | -398.164 | 3.4405E-03 (2003,037,0900) | 3.0116E-03 (2003,087,0200) | 3.0107E-03 (2003,037,0800) | 2.4769E-03 (2003,037,1000) |
| 1910 | -263.247 | -398.238 | 1.0956E-02 (2003,087,0700) | 1.0584E-02 (2003,256,0500) | 8.2929E-03 (2003,087,0600) | 7.6801E-03 (2003,087,0800) |
| 1911 | -261.008 | -398.311 | 7.3609E-03 (2003,087,0700) | 5.5465E-03 (2003,087,0800) | 4.6452E-03 (2003,087,0600) | 4.1051E-03 (2003,037,0800) |
| 1912 | -258.768 | -398.384 | 6.5477E-03 (2003,087,0700) | 4.7236E-03 (2003,087,0800) | 4.1972E-03 (2003,037,0800) | 3.9795E-03 (2003,087,0600) |
| 1913 | -256.528 | -398.456 | 1.2868E-02 (2003,256,0500) | 1.0389E-02 (2003,087,0700) | 9.8259E-03 (2003,256,0400) | 7.6634E-03 (2003,087,0600) |
| 1914 | -254.289 | -398.528 | 1.2054E-02 (2003,256,0500) | 9.4391E-03 (2003,256,0400) | 9.3832E-03 (2003,087,0700) | 6.9284E-03 (2003,087,0600) |
| 1915 | -213.972 | -399.710 | 1.3269E-02 (2003,297,0300) | 1.1553E-02 (2003,078,0200) | 1.0441E-02 (2003,284,0400) | 1.0074E-02 (2003,297,0400) |
| 1916 | -211.732 | -399.770 | 1.0289E-02 (2003,078,0200) | 9.1114E-03 (2003,078,0300) | 6.7915E-03 (2003,078,0100) | 5.6322E-03 (2003,297,0200) |
| 1917 | -209.492 | -399.829 | 1.0333E-02 (2003,284,0400) | 9.7302E-03 (2003,078,0200) | 9.5792E-03 (2003,078,0300) | 8.3396E-03 (2003,297,0300) |
| 1918 | -314.642 | -393.592 | 1.6407E-02 (2003,256,0500) | 1.6207E-02 (2003,256,0600) | 9.7819E-03 (2003,139,0700) | 7.9952E-03 (2003,256,0700) |
| 1919 | -312.404 | -393.680 | 1.8963E-02 (2003,256,0500) | 1.8301E-02 (2003,256,0600) | 9.9480E-03 (2003,139,0700) | 8.9470E-03 (2003,256,0700) |
| 1920 | -310.166 | -393.767 | 2.1497E-02 (2003,256,0500) | 2.0314E-02 (2003,256,0600) | 1.0052E-02 (2003,139,0700) | 9.8970E-03 (2003,256,0700) |
| 1921 | -307.927 | -393.854 | 2.3077E-02 (2003,256,0500) | 2.1559E-02 (2003,256,0600) | 1.0672E-02 (2003,256,0700) | 9.9001E-03 (2003,139,0700) |
| 1922 | -305.689 | -393.940 | 2.4442E-02 (2003,256,0500) | 2.2580E-02 (2003,256,0600) | 1.1406E-02 (2003,256,0700) | 9.7305E-03 (2003,139,0700) |
| 1923 | -303.451 | -394.025 | 2.4182E-02 (2003,256,0500) | 2.2339E-02 (2003,256,0600) | 1.1758E-02 (2003,256,0700) | 9.2965E-03 (2003,139,0700) |
| 1924 | -301.212 | -394.110 | 2.6169E-02 (2003,256,0500) | 2.3727E-02 (2003,256,0600) | 1.2681E-02 (2003,256,0700) | 9.2976E-03 (2003,139,0700) |
| 1925 | -298.974 | -394.194 | 2.6612E-02 (2003,256,0500) | 2.3889E-02 (2003,256,0600) | 1.3224E-02 (2003,256,0700) | 9.1976E-03 (2003,256,0400) |
| 1926 | -296.735 | -394.278 | 2.5813E-02 (2003,256,0500) | 2.3085E-02 (2003,256,0600) | 1.3451E-02 (2003,256,0700) | 9.2598E-03 (2003,256,0400) |
| 1927 | -294.497 | -394.361 | 2.4875E-02 (2003,256,0500) | 2.2128E-02 (2003,256,0600) | 1.3590E-02 (2003,256,0700) | 9.3440E-03 (2003,256,0400) |
| 1928 | -292.258 | -394.443 | 2.4126E-02 (2003,256,0500) | 2.1251E-02 (2003,256,0600) | 1.3704E-02 (2003,256,0700) | 9.9463E-03 (2003,087,0300) |
| 1929 | -290.020 | -394.525 | 2.3378E-02 (2003,256,0500) | 2.0291E-02 (2003,256,0600) | 1.3713E-02 (2003,256,0700) | 1.0957E-02 (2003,087,0300) |
| 1930 | -287.781 | -394.606 | 2.2833E-02 (2003,256,0500) | 1.9398E-02 (2003,256,0600) | 1.3648E-02 (2003,256,0700) | 1.1761E-02 (2003,087,0300) |
| 1931 | -285.543 | -394.686 | 2.1681E-02 (2003,256,0500) | 1.8034E-02 (2003,256,0600) | 1.3259E-02 (2003,256,0700) | 1.2164E-02 (2003,087,0300) |
| 1932 | -283.304 | -394.766 | 2.0889E-02 (2003,256,0500) | 1.6863E-02 (2003,256,0600) | 1.2804E-02 (2003,256,0700) | 1.2254E-02 (2003,087,0300) |
| 1933 | -281.065 | -394.845 | 8.8639E-03 (2003,087,0200) | 8.7388E-03 (2003,087,0300) | 8.0009E-03 (2003,256,0700) | 7.9192E-03 (2003,087,0800) |
| 1934 | -278.827 | -394.924 | 9.2411E-03 (2003,087,0200) | 8.8698E-03 (2003,087,0300) | 8.6897E-03 (2003,087,0800) | 8.1750E-03 (2003,256,0700) |
| 1935 | -276.588 | -395.002 | 8.4137E-03 (2003,087,0200) | 8.3054E-03 (2003,087,0800) | 7.6602E-03 (2003,087,0300) | 7.0344E-03 (2003,256,0700) |
| 1936 | -274.349 | -395.079 | 6.5241E-03 (2003,087,0200) | 5.3896E-03 (2003,087,0300) | 5.3697E-03 (2003,087,0400) | 5.2085E-03 (2003,087,0800) |
| 1937 | -272.111 | -395.156 | 5.9909E-03 (2003,087,0200) | 5.4001E-03 (2003,087,0800) | 5.0981E-03 (2003,087,0400) | 4.8186E-03 (2003,087,0300) |
| 1938 | -269.872 | -395.232 | 7.6400E-03 (2003,087,0800) | 6.8290E-03 (2003,087,0700) | 6.0856E-03 (2003,087,0200) | 5.4362E-03 (2003,087,0400) |
| 1939 | -267.633 | -395.307 | 1.0290E-02 (2003,087,0700) | 8.2534E-03 (2003,087,0800) | 7.7588E-03 (2003,256,0500) | 7.2480E-03 (2003,087,0600) |
| 1940 | -265.394 | -395.382 | 1.1747E-02 (2003,087,0700) | 1.1077E-02 (2003,256,0500) | 9.2713E-03 (2003,087,0600) | 8.5146E-03 (2003,087,0800) |
| 1941 | -263.156 | -395.456 | 1.1721E-02 (2003,087,0700) | 1.1054E-02 (2003,256,0500) | 9.2480E-03 (2003,087,0600) | 8.2709E-03 (2003,256,0400) |
| 1942 | -260.917 | -395.530 | 1.2142E-02 (2003,256,0500) | 1.1879E-02 (2003,087,0700) | 9.9902E-03 (2003,256,0400) | 9.3650E-03 (2003,087,0600) |
| 1943 | -258.678 | -395.602 | 1.0718E-02 (2003,087,0700) | 1.0109E-02 (2003,256,0500) | 8.5485E-03 (2003,087,0600) | 8.1494E-03 (2003,256,0400) |
| 1944 | -216.136 | -396.868 | 3.1707E-02 (2003,297,0400) | 2.9792E-02 (2003,297,0300) | 2.0735E-02 (2003,297,0500) | 1.7158E-02 (2003,297,0200) |
| 1945 | -213.897 | -396.928 | 3.0619E-02 (2003,297,0400) | 2.7864E-02 (2003,297,0300) | 2.0886E-02 (2003,297,0500) | 1.7979E-02 (2003,284,0400) |
| 1946 | -211.658 | -396.988 | 1.0638E-02 (2003,078,0200) | 9.3652E-03 (2003,284,0400) | 9.1511E-03 (2003,078,0300) | 8.3445E-03 (2003,297,0300) |
| 1947 | -209.419 | -397.047 | 2.9006E-02 (2003,297,0400) | 2.4382E-02 (2003,297,0300) | 2.1567E-02 (2003,297,0500) | 2.0078E-02 (2003,284,0400) |
| 1948 | -285.443 | -391.905 | 2.1722E-02 (2003,256,0500) | 1.7213E-02 (2003,256,0600) | 1.3657E-02 (2003,256,0700) | 1.2560E-02 (2003,256,0400) |
| 1949 | -283.205 | -391.985 | 1.0747E-02 (2003,256,0500) | 1.0468E-02 (2003,256,0700) | 1.0158E-02 (2003,087,0200) | 1.0105E-02 (2003,087,0300) |
| 1950 | -280.967 | -392.064 | 7.0261E-03 (2003,087,0200) | 6.0194E-03 (2003,087,0300) | 5.0495E-03 (2003,087,0400) | 4.6214E-03 (2003,256,0800) |
| 1951 | -278.730 | -392.142 | 1.0006E-02 (2003,087,0200) | 9.2899E-03 (2003,087,0300) | 9.1158E-03 (2003,256,0700) | 8.9738E-03 (2003,087,0800) |
| 1952 | -276.492 | -392.220 | 1.1440E-02 (2003,256,0500) | 1.0451E-02 (2003,087,0200) | 9.9555E-03 (2003,087,0800) | 9.6705E-03 (2003,087,0700) |
| 1953 | -274.254 | -392.298 | 9.4027E-03 (2003,087,0800) | 9.3175E-03 (2003,087,0200) | 9.2804E-03 (2003,087,0700) | 8.8226E-03 (2003,256,0500) |
| 1954 | -272.016 | -392.374 | 8.6411E-03 (2003,087,0800) | 8.1262E-03 (2003,087,0700) | 7.9347E-03 (2003,087,0200) | 7.0073E-03 (2003,256,0700) |
| 1955 | -269.778 | -392.450 | 1.0553E-02 (2003,087,0700) | 8.9586E-03 (2003,087,0800) | 8.4932E-03 (2003,256,0500) | 7.5042E-03 (2003,087,0600) |
| 1956 | -267.540 | -392.526 | 1.0925E-02 (2003,087,0700) | 8.5575E-03 (2003,087,0800) | 8.4466E-03 (2003,256,0500) | 7.7526E-03 (2003,087,0600) |
| 1957 | -265.302 | -392.600 | 1.2764E-02 (2003,087,0700) | 1.1842E-02 (2003,256,0500) | 1.0413E-02 (2003,256,0400) | 1.0276E-02 (2003,087,0600) |
| 1958 | -263.064 | -392.674 | 1.5084E-02 (2003,256,0400) | 1.4587E-02 (2003,256,0500) | 1.4293E-02 (2003,087,0700) | 1.1464E-02 (2003,087,0600) |
| 1959 | -260.826 | -392.748 | 1.4457E-02 (2003,256,0400) | 1.3671E-02 (2003,087,0700) | 1.3606E-02 (2003,256,0500) | 1.1186E-02 (2003,087,0600) |
| 1960 | -258.588 | -392.821 | 1.3740E-02 (2003,256,0400) | 1.2669E-02 (2003,087,0700) | 1.2598E-02 (2003,256,0500) | 1.0627E-02 (2003,087,0600) |
| 1961 | -213.823 | -394.146 | 3.0969E-02 (2003,297,0400) | 2.9653E-02 (2003,297,0300) | 1.9898E-02 (2003,297,0500) | 1.8004E-02 (2003,297,0200) |
| 1962 | -211.584 | -394.206 | 3.2415E-02 (2003,297,0400) | 2.9344E-02 (2003,297,0300) | 2.1806E-02 (2003,297,0500) | 1.9261E-02 (2003,284,0400) |
| 1963 | -285.344 | -389.124 | 2.1099E-02 (2003,256,0500) | 1.6418E-02 (2003,256,0600) | 1.4074E-02 (2003,256,0700) | 1.4041E-02 (2003,256,0400) |
| 1964 | -283.107 | -389.203 | 9.2560E-03 (2003,087,0200) | 8.4424E-03 (2003,087,0300) | 7.2080E-03 (2003,256,0700) | 6.7484E-03 (2003,087,0800) |
| 1965 | -280.869 | -389.283 | 8.7662E-03 (2003,087,0200) | 7.6807E-03 (2003,087,0300) | 5.9182E-03 (2003,256,0800) | 5.8817E-03 (2003,087,0400) |
| 1966 | -278.632 | -389.361 | 9.7595E-03 (2003,087,0200) | 8.5919E-03 (2003,087,0300) | 7.9559E-03 (2003,256,0700) | 7.8899E-03 (2003,087,0800) |
| 1967 | -276.395 | -389.439 | 1.0867E-02 (2003,087,0200) | 1.0212E-02 (2003,256,0700) | 9.9221E-03 (2003,256,0500) | 9.7468E-03 (2003,087,0800) |
| 1968 | -274.158 | -389.516 | 1.8893E-02 (2003,256,0400) | 1.8587E-02 (2003,256,0500) | 1.4009E-02 (2003,087,0700) | 1.2910E-02 (2003,264,0600) |
| 1969 | -269.684 | -389.669 | 1.8687E-02 (2003,256,0400) | 1.6704E-02 (2003,256,0500) | 1.5404E-02 (2003,087,0700) | 1.2711E-02 (2003,264,0600) |
| 1970 | -267.447 | -389.744 | 1.8238E-02 (2003,256,0400) | 1.5687E-02 (2003,256,0500) | 1.5604E-02 (2003,087,0700) | 1.2153E-02 (2003,087,0600) |
| 1971 | -211.510 | -391.424 | 2.9750E-02 (2003,297,0400) | 2.8894E-02 (2003,297,0300) | 1.8963E-02 (2003,297,0500) | 1.8361E-02 (2003,284,0400) |
| 1972 | -209.273 | -391.483 | 8.7623E-03 (2003,078,0200) | 8.2796E-03 (2003,078,0300) | 6.2825E-03 (2003,078,0100) | 5.8640E-03 (2003,037,0600) |
| 1973 | -278.535 | -386.580 | 9.4226E-03 (2003,087,0200) | 7.9248E-03 (2003,087,0300) | 6.3328E-03 (2003,256,0700) | 6.2439E-03 (2003,256,0800) |
| 1974 | -276.299 | -386.658 | 1.1495E-02 (2003,087,0200) | 1.1202E-02 (2003,256,0700) | 9.9067E-03 (2003,087,0300) | 9.7346E-03 (2003,087,0800) |
| 1975 | -215.910 | -388.522 | 2.8820E-02 (2003,297,0300) | 2.5368E-02 (2003,297,0400) | 2.1418E-02 (2003,297,0200) | 1.4908E-02 (2003,284,0400) |
| 1976 | -213.599 | -385.800 | 2.6329E-02 (2003,297,0300) | 2.2818E-02 (2003,297,0400) | 2.0331E-02 (2003,297,0200) | 1.5236E-02 (2003,284,0400) |
| 1977 | -211.363 | -385.860 | 2.6315E-02 (2003,297,0300) | 2.3977E-02 (2003,297,0400) | 1.9128E-02 (2003,297,0200) | 1.6447E-02 (2003,284,0400) |
| 1978 | -209.054 | -383.137 | 2.6272E-02 (2003,297,0300) | 2.4411E-02 (2003,297,0400) | 1.8771E-02 (2003,297,0200) | 1.7285E-02 (2003,284,0300) |
| 1979 | -206.746 | -380.413 | 8.5335E-03 (2003,298,0900) | 7.3643E-03 (2003,037,0500) | 7.2527E-03 (2003,078,0300) | 6.9521E-03 (2003,037,0600) |
| 1980 | -204.440 | -377.689 | 2.1368E-02 (2003,284,0300) | 1.9713E-02 (2003,297,0300) | 1.8774E-02 (2003,297,0400) | 1.5668E-02 (2003,284,0400) |
| 1981 | -202.136 | -374.965 | 1.4129E-02 (2003,284,0300) | 1.0398E-02 (2003,298,0900) | 9.5121E-03 (2003,284,0200) | 9.0620E-03 (2003,284,0400) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1982 | -202.065 | -372.183 | 1.0796E-02 (2003,298,0900) | 8.6886E-03 (2003,298,0800) | 7.9780E-03 (2003,037,0400) | 7.4840E-03 (2003,037,0500) |
| 1983 | -201.994 | -369.401 | 1.1334E-02 (2003,298,0900) | 1.1317E-02 (2003,284,0300) | 1.1060E-02 (2003,298,0800) | 9.9065E-03 (2003,284,0200) |
| 1984 | -199.763 | -369.458 | 1.0991E-02 (2003,298,0800) | 1.0893E-02 (2003,298,0900) | 8.5030E-03 (2003,284,0200) | 8.4104E-03 (2003,284,0300) |
| 1985 | -199.693 | -366.676 | 1.7183E-02 (2003,284,0300) | 1.5773E-02 (2003,284,0200) | 1.3831E-02 (2003,298,0800) | 1.1530E-02 (2003,298,0900) |
| 1986 | -195.231 | -366.787 | 2.2931E-02 (2003,284,0200) | 2.1548E-02 (2003,284,0300) | 1.4163E-02 (2003,298,0800) | 1.3577E-02 (2003,346,0500) |
| 1987 | -197.393 | -363.950 | 1.5712E-02 (2003,298,0800) | 1.5311E-02 (2003,284,0200) | 1.4037E-02 (2003,284,0300) | 1.0302E-02 (2003,298,0900) |
| 1988 | -192.798 | -358.497 | 1.6601E-02 (2003,298,0800) | 9.7090E-03 (2003,284,0200) | 8.6955E-03 (2003,037,0300) | 7.4094E-03 (2003,086,0400) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1198 | -355.887 | -464.319 | 5.2285E-06 | 1593 | -221.307 | -421.787 | 3.2433E-05 |
| 1199 | -353.629 | -464.418 | 5.3958E-06 | 1594 | -219.061 | -421.849 | 3.4207E-05 |
| 1200 | -351.371 | -464.517 | 5.3797E-06 | 1595 | -216.814 | -421.910 | 3.3152E-05 |
| 1201 | -362.536 | -461.234 | 5.9035E-06 | 1596 | -214.568 | -421.971 | 2.8466E-05 |
| 1202 | -360.279 | -461.336 | 5.8849E-06 | 1597 | -212.322 | -422.030 | 2.7255E-05 |
| 1203 | -358.021 | -461.436 | 5.9743E-06 | 1598 | -210.076 | -422.090 | 3.0367E-05 |
| 1204 | -355.764 | -461.536 | 6.1381E-06 | 1599 | -207.829 | -422.148 | 1.8869E-05 |
| 1205 | -353.507 | -461.636 | 6.2249E-06 | 1600 | -205.583 | -422.206 | 1.9680E-05 |
| 1206 | -351.249 | -461.735 | 6.0006E-06 | 1601 | -203.337 | -422.264 | 4.1169E-05 |
| 1207 | -348.992 | -461.833 | 5.8382E-06 | 1602 | -326.742 | -415.392 | 1.3435E-05 |
| 1208 | -366.923 | -458.247 | 5.7914E-06 | 1603 | -324.498 | -415.483 | 1.2602E-05 |
| 1209 | -364.667 | -458.350 | 6.3859E-06 | 1604 | -322.253 | -415.574 | 1.1816E-05 |
| 1210 | -362.410 | -458.452 | 6.2585E-06 | 1605 | -302.052 | -416.362 | 1.4812E-05 |
| 1211 | -360.154 | -458.553 | 6.4635E-06 | 1606 | -268.380 | -417.562 | 1.7781E-05 |
| 1212 | -357.897 | -458.654 | 6.4724E-06 | 1607 | -266.134 | -417.637 | 1.2729E-05 |
| 1213 | -355.641 | -458.754 | 6.5648E-06 | 1608 | -263.889 | -417.712 | 9.6683E-06 |
| 1214 | -353.384 | -458.853 | 6.5351E-06 | 1609 | -261.644 | -417.785 | 1.3443E-05 |
| 1215 | -351.128 | -458.952 | 6.6205E-06 | 1610 | -259.399 | -417.858 | 1.5252E-05 |
| 1216 | -348.871 | -459.050 | 6.6246E-06 | 1611 | -257.154 | -417.931 | 1.3748E-05 |
| 1217 | -346.614 | -459.148 | 6.1112E-06 | 1612 | -254.909 | -418.003 | 9.8516E-06 |
| 1218 | -373.563 | -455.154 | 6.6459E-06 | 1613 | -252.664 | -418.074 | 1.1987E-05 |
| 1219 | -366.796 | -455.465 | 6.3506E-06 | 1614 | -250.419 | -418.144 | 1.2694E-05 |
| 1220 | -364.541 | -455.568 | 6.7919E-06 | 1615 | -248.174 | -418.214 | 1.7547E-05 |
| 1221 | -362.285 | -455.670 | 6.8318E-06 | 1616 | -245.928 | -418.284 | 1.5569E-05 |
| 1222 | -360.029 | -455.771 | 6.8705E-06 | 1617 | -243.683 | -418.352 | 1.8690E-05 |
| 1223 | -357.774 | -455.872 | 6.9109E-06 | 1618 | -241.438 | -418.420 | 1.8556E-05 |
| 1224 | -355.518 | -455.972 | 6.9856E-06 | 1619 | -239.193 | -418.488 | 1.7140E-05 |
| 1225 | -353.262 | -456.071 | 6.9753E-06 | 1620 | -236.947 | -418.555 | 2.2121E-05 |
| 1226 | -351.006 | -456.170 | 6.9130E-06 | 1621 | -234.702 | -418.621 | 2.3468E-05 |
| 1227 | -348.750 | -456.268 | 6.7190E-06 | 1622 | -232.457 | -418.686 | 2.4956E-05 |
| 1228 | -346.494 | -456.366 | 6.4120E-06 | 1623 | -230.211 | -418.751 | 2.6537E-05 |
| 1229 | -375.689 | -452.267 | 6.5784E-06 | 1624 | -227.966 | -418.815 | 2.8176E-05 |
| 1230 | -373.434 | -452.372 | 7.0473E-06 | 1625 | -225.721 | -418.879 | 3.0034E-05 |
| 1231 | -371.179 | -452.476 | 6.5574E-06 | 1626 | -223.475 | -418.942 | 3.1948E-05 |
| 1232 | -368.924 | -452.580 | 7.2178E-06 | 1627 | -221.230 | -419.004 | 3.3802E-05 |
| 1233 | -366.670 | -452.683 | 7.2501E-06 | 1628 | -218.984 | -419.066 | 3.5494E-05 |
| 1234 | -364.415 | -452.786 | 7.0557E-06 | 1629 | -216.739 | -419.127 | 3.5352E-05 |
| 1235 | -362.160 | -452.888 | 7.2779E-06 | 1630 | -214.494 | -419.188 | 3.7790E-05 |
| 1236 | -359.905 | -452.989 | 7.2405E-06 | 1631 | -212.248 | -419.248 | 3.6096E-05 |
| 1237 | -357.650 | -453.089 | 7.3637E-06 | 1632 | -210.003 | -419.307 | 3.1051E-05 |
| 1238 | -353.140 | -453.289 | 7.3624E-06 | 1633 | -207.757 | -419.365 | 1.9081E-05 |
| 1239 | -350.885 | -453.388 | 7.3279E-06 | 1634 | -205.512 | -419.423 | 3.4234E-05 |
| 1240 | -348.630 | -453.486 | 7.2502E-06 | 1635 | -203.266 | -419.481 | 4.3080E-05 |
| 1241 | -346.375 | -453.583 | 7.3637E-06 | 1636 | -328.872 | -412.519 | 1.6126E-05 |
| 1242 | -377.813 | -449.379 | 7.0866E-06 | 1637 | -326.629 | -412.611 | 1.5265E-05 |
| 1243 | -375.559 | -449.485 | 7.4679E-06 | 1638 | -324.385 | -412.702 | 1.4343E-05 |
| 1244 | -373.305 | -449.590 | 7.1545E-06 | 1639 | -322.141 | -412.793 | 1.4149E-05 |
| 1245 | -371.051 | -449.694 | 7.2924E-06 | 1640 | -319.898 | -412.883 | 1.4456E-05 |
| 1246 | -368.797 | -449.798 | 7.7309E-06 | 1641 | -317.654 | -412.972 | 1.0287E-05 |
| 1247 | -366.543 | -449.901 | 7.7364E-06 | 1642 | -301.947 | -413.580 | 1.3403E-05 |
| 1248 | -364.289 | -450.004 | 7.4929E-06 | 1643 | -272.775 | -414.628 | 1.4553E-05 |
| 1249 | -362.034 | -450.105 | 7.5703E-06 | 1644 | -270.530 | -414.705 | 1.5351E-05 |
| 1250 | -359.780 | -450.207 | 7.7190E-06 | 1645 | -268.286 | -414.780 | 1.4291E-05 |
| 1251 | -357.526 | -450.307 | 7.7700E-06 | 1646 | -266.042 | -414.855 | 1.0940E-05 |
| 1252 | -353.018 | -450.507 | 7.8606E-06 | 1647 | -263.798 | -414.929 | 1.5852E-05 |
| 1253 | -350.763 | -450.605 | 7.7672E-06 | 1648 | -261.553 | -415.003 | 1.1562E-05 |
| 1254 | -348.509 | -450.703 | 7.6767E-06 | 1649 | -259.309 | -415.076 | 1.4488E-05 |
| 1255 | -346.255 | -450.801 | 7.7198E-06 | 1650 | -257.065 | -415.149 | 1.2318E-05 |
| 1256 | -344.000 | -450.898 | 6.9690E-06 | 1651 | -254.820 | -415.220 | 9.6891E-06 |
| 1257 | -379.935 | -446.491 | 7.5462E-06 | 1652 | -252.576 | -415.292 | 1.2563E-05 |
| 1258 | -377.682 | -446.597 | 8.3651E-06 | 1653 | -250.332 | -415.362 | 1.8208E-05 |
| 1259 | -375.429 | -446.703 | 8.3153E-06 | 1654 | -248.087 | -415.432 | 1.8279E-05 |
| 1260 | -373.175 | -446.808 | 8.1352E-06 | 1655 | -245.843 | -415.501 | 1.9418E-05 |
| 1261 | -370.922 | -446.912 | 8.1779E-06 | 1656 | -243.598 | -415.570 | 2.0116E-05 |
| 1262 | -368.669 | -447.016 | 8.2352E-06 | 1657 | -241.354 | -415.638 | 2.0912E-05 |
| 1263 | -366.416 | -447.119 | 8.2387E-06 | 1658 | -239.109 | -415.705 | 1.9870E-05 |
| 1264 | -364.162 | -447.222 | 8.1587E-06 | 1659 | -236.865 | -415.772 | 2.3202E-05 |
| 1265 | -361.909 | -447.323 | 8.1523E-06 | 1660 | -234.620 | -415.838 | 2.4614E-05 |
| 1266 | -359.656 | -447.425 | 8.2108E-06 | 1661 | -232.376 | -415.904 | 2.6134E-05 |
| 1267 | -350.642 | -447.823 | 8.2137E-06 | 1662 | -230.131 | -415.969 | 2.7795E-05 |
| 1268 | -348.388 | -447.921 | 8.0867E-06 | 1663 | -227.887 | -416.033 | 2.9562E-05 |
| 1269 | -346.135 | -448.019 | 7.8333E-06 | 1664 | -225.642 | -416.096 | 3.1326E-05 |
| 1270 | -379.803 | -443.709 | 7.9632E-06 | 1665 | -223.398 | -416.159 | 3.3330E-05 |
| 1271 | -377.551 | -443.816 | 8.9321E-06 | 1666 | -221.153 | -416.222 | 3.5085E-05 |
| 1272 | -375.299 | -443.921 | 8.8868E-06 | 1667 | -218.908 | -416.284 | 3.2505E-05 |
| 1273 | -373.046 | -444.026 | 8.8316E-06 | 1668 | -216.664 | -416.345 | 3.8187E-05 |
| 1274 | -370.794 | -444.131 | 8.4517E-06 | 1669 | -214.419 | -416.405 | 2.6722E-05 |
| 1275 | -368.541 | -444.234 | 8.7649E-06 | 1670 | -212.174 | -416.465 | 2.7407E-05 |
| 1276 | -366.289 | -444.337 | 8.7416E-06 | 1671 | -209.930 | -416.524 | 2.7522E-05 |
| 1277 | -364.036 | -444.440 | 8.7432E-06 | 1672 | -207.685 | -416.583 | 4.3673E-05 |
| 1278 | -355.026 | -444.843 | 8.7861E-06 | 1673 | -328.758 | -409.737 | 1.7531E-05 |
| 1279 | -350.520 | -445.041 | 8.7670E-06 | 1674 | -326.515 | -409.829 | 1.7384E-05 |
| 1280 | -348.268 | -445.139 | 8.5214E-06 | 1675 | -324.272 | -409.921 | 1.5165E-05 |
| 1281 | -346.015 | -445.237 | 8.2892E-06 | 1676 | -322.029 | -410.011 | 1.4932E-05 |
| 1282 | -381.923 | -440.821 | 8.4843E-06 | 1677 | -319.786 | -410.101 | 1.5443E-05 |
| 1283 | -379.672 | -440.928 | 9.1944E-06 | 1678 | -317.543 | -410.191 | 1.5514E-05 |
| 1284 | -377.420 | -441.034 | 9.2066E-06 | 1679 | -315.300 | -410.279 | 1.1938E-05 |
| 1285 | -375.169 | -441.140 | 9.4593E-06 | 1680 | -313.057 | -410.367 | 1.6629E-05 |
| 1286 | -372.917 | -441.245 | 9.4139E-06 | 1681 | -310.814 | -410.455 | 1.5016E-05 |
| 1287 | -370.665 | -441.349 | 9.2638E-06 | 1682 | -308.571 | -410.542 | 1.5263E-05 |
| 1288 | -368.414 | -441.453 | 9.1889E-06 | 1683 | -301.842 | -410.799 | 1.5676E-05 |

| | | | |
|---|---|---|---|
| 1289 | -366.162 | -441.556 | 9.1438E-06 |
| 1290 | -354.903 | -442.061 | 9.2042E-06 |
| 1291 | -352.651 | -442.161 | 8.9398E-06 |
| 1292 | -350.399 | -442.259 | 9.0803E-06 |
| 1293 | -348.147 | -442.357 | 8.7997E-06 |
| 1294 | -345.895 | -442.454 | 8.8257E-06 |
| 1295 | -397.546 | -437.275 | 1.1449E-05 |
| 1296 | -384.042 | -437.932 | 9.5037E-06 |
| 1297 | -381.791 | -438.040 | 9.0231E-06 |
| 1298 | -379.540 | -438.146 | 1.0179E-05 |
| 1299 | -377.289 | -438.253 | 1.0146E-05 |
| 1300 | -375.039 | -438.358 | 1.0095E-05 |
| 1301 | -372.788 | -438.463 | 1.0117E-05 |
| 1302 | -370.537 | -438.567 | 9.8574E-06 |
| 1303 | -368.286 | -438.671 | 9.8664E-06 |
| 1304 | -366.035 | -438.774 | 9.4450E-06 |
| 1305 | -363.784 | -438.876 | 9.7514E-06 |
| 1306 | -361.533 | -438.978 | 9.7472E-06 |
| 1307 | -359.282 | -439.079 | 9.8081E-06 |
| 1308 | -352.529 | -439.379 | 9.6555E-06 |
| 1309 | -350.278 | -439.477 | 9.4267E-06 |
| 1310 | -348.026 | -439.575 | 9.0743E-06 |
| 1311 | -345.775 | -439.673 | 8.4550E-06 |
| 1312 | -228.679 | -443.862 | 1.9360E-05 |
| 1313 | -226.427 | -443.926 | 2.0642E-05 |
| 1314 | -224.175 | -443.990 | 2.1935E-05 |
| 1315 | -221.922 | -444.052 | 2.3250E-05 |
| 1316 | -219.670 | -444.114 | 2.4525E-05 |
| 1317 | -401.907 | -434.269 | 1.2587E-05 |
| 1318 | -399.658 | -434.382 | 1.2372E-05 |
| 1319 | -397.408 | -434.493 | 1.2188E-05 |
| 1320 | -383.909 | -435.151 | 1.1148E-05 |
| 1321 | -381.659 | -435.258 | 1.1059E-05 |
| 1322 | -379.409 | -435.365 | 1.0999E-05 |
| 1323 | -377.159 | -435.471 | 1.0461E-05 |
| 1324 | -374.909 | -435.577 | 1.0506E-05 |
| 1325 | -372.659 | -435.682 | 1.0770E-05 |
| 1326 | -368.158 | -435.889 | 1.0532E-05 |
| 1327 | -365.908 | -435.992 | 1.0269E-05 |
| 1328 | -361.408 | -436.196 | 1.0361E-05 |
| 1329 | -359.157 | -436.297 | 1.0384E-05 |
| 1330 | -352.407 | -436.597 | 1.0218E-05 |
| 1331 | -350.156 | -436.695 | 9.8721E-06 |
| 1332 | -347.906 | -436.793 | 9.9739E-06 |
| 1333 | -235.355 | -440.884 | 1.6578E-05 |
| 1334 | -233.103 | -440.950 | 1.7692E-05 |
| 1335 | -230.852 | -441.015 | 1.8898E-05 |
| 1336 | -228.600 | -441.079 | 2.0165E-05 |
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| 1839 | -265.672 | -403.727 | 1.1234E-05 |
| 1840 | -263.431 | -403.801 | 2.1166E-05 |
| 1841 | -261.190 | -403.875 | 2.2348E-05 |
| 1842 | -258.948 | -403.948 | 2.4637E-05 |
| 1843 | -256.707 | -404.020 | 2.4474E-05 |
| 1844 | -254.466 | -404.092 | 2.4305E-05 |
| 1845 | -252.225 | -404.163 | 2.4216E-05 |
| 1846 | -249.984 | -404.233 | 2.4306E-05 |
| 1847 | -247.742 | -404.303 | 2.4535E-05 |
| 1848 | -245.501 | -404.372 | 2.4964E-05 |
| 1849 | -243.260 | -404.441 | 2.5615E-05 |
| 1850 | -241.018 | -404.509 | 2.6467E-05 |
| 1851 | -238.777 | -404.576 | 2.7533E-05 |
| 1852 | -236.536 | -404.643 | 2.8824E-05 |
| 1853 | -234.294 | -404.709 | 3.0312E-05 |
| 1854 | -232.053 | -404.774 | 3.1987E-05 |
| 1855 | -229.811 | -404.839 | 3.3833E-05 |
| 1856 | -211.879 | -405.335 | 2.1538E-05 |
| 1857 | -314.862 | -399.154 | 2.4433E-05 |
| 1858 | -312.622 | -399.242 | 2.4797E-05 |
| 1859 | -310.382 | -399.330 | 2.5107E-05 |
| 1860 | -308.142 | -399.416 | 2.5355E-05 |
| 1861 | -305.902 | -399.502 | 2.0755E-05 |
| 1862 | -303.662 | -399.588 | 1.8081E-05 |
| 1863 | -301.422 | -399.673 | 2.4559E-05 |
| 1864 | -299.182 | -399.757 | 2.7696E-05 |
| 1865 | -296.942 | -399.841 | 2.8508E-05 |
| 1866 | -294.702 | -399.924 | 2.8337E-05 |
| 1867 | -292.462 | -400.006 | 2.5495E-05 |
| 1868 | -290.222 | -400.088 | 2.1544E-05 |
| 1869 | -287.982 | -400.169 | 1.6766E-05 |
| 1870 | -285.742 | -400.249 | 1.2700E-05 |
| 1871 | -283.502 | -400.329 | 1.2242E-05 |
| 1872 | -281.261 | -400.408 | 2.1953E-05 |
| 1873 | -279.021 | -400.487 | 1.7274E-05 |
| 1874 | -276.781 | -400.565 | 2.4304E-05 |
| 1875 | -274.541 | -400.642 | 3.0930E-05 |
| 1876 | -272.300 | -400.719 | 2.3377E-05 |
| 1877 | -270.060 | -400.795 | 2.9815E-05 |
| 1878 | -267.820 | -400.870 | 2.8139E-05 |
| 1879 | -265.579 | -400.945 | 1.2561E-05 |
| 1880 | -263.339 | -401.019 | 1.5345E-05 |
| 1881 | -261.099 | -401.093 | 2.1870E-05 |
| 1882 | -258.858 | -401.166 | 2.5476E-05 |
| 1883 | -256.618 | -401.238 | 2.6286E-05 |
| 1884 | -216.287 | -402.432 | 4.6746E-05 |
| 1885 | -214.046 | -402.493 | 2.1917E-05 |
| 1886 | -211.805 | -402.552 | 4.4061E-05 |
| 1887 | -314.752 | -396.373 | 2.5801E-05 |
| 1888 | -312.513 | -396.461 | 2.6393E-05 |
| 1889 | -310.274 | -396.548 | 2.6805E-05 |
| 1890 | -308.035 | -396.635 | 2.7130E-05 |
| 1891 | -305.796 | -396.721 | 2.0919E-05 |
| 1892 | -303.556 | -396.807 | 2.7467E-05 |
| 1893 | -301.317 | -396.892 | 2.5042E-05 |
| 1894 | -299.078 | -396.976 | 2.9744E-05 |
| 1895 | -296.839 | -397.059 | 3.0393E-05 |
| 1896 | -294.599 | -397.142 | 2.8810E-05 |
| 1897 | -292.360 | -397.225 | 2.3667E-05 |
| 1898 | -290.121 | -397.306 | 2.3164E-05 |
| 1899 | -287.882 | -397.387 | 2.8849E-05 |
| 1900 | -285.642 | -397.468 | 2.6085E-05 |
| 1901 | -283.403 | -397.548 | 2.2346E-05 |
| 1902 | -281.163 | -397.627 | 2.0928E-05 |
| 1903 | -278.924 | -397.705 | 2.2827E-05 |
| 1904 | -276.684 | -397.783 | 2.3235E-05 |
| 1905 | -274.445 | -397.861 | 2.1497E-05 |
| 1906 | -272.206 | -397.937 | 2.4888E-05 |
| 1907 | -269.966 | -398.013 | 2.0957E-05 |
| 1908 | -267.726 | -398.089 | 1.1900E-05 |
| 1909 | -265.487 | -398.164 | 1.2284E-05 |
| 1910 | -263.247 | -398.238 | 2.5619E-05 |
| 1911 | -261.008 | -398.311 | 1.9127E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1517 | -248.432 | -426.562 | 9.7289E-06 | 1912 | -258.768 | -398.384 | 1.8290E-05 |
| 1518 | -246.185 | -426.631 | 9.2541E-06 | 1913 | -256.528 | -398.456 | 2.8745E-05 |
| 1519 | -243.937 | -426.700 | 1.3347E-05 | 1914 | -254.289 | -398.528 | 2.8418E-05 |
| 1520 | -241.690 | -426.768 | 1.4313E-05 | 1915 | -213.972 | -399.710 | 3.1594E-05 |
| 1521 | -239.442 | -426.836 | 1.2064E-05 | 1916 | -211.732 | -399.770 | 2.4112E-05 |
| 1522 | -237.195 | -426.903 | 1.6323E-05 | 1917 | -209.492 | -399.829 | 2.9940E-05 |
| 1523 | -234.947 | -426.969 | 1.3618E-05 | 1918 | -314.642 | -393.592 | 2.7112E-05 |
| 1524 | -232.699 | -427.034 | 1.6327E-05 | 1919 | -312.404 | -393.680 | 2.7927E-05 |
| 1525 | -230.452 | -427.099 | 1.7510E-05 | 1920 | -310.166 | -393.767 | 2.8927E-05 |
| 1526 | -228.204 | -427.164 | 2.4810E-05 | 1921 | -307.927 | -393.854 | 2.9079E-05 |
| 1527 | -225.956 | -427.227 | 1.7733E-05 | 1922 | -305.689 | -393.940 | 2.9501E-05 |
| 1528 | -223.708 | -427.290 | 2.0479E-05 | 1923 | -303.451 | -394.025 | 2.9057E-05 |
| 1529 | -221.461 | -427.353 | 2.9874E-05 | 1924 | -301.212 | -394.110 | 3.0757E-05 |
| 1530 | -219.213 | -427.415 | 3.1506E-05 | 1925 | -298.974 | -394.194 | 3.1614E-05 |
| 1531 | -216.965 | -427.476 | 3.2753E-05 | 1926 | -296.735 | -394.278 | 3.1713E-05 |
| 1532 | -214.717 | -427.536 | 3.4199E-05 | 1927 | -294.497 | -394.361 | 3.1941E-05 |
| 1533 | -212.469 | -427.596 | 2.6186E-05 | 1928 | -292.258 | -394.443 | 3.2490E-05 |
| 1534 | -210.222 | -427.656 | 1.9768E-05 | 1929 | -290.020 | -394.525 | 3.3167E-05 |
| 1535 | -207.974 | -427.714 | 1.8679E-05 | 1930 | -287.781 | -394.606 | 3.4060E-05 |
| 1536 | -205.726 | -427.772 | 3.8511E-05 | 1931 | -285.543 | -394.686 | 3.4298E-05 |
| 1537 | -203.478 | -427.830 | 3.7029E-05 | 1932 | -283.304 | -394.766 | 3.4736E-05 |
| 1538 | -385.355 | -418.357 | 1.6482E-05 | 1933 | -281.065 | -394.845 | 2.1940E-05 |
| 1539 | -347.182 | -420.104 | 1.3126E-05 | 1934 | -278.827 | -394.924 | 2.3846E-05 |
| 1540 | -266.320 | -423.202 | 1.4850E-05 | 1935 | -276.588 | -395.002 | 2.1793E-05 |
| 1541 | -264.073 | -423.276 | 1.3407E-05 | 1936 | -274.349 | -395.079 | 1.6637E-05 |
| 1542 | -261.826 | -423.350 | 1.4737E-05 | 1937 | -272.111 | -395.156 | 1.6882E-05 |
| 1543 | -259.580 | -423.423 | 1.4633E-05 | 1938 | -269.872 | -395.232 | 2.0754E-05 |
| 1544 | -257.333 | -423.496 | 1.4691E-05 | 1939 | -267.633 | -395.307 | 2.4981E-05 |
| 1545 | -255.086 | -423.568 | 1.4115E-05 | 1940 | -265.394 | -395.382 | 2.8082E-05 |
| 1546 | -252.840 | -423.639 | 9.9467E-06 | 1941 | -263.156 | -395.456 | 2.8109E-05 |
| 1547 | -250.593 | -423.709 | 9.9258E-06 | 1942 | -260.917 | -395.530 | 2.9243E-05 |
| 1548 | -248.346 | -423.779 | 9.9578E-06 | 1943 | -258.678 | -395.602 | 2.7446E-05 |
| 1549 | -246.099 | -423.849 | 1.3030E-05 | 1944 | -216.136 | -396.868 | 4.9275E-05 |
| 1550 | -243.853 | -423.917 | 1.1950E-05 | 1945 | -213.897 | -396.928 | 4.8713E-05 |
| 1551 | -241.606 | -423.986 | 1.6072E-05 | 1946 | -211.658 | -396.988 | 3.0244E-05 |
| 1552 | -239.359 | -424.053 | 1.8448E-05 | 1947 | -209.419 | -397.047 | 4.8876E-05 |
| 1553 | -237.112 | -424.120 | 1.5775E-05 | 1948 | -285.443 | -391.905 | 3.5846E-05 |
| 1554 | -234.865 | -424.186 | 1.6075E-05 | 1949 | -283.205 | -391.985 | 2.6906E-05 |
| 1555 | -232.618 | -424.252 | 1.8940E-05 | 1950 | -280.967 | -392.064 | 1.5062E-05 |
| 1556 | -230.371 | -424.317 | 1.7638E-05 | 1951 | -278.730 | -392.142 | 2.5666E-05 |
| 1557 | -228.125 | -424.381 | 2.4839E-05 | 1952 | -276.492 | -392.220 | 2.9730E-05 |
| 1558 | -225.878 | -424.445 | 2.7522E-05 | 1953 | -274.254 | -392.298 | 2.7256E-05 |
| 1559 | -223.631 | -424.508 | 2.9374E-05 | 1954 | -272.016 | -392.374 | 2.4639E-05 |
| 1560 | -221.384 | -424.570 | 3.0905E-05 | 1955 | -269.778 | -392.450 | 2.7485E-05 |
| 1561 | -219.137 | -424.632 | 3.2843E-05 | 1956 | -267.540 | -392.526 | 2.7512E-05 |
| 1562 | -216.890 | -424.693 | 3.1069E-05 | 1957 | -265.302 | -392.600 | 3.1455E-05 |
| 1563 | -214.643 | -424.754 | 2.4697E-05 | 1958 | -263.064 | -392.674 | 3.6302E-05 |
| 1564 | -212.396 | -424.813 | 2.0730E-05 | 1959 | -260.826 | -392.748 | 3.5411E-05 |
| 1565 | -210.149 | -424.873 | 2.0350E-05 | 1960 | -258.588 | -392.821 | 3.3705E-05 |
| 1566 | -207.902 | -424.931 | 1.8088E-05 | 1961 | -213.823 | -394.146 | 5.0810E-05 |
| 1567 | -205.654 | -424.989 | 3.9690E-05 | 1962 | -211.584 | -394.206 | 5.2249E-05 |
| 1568 | -203.407 | -425.047 | 3.9522E-05 | 1963 | -285.344 | -389.124 | 3.7132E-05 |
| 1569 | -349.306 | -417.225 | 1.3974E-05 | 1964 | -283.107 | -389.203 | 2.2380E-05 |
| 1570 | -329.101 | -418.081 | 1.2273E-05 | 1965 | -280.869 | -389.283 | 1.9957E-05 |
| 1571 | -326.856 | -418.173 | 1.1290E-05 | 1966 | -278.632 | -389.361 | 2.3482E-05 |
| 1572 | -302.157 | -419.144 | 1.8041E-05 | 1967 | -276.395 | -389.439 | 3.0066E-05 |
| 1573 | -266.227 | -420.420 | 1.3093E-05 | 1968 | -274.158 | -389.516 | 4.2315E-05 |
| 1574 | -263.981 | -420.494 | 1.2539E-05 | 1969 | -269.684 | -389.669 | 4.1890E-05 |
| 1575 | -261.735 | -420.568 | 1.4046E-05 | 1970 | -267.447 | -389.744 | 4.0919E-05 |
| 1576 | -259.489 | -420.641 | 1.5700E-05 | 1971 | -211.510 | -391.424 | 5.2410E-05 |
| 1577 | -257.244 | -420.713 | 1.5677E-05 | 1972 | -209.273 | -391.483 | 2.6801E-05 |
| 1578 | -254.998 | -420.785 | 1.0552E-05 | 1973 | -278.535 | -386.580 | 2.1605E-05 |
| 1579 | -252.752 | -420.856 | 9.6377E-06 | 1974 | -276.299 | -386.658 | 3.1733E-05 |
| 1580 | -250.506 | -420.927 | 1.1106E-05 | 1975 | -215.910 | -388.522 | 5.1002E-05 |
| 1581 | -248.260 | -420.997 | 1.3019E-05 | 1976 | -213.599 | -385.800 | 5.1588E-05 |
| 1582 | -246.014 | -421.066 | 1.5128E-05 | 1977 | -211.363 | -385.860 | 5.2825E-05 |
| 1583 | -243.768 | -421.135 | 1.4879E-05 | 1978 | -209.054 | -383.137 | 5.6256E-05 |
| 1584 | -241.522 | -421.203 | 1.4156E-05 | 1979 | -206.746 | -380.413 | 3.4007E-05 |
| 1585 | -239.276 | -421.270 | 1.9516E-05 | 1980 | -204.440 | -377.689 | 5.9626E-05 |
| 1586 | -237.030 | -421.337 | 2.0881E-05 | 1981 | -202.136 | -374.965 | 4.7481E-05 |
| 1587 | -234.784 | -421.403 | 2.2070E-05 | 1982 | -202.065 | -372.183 | 3.6268E-05 |
| 1588 | -232.538 | -421.469 | 2.3561E-05 | 1983 | -201.994 | -369.401 | 4.7198E-05 |
| 1589 | -230.291 | -421.534 | 2.5288E-05 | 1984 | -199.763 | -369.458 | 4.2591E-05 |
| 1590 | -228.045 | -421.598 | 2.0024E-05 | 1985 | -199.693 | -366.676 | 5.9992E-05 |
| 1591 | -225.799 | -421.662 | 2.8752E-05 | 1986 | -195.231 | -366.787 | 6.7840E-05 |
| 1592 | -223.553 | -421.725 | 3.0625E-05 | 1987 | -197.393 | -363.950 | 5.8272E-05 |
| | | | | 1988 | -192.798 | -358.497 | 5.1389E-05 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1672 | -207.685 | -416.583 | DISCRETE | 3.3241E-02 (2003,297,0500) | RANK 1 | 1 | HOUR |
| 1766 | -209.784 | -410.959 | DISCRETE | 3.1961E-02 (2003,297,0400) | RANK 2 | 1 | HOUR |
| 1884 | -216.287 | -402.432 | DISCRETE | 2.4155E-02 (2003,297,0500) | RANK 3 | 1 | HOUR |
| 1672 | -207.685 | -416.583 | DISCRETE | 2.0143E-02 (2003,284,0400) | RANK 4 | 1 | HOUR |
| 1986 | -195.231 | -366.787 | DISCRETE | 6.7840E-05 | RANK 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Zion

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = NOX  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1988*0, 224*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = T  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = F  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: NOX
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

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```

```
0 0 0 
```

OUTPUT FILES

| Default Name | Unit No. | File Name and Path |
|---|---|---|
| CALPOST.LST | 8 | C:\SPC_FF\CALPOST\2003\2003_ZION_NOX.LST |
| (TOPN) | 11 | C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_ZI.DAT |

CALPOST Version 5.6394 Level 070622

NOX 1

4 RANKED 1 HOUR AVERAGE CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR (YEAR,DAY,ENDING TIME) (ug/m**3)

| RECEPTOR | COORDINATES (km) | | 1 RANK | 2 RANK | 3 RANK | 4 RANK |
|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 1.9638E-02 (2003,057,0600) | 1.7725E-02 (2003,036,0900) | 1.5881E-02 (2003,057,0500) | 1.5766E-02 (2003,057,0700) |
| 1990 | -306.221 | -311.322 | 1.9624E-02 (2003,057,0600) | 1.8044E-02 (2003,036,0900) | 1.6674E-02 (2003,057,0700) | 1.5062E-02 (2003,057,0500) |
| 1991 | -304.745 | -311.379 | 1.9511E-02 (2003,057,0600) | 1.8514E-02 (2003,036,0900) | 1.7519E-02 (2003,057,0700) | 1.6715E-02 (2003,261,0300) |
| 1992 | -303.268 | -311.436 | 2.9667E-02 (2003,139,0300) | 2.5168E-02 (2003,139,0400) | 2.3914E-02 (2003,256,0200) | 2.3077E-02 (2003,261,0300) |
| 1993 | -301.791 | -311.492 | 3.2722E-02 (2003,139,0300) | 2.7903E-02 (2003,256,0200) | 2.6873E-02 (2003,139,0400) | 2.2626E-02 (2003,261,0300) |
| 1994 | -307.626 | -309.412 | 1.9484E-02 (2003,057,0600) | 1.8480E-02 (2003,036,0900) | 1.6067E-02 (2003,057,0500) | 1.5532E-02 (2003,057,0700) |
| 1995 | -306.150 | -309.469 | 1.9513E-02 (2003,057,0600) | 1.8865E-02 (2003,036,0900) | 1.6439E-02 (2003,057,0700) | 1.5273E-02 (2003,057,0500) |
| 1996 | -304.673 | -309.526 | 1.9503E-02 (2003,036,0900) | 1.9461E-02 (2003,057,0600) | 1.7320E-02 (2003,057,0700) | 1.4948E-02 (2003,036,0800) |
| 1997 | -303.197 | -309.583 | 2.5686E-02 (2003,139,0300) | 2.1923E-02 (2003,261,0300) | 2.1242E-02 (2003,139,0400) | 2.0023E-02 (2003,036,0900) |
| 1998 | -301.720 | -309.640 | 1.9613E-02 (2003,036,0900) | 1.9150E-02 (2003,139,0300) | 1.9069E-02 (2003,057,0600) | 1.8862E-02 (2003,057,0700) |
| 1999 | -300.244 | -309.696 | 3.4682E-02 (2003,139,0300) | 3.0043E-02 (2003,256,0200) | 2.6822E-02 (2003,139,0400) | 2.2837E-02 (2003,261,0300) |
| 2000 | -298.767 | -309.752 | 3.9267E-02 (2003,139,0300) | 3.5653E-02 (2003,256,0200) | 2.9613E-02 (2003,139,0400) | 2.5441E-02 (2003,139,0200) |
| 2001 | -317.886 | -307.150 | 1.9785E-02 (2003,057,0500) | 1.7779E-02 (2003,057,0400) | 1.6293E-02 (2003,261,0000) | 1.6082E-02 (2003,057,0600) |
| 2002 | -316.410 | -307.209 | 1.9538E-02 (2003,057,0500) | 1.6873E-02 (2003,057,0400) | 1.6792E-02 (2003,057,0600) | 1.6272E-02 (2003,261,0000) |
| 2003 | -314.934 | -307.268 | 1.9181E-02 (2003,057,0500) | 1.7430E-02 (2003,057,0600) | 1.5898E-02 (2003,057,0400) | 1.5616E-02 (2003,261,0000) |
| 2004 | -313.458 | -307.327 | 1.8737E-02 (2003,057,0500) | 1.7987E-02 (2003,057,0600) | 1.5697E-02 (2003,261,0000) | 1.5689E-02 (2003,006,0300) |
| 2005 | -311.982 | -307.385 | 1.8457E-02 (2003,057,0600) | 1.8210E-02 (2003,057,0500) | 1.6803E-02 (2003,036,0900) | 1.5885E-02 (2003,006,0300) |
| 2006 | -309.030 | -307.501 | 1.9126E-02 (2003,057,0600) | 1.8747E-02 (2003,036,0900) | 1.6945E-02 (2003,057,0500) | 1.5539E-02 (2003,261,0100) |
| 2007 | -307.554 | -307.559 | 2.3374E-02 (2003,261,0200) | 2.1032E-02 (2003,261,0600) | 2.0536E-02 (2003,261,0100) | 2.0119E-02 (2003,036,0900) |
| 2008 | -306.078 | -307.616 | 2.0274E-02 (2003,036,0900) | 1.9410E-02 (2003,057,0600) | 1.6879E-02 (2003,261,0200) | 1.6204E-02 (2003,057,0700) |
| 2009 | -304.602 | -307.673 | 2.2150E-02 (2003,261,0200) | 2.1094E-02 (2003,036,0900) | 2.0526E-02 (2003,261,0300) | 2.0466E-02 (2003,139,0300) |
| 2010 | -303.125 | -307.730 | 2.0814E-02 (2003,036,0900) | 1.9311E-02 (2003,057,0600) | 1.7918E-02 (2003,057,0700) | 1.5250E-02 (2003,036,0800) |
| 2011 | -301.649 | -307.787 | 2.0394E-02 (2003,036,0900) | 1.9118E-02 (2003,057,0600) | 1.8680E-02 (2003,057,0700) | 1.4810E-02 (2003,036,0800) |
| 2012 | -300.173 | -307.843 | 2.0692E-02 (2003,036,0900) | 1.9365E-02 (2003,057,0700) | 1.8863E-02 (2003,057,0600) | 1.8836E-02 (2003,139,0300) |
| 2013 | -298.697 | -307.899 | 1.9953E-02 (2003,057,0700) | 1.9856E-02 (2003,036,0900) | 1.8510E-02 (2003,057,0600) | 1.4998E-02 (2003,036,0800) |
| 2014 | -317.812 | -305.297 | 1.9517E-02 (2003,057,0500) | 1.8344E-02 (2003,261,0000) | 1.8297E-02 (2003,057,0400) | 1.5556E-02 (2003,057,0600) |
| 2015 | -316.336 | -305.356 | 1.8696E-02 (2003,057,0500) | 1.7348E-02 (2003,057,0400) | 1.6232E-02 (2003,261,0000) | 1.4899E-02 (2003,057,0600) |
| 2016 | -314.860 | -305.415 | 1.9045E-02 (2003,057,0500) | 1.8366E-02 (2003,261,0000) | 1.6974E-02 (2003,057,0600) | 1.6416E-02 (2003,057,0400) |
| 2017 | -313.385 | -305.474 | 2.3243E-02 (2003,261,0000) | 2.1497E-02 (2003,261,0100) | 1.9565E-02 (2003,260,2300) | 1.8666E-02 (2003,057,0500) |
| 2018 | -311.909 | -305.533 | 2.2309E-02 (2003,261,0100) | 2.2101E-02 (2003,261,0000) | 1.9579E-02 (2003,261,0200) | 1.9274E-02 (2003,260,2300) |
| 2019 | -308.957 | -305.649 | 1.8912E-02 (2003,036,0900) | 1.8893E-02 (2003,057,0600) | 1.7018E-02 (2003,057,0500) | 1.5785E-02 (2003,006,0300) |
| 2020 | -307.482 | -305.706 | 2.0159E-02 (2003,036,0900) | 1.9141E-02 (2003,057,0600) | 1.6344E-02 (2003,057,0500) | 1.5612E-02 (2003,261,0100) |
| 2021 | -306.006 | -305.764 | 2.3319E-02 (2003,261,0200) | 2.1594E-02 (2003,036,0900) | 2.0645E-02 (2003,261,0100) | 1.9963E-02 (2003,261,0600) |
| 2022 | -304.530 | -305.821 | 2.4249E-02 (2003,261,0200) | 2.2406E-02 (2003,261,0600) | 2.2263E-02 (2003,036,0900) | 2.0676E-02 (2003,139,0300) |
| 2023 | -303.054 | -305.878 | 2.2383E-02 (2003,036,0900) | 2.0705E-02 (2003,261,0200) | 1.9329E-02 (2003,057,0600) | 1.8408E-02 (2003,139,0300) |
| 2024 | -301.579 | -305.934 | 2.7193E-02 (2003,139,0300) | 2.2703E-02 (2003,036,0900) | 2.2467E-02 (2003,261,0200) | 2.1178E-02 (2003,261,0300) |
| 2025 | -300.103 | -305.990 | 3.0041E-02 (2003,139,0300) | 2.3607E-02 (2003,256,0200) | 2.2530E-02 (2003,036,0900) | 2.2114E-02 (2003,139,0400) |
| 2026 | -298.627 | -306.046 | 2.7974E-02 (2003,139,0300) | 2.3089E-02 (2003,256,0200) | 2.1976E-02 (2003,036,0900) | 2.0685E-02 (2003,139,0400) |
| 2027 | -319.212 | -303.385 | 1.9657E-02 (2003,261,0000) | 1.9551E-02 (2003,057,0400) | 1.9187E-02 (2003,057,0500) | 1.4998E-02 (2003,260,2300) |
| 2028 | -317.737 | -303.445 | 1.9187E-02 (2003,057,0500) | 1.8886E-02 (2003,261,0000) | 1.8747E-02 (2003,057,0400) | 1.5113E-02 (2003,260,2300) |
| 2029 | -316.262 | -303.504 | 1.9602E-02 (2003,261,0000) | 1.9060E-02 (2003,057,0500) | 1.7844E-02 (2003,057,0400) | 1.6078E-02 (2003,260,2300) |
| 2030 | -314.786 | -303.563 | 1.8837E-02 (2003,057,0500) | 1.8616E-02 (2003,261,0000) | 1.6873E-02 (2003,057,0400) | 1.6512E-02 (2003,057,0600) |
| 2031 | -313.311 | -303.622 | 1.9108E-02 (2003,261,0000) | 1.8513E-02 (2003,057,0500) | 1.7174E-02 (2003,057,0600) | 1.6752E-02 (2003,260,2300) |
| 2032 | -311.836 | -303.680 | 2.4239E-02 (2003,261,0000) | 2.2792E-02 (2003,261,0100) | 2.0429E-02 (2003,260,2300) | 1.8975E-02 (2003,261,0200) |
| 2033 | -310.360 | -303.738 | 1.8475E-02 (2003,036,0900) | 1.8252E-02 (2003,057,0600) | 1.7615E-02 (2003,057,0500) | 1.7505E-02 (2003,261,0000) |
| 2034 | -308.885 | -303.796 | 1.9424E-02 (2003,036,0900) | 1.8651E-02 (2003,057,0600) | 1.7062E-02 (2003,057,0500) | 1.6579E-02 (2003,006,0300) |
| 2035 | -307.409 | -303.854 | 2.0471E-02 (2003,036,0900) | 1.8959E-02 (2003,057,0600) | 1.6446E-02 (2003,057,0500) | 1.6127E-02 (2003,006,0300) |
| 2036 | -305.934 | -303.911 | 2.1827E-02 (2003,036,0900) | 1.9196E-02 (2003,057,0600) | 1.7360E-02 (2003,261,0100) | 1.6166E-02 (2003,261,0200) |
| 2037 | -304.459 | -303.968 | 2.2836E-02 (2003,036,0900) | 1.9661E-02 (2003,261,0200) | 1.9318E-02 (2003,057,0600) | 1.8586E-02 (2003,261,0100) |
| 2038 | -302.983 | -304.025 | 2.3534E-02 (2003,036,0900) | 2.1923E-02 (2003,261,0200) | 1.9342E-02 (2003,057,0600) | 1.8516E-02 (2003,261,0100) |
| 2039 | -301.508 | -304.082 | 2.6765E-02 (2003,139,0300) | 2.4678E-02 (2003,261,0200) | 2.4056E-02 (2003,036,0900) | 2.2459E-02 (2003,261,0600) |
| 2040 | -300.032 | -304.138 | 3.1303E-02 (2003,139,0300) | 2.4396E-02 (2003,261,0200) | 2.4102E-02 (2003,036,0900) | 2.3331E-02 (2003,256,0200) |
| 2041 | -298.557 | -304.194 | 3.5609E-02 (2003,139,0300) | 2.8420E-02 (2003,139,0200) | 2.8175E-02 (2003,256,0200) | 2.4938E-02 (2003,139,0400) |
| 2042 | -319.137 | -301.533 | 1.9882E-02 (2003,057,0400) | 1.8724E-02 (2003,057,0500) | 1.8611E-02 (2003,261,0000) | 1.5215E-02 (2003,057,0300) |
| 2043 | -317.662 | -301.592 | 1.9107E-02 (2003,057,0400) | 1.8846E-02 (2003,261,0000) | 1.8769E-02 (2003,057,0500) | 1.4779E-02 (2003,260,2300) |
| 2044 | -316.187 | -301.651 | 2.0330E-02 (2003,261,0000) | 1.8719E-02 (2003,057,0500) | 1.8225E-02 (2003,057,0400) | 1.6233E-02 (2003,260,2300) |
| 2045 | -314.712 | -301.710 | 1.9757E-02 (2003,261,0000) | 1.8568E-02 (2003,057,0500) | 1.7272E-02 (2003,057,0400) | 1.6449E-02 (2003,260,2300) |
| 2046 | -313.237 | -301.769 | 2.1043E-02 (2003,261,0000) | 1.8317E-02 (2003,057,0500) | 1.7775E-02 (2003,260,2300) | 1.6761E-02 (2003,057,0600) |
| 2047 | -311.762 | -301.827 | 2.5805E-02 (2003,261,0000) | 2.2104E-02 (2003,261,0100) | 2.1182E-02 (2003,260,2300) | 1.8015E-02 (2003,261,0600) |
| 2048 | -310.287 | -301.886 | 2.4400E-02 (2003,261,0000) | 2.3111E-02 (2003,261,0100) | 2.0817E-02 (2003,260,2300) | 1.9241E-02 (2003,036,0900) |
| 2049 | -308.812 | -301.944 | 2.3744E-02 (2003,261,0100) | 2.2497E-02 (2003,261,0000) | 2.0766E-02 (2003,261,0200) | 2.0650E-02 (2003,036,0900) |
| 2050 | -307.337 | -302.001 | 2.1269E-02 (2003,036,0900) | 1.8810E-02 (2003,057,0600) | 1.8040E-02 (2003,261,0100) | 1.7208E-02 (2003,006,0300) |
| 2051 | -305.862 | -302.059 | 2.2956E-02 (2003,036,0900) | 2.2833E-02 (2003,261,0100) | 2.2216E-02 (2003,261,0200) | 1.9104E-02 (2003,057,0600) |
| 2052 | -304.387 | -302.116 | 2.4166E-02 (2003,261,0200) | 2.3989E-02 (2003,036,0900) | 2.2737E-02 (2003,261,0100) | 2.0654E-02 (2003,261,0600) |
| 2053 | -302.912 | -302.172 | 2.5516E-02 (2003,261,0200) | 2.4790E-02 (2003,036,0900) | 2.2725E-02 (2003,261,0600) | 2.1938E-02 (2003,261,0100) |
| 2054 | -301.437 | -302.229 | 2.5395E-02 (2003,261,0200) | 2.5209E-02 (2003,036,0900) | 2.4116E-02 (2003,139,0300) | 2.1804E-02 (2003,261,0600) |
| 2055 | -299.962 | -302.285 | 2.8207E-02 (2003,139,0300) | 2.5376E-02 (2003,036,0900) | 2.5232E-02 (2003,261,0200) | 2.2249E-02 (2003,139,0200) |
| 2056 | -298.487 | -302.341 | 3.0557E-02 (2003,139,0300) | 2.5704E-02 (2003,139,0200) | 2.5150E-02 (2003,036,0900) | 2.3938E-02 (2003,261,0200) |
| 2057 | -319.062 | -299.680 | 2.0776E-02 (2003,261,0000) | 2.0128E-02 (2003,057,0400) | 1.8186E-02 (2003,057,0500) | 1.6184E-02 (2003,057,0300) |
| 2058 | -317.588 | -299.740 | 2.3626E-02 (2003,261,0000) | 1.9389E-02 (2003,057,0400) | 1.8316E-02 (2003,057,0500) | 1.7098E-02 (2003,260,2300) |
| 2059 | -316.113 | -299.799 | 2.6023E-02 (2003,261,0000) | 1.9124E-02 (2003,260,2300) | 1.8543E-02 (2003,057,0400) | 1.8336E-02 (2003,057,0500) |
| 2060 | -314.639 | -299.858 | 2.2429E-02 (2003,261,0000) | 1.8259E-02 (2003,057,0500) | 1.7744E-02 (2003,260,2300) | 1.7605E-02 (2003,057,0400) |
| 2061 | -313.164 | -299.917 | 2.3963E-02 (2003,261,0000) | 1.9282E-02 (2003,260,2300) | 1.8090E-02 (2003,057,0500) | 1.6604E-02 (2003,057,0400) |
| 2062 | -311.689 | -299.975 | 2.3500E-02 (2003,261,0000) | 1.9607E-02 (2003,260,2300) | 1.7835E-02 (2003,057,0500) | 1.7407E-02 (2003,261,0100) |
| 2063 | -310.214 | -300.033 | 2.6057E-02 (2003,261,0000) | 2.2367E-02 (2003,261,0100) | 2.1716E-02 (2003,260,2300) | 1.9176E-02 (2003,036,0900) |
| 2064 | -308.740 | -300.091 | 2.4404E-02 (2003,261,0000) | 2.3466E-02 (2003,261,0100) | 2.1197E-02 (2003,260,2300) | 2.0722E-02 (2003,036,0900) |
| 2065 | -307.265 | -300.149 | 2.4181E-02 (2003,261,0100) | 2.2269E-02 (2003,261,0000) | 2.2182E-02 (2003,036,0900) | 2.0826E-02 (2003,261,0200) |
| 2066 | -305.790 | -300.206 | 2.2473E-02 (2003,036,0900) | 1.9005E-02 (2003,057,0600) | 1.7089E-02 (2003,006,0300) | 1.6047E-02 (2003,057,0500) |
| 2067 | -304.316 | -300.263 | 2.4634E-02 (2003,036,0900) | 2.4110E-02 (2003,261,0100) | 2.3835E-02 (2003,261,0200) | 2.0992E-02 (2003,261,0600) |
| 2068 | -302.841 | -300.320 | 2.5585E-02 (2003,036,0900) | 2.5256E-02 (2003,261,0200) | 2.3474E-02 (2003,261,0100) | 2.2170E-02 (2003,261,0600) |
| 2069 | -301.366 | -300.376 | 2.6227E-02 (2003,036,0900) | 2.6083E-02 (2003,261,0200) | 2.2473E-02 (2003,261,0600) | 2.2242E-02 (2003,261,0100) |
| 2070 | -299.891 | -300.432 | 2.6567E-02 (2003,036,0900) | 2.6540E-02 (2003,261,0200) | 2.6146E-02 (2003,139,0300) | 2.2586E-02 (2003,261,0600) |
| 2071 | -298.417 | -300.488 | 3.0446E-02 (2003,139,0300) | 2.7344E-02 (2003,139,0200) | 2.6584E-02 (2003,261,0200) | 2.6576E-02 (2003,036,0900) |
| 2072 | -318.988 | -297.828 | 2.0272E-02 (2003,057,0400) | 1.7604E-02 (2003,057,0500) | 1.7141E-02 (2003,057,0300) | 1.5167E-02 (2003,261,0000) |
| 2073 | -317.513 | -297.887 | 2.0016E-02 (2003,261,0000) | 1.9576E-02 (2003,057,0400) | 1.7800E-02 (2003,057,0500) | 1.6277E-02 (2003,057,0300) |
| 2074 | -316.039 | -297.946 | 2.1341E-02 (2003,261,0000) | 1.8779E-02 (2003,057,0400) | 1.7898E-02 (2003,057,0500) | 1.6112E-02 (2003,260,2300) |
| 2075 | -314.565 | -298.005 | 2.7413E-02 (2003,261,0000) | 2.0174E-02 (2003,260,2300) | 1.7919E-02 (2003,057,0500) | 1.7881E-02 (2003,057,0400) |
| 2076 | -313.090 | -298.064 | 2.7470E-02 (2003,261,0000) | 2.1036E-02 (2003,260,2300) | 1.7827E-02 (2003,057,0500) | 1.7031E-02 (2003,261,0100) |
| 2077 | -311.616 | -298.122 | 2.8153E-02 (2003,261,0000) | 2.2128E-02 (2003,260,2300) | 1.9446E-02 (2003,261,0100) | 1.7673E-02 (2003,057,0500) |
| 2078 | -310.142 | -298.181 | 2.7504E-02 (2003,261,0000) | 2.2433E-02 (2003,260,2300) | 2.1179E-02 (2003,261,0100) | 1.8890E-02 (2003,036,0900) |
| 2079 | -308.667 | -298.238 | 2.6181E-02 (2003,261,0000) | 2.2678E-02 (2003,261,0100) | 2.2244E-02 (2003,260,2300) | 2.0571E-02 (2003,036,0900) |
| 2080 | -307.193 | -298.296 | 2.4277E-02 (2003,261,0000) | 2.3865E-02 (2003,261,0100) | 2.2179E-02 (2003,036,0900) | 2.1567E-02 (2003,260,2300) |
| 2081 | -305.719 | -298.353 | 2.3512E-02 (2003,036,0900) | 2.3489E-02 (2003,261,0100) | 2.1149E-02 (2003,261,0000) | 1.9936E-02 (2003,260,2300) |
| 2082 | -304.244 | -298.410 | 2.5013E-02 (2003,036,0900) | 2.4931E-02 (2003,261,0100) | 2.2734E-02 (2003,261,0200) | 2.0858E-02 (2003,261,0600) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2083 | -302.770 | -298.467 | 2.6118E-02 (2003,036,0900) | 2.4667E-02 (2003,261,0100) | 2.4367E-02 (2003,261,0200) | 2.1437E-02 (2003,261,0600) |
| 2084 | -301.295 | -298.524 | 2.6952E-02 (2003,036,0900) | 2.5690E-02 (2003,261,0200) | 2.3853E-02 (2003,261,0100) | 2.1852E-02 (2003,261,0600) |
| 2085 | -299.821 | -298.580 | 2.7483E-02 (2003,036,0900) | 2.6669E-02 (2003,261,0200) | 2.3489E-02 (2003,139,0300) | 2.2489E-02 (2003,261,0100) |
| 2086 | -318.913 | -295.975 | 2.0322E-02 (2003,057,0400) | 1.8052E-02 (2003,057,0300) | 1.6995E-02 (2003,057,0500) | 1.6353E-02 (2003,261,0000) |
| 2087 | -317.439 | -296.035 | 2.0073E-02 (2003,261,0000) | 1.9695E-02 (2003,057,0400) | 1.7263E-02 (2003,057,0500) | 1.7177E-02 (2003,057,0300) |
| 2088 | -315.965 | -296.094 | 1.9051E-02 (2003,261,0000) | 1.8942E-02 (2003,057,0400) | 1.7434E-02 (2003,057,0500) | 1.6192E-02 (2003,057,0300) |
| 2089 | -314.491 | -296.153 | 2.2922E-02 (2003,261,0000) | 1.8099E-02 (2003,057,0400) | 1.7517E-02 (2003,057,0500) | 1.7348E-02 (2003,260,2300) |
| 2090 | -313.017 | -296.212 | 2.2892E-02 (2003,261,0000) | 1.8073E-02 (2003,260,2300) | 1.7515E-02 (2003,057,0500) | 1.7176E-02 (2003,057,0400) |
| 2091 | -311.543 | -296.270 | 2.5801E-02 (2003,261,0000) | 2.0522E-02 (2003,260,2300) | 1.7433E-02 (2003,057,0500) | 1.6378E-02 (2003,057,0600) |
| 2092 | -310.069 | -296.328 | 2.8609E-02 (2003,261,0000) | 2.2927E-02 (2003,260,2300) | 1.9591E-02 (2003,261,0100) | 1.8395E-02 (2003,036,0900) |
| 2093 | -308.595 | -296.386 | 2.7665E-02 (2003,261,0000) | 2.3115E-02 (2003,260,2300) | 2.1459E-02 (2003,261,0100) | 2.0188E-02 (2003,036,0900) |
| 2094 | -307.121 | -296.444 | 2.6062E-02 (2003,261,0000) | 2.3088E-02 (2003,261,0100) | 2.2773E-02 (2003,260,2300) | 2.1934E-02 (2003,036,0900) |
| 2095 | -305.647 | -296.501 | 2.4118E-02 (2003,261,0100) | 2.3794E-02 (2003,261,0000) | 2.3533E-02 (2003,036,0900) | 2.1898E-02 (2003,260,2300) |
| 2096 | -304.173 | -296.558 | 2.5023E-02 (2003,036,0900) | 2.4926E-02 (2003,261,0100) | 2.1261E-02 (2003,261,0000) | 2.0574E-02 (2003,260,2300) |
| 2097 | -302.699 | -296.615 | 2.6114E-02 (2003,036,0900) | 2.3875E-02 (2003,261,0100) | 2.0586E-02 (2003,261,0200) | 1.9543E-02 (2003,057,0600) |
| 2098 | -301.225 | -296.671 | 2.7405E-02 (2003,036,0900) | 2.5108E-02 (2003,261,0100) | 2.4624E-02 (2003,261,0200) | 2.1088E-02 (2003,261,0600) |
| 2099 | -318.838 | -294.123 | 2.0281E-02 (2003,057,0400) | 1.8915E-02 (2003,057,0300) | 1.8345E-02 (2003,261,0000) | 1.6376E-02 (2003,057,0500) |
| 2100 | -317.364 | -294.182 | 2.1676E-02 (2003,261,0000) | 1.9719E-02 (2003,057,0400) | 1.8057E-02 (2003,057,0300) | 1.6719E-02 (2003,057,0500) |
| 2101 | -315.890 | -294.242 | 2.0682E-02 (2003,261,0000) | 1.9038E-02 (2003,057,0400) | 1.7067E-02 (2003,057,0300) | 1.6957E-02 (2003,057,0500) |
| 2102 | -314.417 | -294.301 | 2.6386E-02 (2003,261,0000) | 1.8799E-02 (2003,260,2300) | 1.8269E-02 (2003,057,0400) | 1.7150E-02 (2003,057,0500) |
| 2103 | -312.943 | -294.359 | 2.7452E-02 (2003,261,0000) | 2.0341E-02 (2003,260,2300) | 1.7390E-02 (2003,057,0400) | 1.7223E-02 (2003,057,0500) |
| 2104 | -311.470 | -294.418 | 2.8998E-02 (2003,261,0000) | 2.2086E-02 (2003,260,2300) | 1.7246E-02 (2003,057,0500) | 1.6462E-02 (2003,057,0400) |
| 2105 | -309.996 | -294.476 | 2.9266E-02 (2003,261,0000) | 2.3162E-02 (2003,260,2300) | 1.7698E-02 (2003,261,0100) | 1.7688E-02 (2003,036,0900) |
| 2106 | -308.522 | -294.534 | 2.8792E-02 (2003,261,0000) | 2.3754E-02 (2003,260,2300) | 1.9824E-02 (2003,261,0100) | 1.9554E-02 (2003,036,0900) |
| 2107 | -307.049 | -294.591 | 2.7603E-02 (2003,261,0000) | 2.3808E-02 (2003,260,2300) | 2.1825E-02 (2003,261,0100) | 2.1402E-02 (2003,036,0900) |
| 2108 | -305.575 | -294.648 | 2.5391E-02 (2003,261,0000) | 2.3115E-02 (2003,260,2300) | 2.3092E-02 (2003,036,0900) | 2.3066E-02 (2003,261,0100) |
| 2109 | -304.101 | -294.705 | 2.4756E-02 (2003,036,0900) | 2.4474E-02 (2003,261,0100) | 2.3147E-02 (2003,261,0000) | 2.2145E-02 (2003,260,2300) |
| 2110 | -302.627 | -294.762 | 2.6300E-02 (2003,036,0900) | 2.5730E-02 (2003,261,0100) | 2.0875E-02 (2003,261,0200) | 2.0728E-02 (2003,260,2300) |
| 2111 | -301.154 | -294.819 | 2.7518E-02 (2003,036,0900) | 2.5950E-02 (2003,261,0100) | 2.2956E-02 (2003,261,0200) | 2.0243E-02 (2003,261,0600) |
| 2112 | -318.763 | -292.271 | 2.0131E-02 (2003,057,0400) | 1.9733E-02 (2003,057,0300) | 1.7224E-02 (2003,261,0000) | 1.5750E-02 (2003,057,0500) |
| 2113 | -317.289 | -292.330 | 1.9658E-02 (2003,057,0400) | 1.9655E-02 (2003,261,0000) | 1.8889E-02 (2003,057,0300) | 1.6154E-02 (2003,057,0500) |
| 2114 | -315.816 | -292.389 | 2.2747E-02 (2003,261,0000) | 1.9063E-02 (2003,057,0400) | 1.7907E-02 (2003,057,0300) | 1.6496E-02 (2003,057,0500) |
| 2115 | -314.343 | -292.448 | 2.5189E-02 (2003,261,0000) | 1.8356E-02 (2003,057,0400) | 1.7787E-02 (2003,260,2300) | 1.6818E-02 (2003,057,0300) |
| 2116 | -312.870 | -292.507 | 2.7163E-02 (2003,261,0000) | 1.9845E-02 (2003,260,2300) | 1.7552E-02 (2003,057,0400) | 1.6920E-02 (2003,057,0500) |
| 2117 | -311.396 | -292.565 | 2.8679E-02 (2003,261,0000) | 2.1657E-02 (2003,260,2300) | 1.7033E-02 (2003,057,0500) | 1.6685E-02 (2003,057,0400) |
| 2118 | -309.923 | -292.623 | 2.9451E-02 (2003,261,0000) | 2.3123E-02 (2003,260,2300) | 1.7040E-02 (2003,057,0500) | 1.6772E-02 (2003,036,0900) |
| 2119 | -308.450 | -292.681 | 2.9483E-02 (2003,261,0000) | 2.4142E-02 (2003,260,2300) | 1.8683E-02 (2003,036,0900) | 1.7904E-02 (2003,261,0100) |
| 2120 | -306.976 | -292.739 | 2.8733E-02 (2003,261,0000) | 2.4616E-02 (2003,260,2300) | 2.0605E-02 (2003,036,0900) | 2.0188E-02 (2003,261,0100) |
| 2121 | -305.503 | -292.796 | 2.3981E-02 (2003,261,0000) | 2.2272E-02 (2003,260,2300) | 2.2002E-02 (2003,036,0900) | 1.8934E-02 (2003,261,0100) |
| 2122 | -304.030 | -292.853 | 2.3708E-02 (2003,036,0900) | 2.1950E-02 (2003,261,0000) | 2.1479E-02 (2003,260,2300) | 2.0232E-02 (2003,261,0100) |
| 2123 | -302.556 | -292.910 | 2.5153E-02 (2003,036,0900) | 2.0400E-02 (2003,261,0100) | 1.9784E-02 (2003,260,2300) | 1.9600E-02 (2003,057,0600) |
| 2124 | -301.083 | -292.966 | 2.6682E-02 (2003,036,0900) | 2.2326E-02 (2003,261,0100) | 1.9922E-02 (2003,057,0600) | 1.8913E-02 (2003,260,2300) |
| 2125 | -318.688 | -290.418 | 2.0482E-02 (2003,057,0300) | 1.9891E-02 (2003,057,0400) | 1.6873E-02 (2003,061,0700) | 1.5793E-02 (2003,057,0200) |
| 2126 | -317.215 | -290.478 | 1.9663E-02 (2003,057,0300) | 1.9505E-02 (2003,057,0400) | 1.8096E-02 (2003,261,0000) | 1.6198E-02 (2003,061,0700) |
| 2127 | -315.742 | -290.537 | 2.0896E-02 (2003,261,0000) | 1.9002E-02 (2003,057,0400) | 1.8718E-02 (2003,057,0300) | 1.6034E-02 (2003,057,0500) |
| 2128 | -314.269 | -290.596 | 2.3558E-02 (2003,261,0000) | 1.8381E-02 (2003,057,0400) | 1.7643E-02 (2003,057,0300) | 1.6583E-02 (2003,260,2300) |
| 2129 | -312.796 | -290.654 | 2.5930E-02 (2003,261,0000) | 1.8844E-02 (2003,260,2300) | 1.7664E-02 (2003,057,0400) | 1.6628E-02 (2003,057,0500) |
| 2130 | -311.323 | -290.713 | 2.7675E-02 (2003,261,0000) | 2.0948E-02 (2003,260,2300) | 1.6851E-02 (2003,057,0400) | 1.6816E-02 (2003,057,0500) |
| 2131 | -309.850 | -290.771 | 2.9080E-02 (2003,261,0000) | 2.2797E-02 (2003,260,2300) | 1.6955E-02 (2003,057,0500) | 1.6280E-02 (2003,057,0600) |
| 2132 | -308.377 | -290.829 | 2.9619E-02 (2003,261,0000) | 2.4225E-02 (2003,260,2300) | 1.7603E-02 (2003,036,0900) | 1.7093E-02 (2003,057,0600) |
| 2133 | -306.904 | -290.886 | 2.9394E-02 (2003,261,0000) | 2.5155E-02 (2003,260,2300) | 1.9574E-02 (2003,036,0900) | 1.8227E-02 (2003,261,0100) |
| 2134 | -305.431 | -290.943 | 2.2547E-02 (2003,261,0000) | 2.1459E-02 (2003,260,2300) | 2.0750E-02 (2003,036,0900) | 1.8475E-02 (2003,057,0600) |
| 2135 | -303.958 | -291.000 | 2.6796E-02 (2003,261,0000) | 2.5185E-02 (2003,260,2300) | 2.3408E-02 (2003,036,0900) | 2.2878E-02 (2003,261,0100) |
| 2136 | -302.485 | -291.057 | 2.5166E-02 (2003,036,0900) | 2.4758E-02 (2003,261,0100) | 2.4577E-02 (2003,261,0000) | 2.4260E-02 (2003,260,2300) |
| 2137 | -301.012 | -291.114 | 2.6731E-02 (2003,036,0900) | 2.6154E-02 (2003,261,0100) | 2.2773E-02 (2003,260,2300) | 2.1963E-02 (2003,261,0000) |
| 2138 | -318.613 | -288.566 | 2.1161E-02 (2003,057,0300) | 1.9555E-02 (2003,057,0400) | 1.8188E-02 (2003,061,0700) | 1.6810E-02 (2003,057,0200) |
| 2139 | -317.140 | -288.625 | 2.0394E-02 (2003,057,0300) | 1.9265E-02 (2003,057,0400) | 1.7683E-02 (2003,061,0700) | 1.6811E-02 (2003,057,0200) |
| 2140 | -315.668 | -288.684 | 1.9476E-02 (2003,057,0300) | 1.8859E-02 (2003,057,0400) | 1.8786E-02 (2003,261,0000) | 1.7058E-02 (2003,061,0700) |
| 2141 | -314.195 | -288.743 | 2.1592E-02 (2003,261,0000) | 1.8425E-02 (2003,057,0300) | 1.8325E-02 (2003,057,0400) | 1.6324E-02 (2003,061,0700) |
| 2142 | -312.722 | -288.802 | 2.4185E-02 (2003,261,0000) | 1.7702E-02 (2003,057,0400) | 1.7658E-02 (2003,260,2300) | 1.7271E-02 (2003,057,0300) |
| 2143 | -311.250 | -288.860 | 2.6422E-02 (2003,261,0000) | 2.0016E-02 (2003,260,2300) | 1.6975E-02 (2003,057,0400) | 1.6646E-02 (2003,057,0500) |
| 2144 | -309.777 | -288.918 | 2.8135E-02 (2003,261,0000) | 2.2183E-02 (2003,260,2300) | 1.6870E-02 (2003,057,0500) | 1.6190E-02 (2003,057,0400) |
| 2145 | -308.305 | -288.976 | 2.9211E-02 (2003,261,0000) | 2.4012E-02 (2003,260,2300) | 1.7012E-02 (2003,057,0500) | 1.6787E-02 (2003,057,0600) |
| 2146 | -306.832 | -289.034 | 2.9554E-02 (2003,261,0000) | 2.5389E-02 (2003,260,2300) | 1.8307E-02 (2003,036,0900) | 1.7568E-02 (2003,057,0600) |
| 2147 | -305.359 | -289.091 | 2.9128E-02 (2003,261,0000) | 2.6181E-02 (2003,260,2300) | 2.0295E-02 (2003,036,0900) | 1.8684E-02 (2003,261,0100) |
| 2148 | -303.887 | -289.148 | 2.7879E-02 (2003,261,0000) | 2.6330E-02 (2003,260,2300) | 2.2216E-02 (2003,036,0900) | 2.1062E-02 (2003,261,0100) |
| 2149 | -302.414 | -289.205 | 2.6165E-02 (2003,261,0000) | 2.5811E-02 (2003,260,2300) | 2.4126E-02 (2003,036,0900) | 2.3556E-02 (2003,261,0100) |
| 2150 | -300.941 | -289.261 | 2.5830E-02 (2003,036,0900) | 2.5463E-02 (2003,261,0100) | 2.4633E-02 (2003,260,2300) | 2.3887E-02 (2003,261,0000) |
| 2151 | -320.010 | -286.654 | 2.2268E-02 (2003,057,0300) | 1.9887E-02 (2003,061,0700) | 1.9165E-02 (2003,057,0400) | 1.7517E-02 (2003,057,0200) |
| 2152 | -318.538 | -286.714 | 2.1744E-02 (2003,057,0300) | 1.9556E-02 (2003,061,0700) | 1.9118E-02 (2003,057,0400) | 1.7769E-02 (2003,057,0200) |
| 2153 | -317.066 | -286.773 | 2.1038E-02 (2003,057,0300) | 1.9084E-02 (2003,061,0700) | 1.8929E-02 (2003,057,0400) | 1.7836E-02 (2003,057,0200) |
| 2154 | -315.593 | -286.832 | 2.0168E-02 (2003,057,0300) | 1.8625E-02 (2003,057,0400) | 1.8480E-02 (2003,061,0700) | 1.7726E-02 (2003,057,0200) |
| 2155 | -314.121 | -286.891 | 1.9313E-02 (2003,261,0000) | 1.9172E-02 (2003,057,0300) | 1.8199E-02 (2003,057,0400) | 1.7753E-02 (2003,061,0700) |
| 2156 | -312.649 | -286.950 | 2.2043E-02 (2003,261,0000) | 1.8049E-02 (2003,057,0300) | 1.7668E-02 (2003,057,0400) | 1.6972E-02 (2003,057,0200) |
| 2157 | -311.177 | -287.008 | 2.4568E-02 (2003,261,0000) | 1.8849E-02 (2003,260,2300) | 1.7040E-02 (2003,057,0400) | 1.6842E-02 (2003,057,0300) |
| 2158 | -309.704 | -287.066 | 2.6673E-02 (2003,261,0000) | 2.1286E-02 (2003,260,2300) | 1.6801E-02 (2003,057,0500) | 1.6340E-02 (2003,057,0400) |
| 2159 | -308.232 | -287.124 | 2.7844E-02 (2003,261,0000) | 2.3298E-02 (2003,260,2300) | 1.7019E-02 (2003,057,0500) | 1.6387E-02 (2003,057,0600) |
| 2160 | -306.760 | -287.181 | 2.9112E-02 (2003,261,0000) | 2.5286E-02 (2003,260,2300) | 1.7271E-02 (2003,057,0600) | 1.7221E-02 (2003,057,0500) |
| 2161 | -305.288 | -287.239 | 2.9239E-02 (2003,261,0000) | 2.6562E-02 (2003,260,2300) | 1.8841E-02 (2003,036,0900) | 1.8040E-02 (2003,057,0600) |
| 2162 | -303.815 | -287.296 | 2.6353E-02 (2003,261,0000) | 2.5447E-02 (2003,260,2300) | 2.0518E-02 (2003,036,0900) | 1.8717E-02 (2003,057,0600) |
| 2163 | -302.343 | -287.352 | 2.7446E-02 (2003,261,0000) | 2.7124E-02 (2003,260,2300) | 2.2805E-02 (2003,036,0900) | 2.1911E-02 (2003,261,0100) |
| 2164 | -300.871 | -287.409 | 2.6344E-02 (2003,260,2300) | 2.5578E-02 (2003,261,0000) | 2.4614E-02 (2003,036,0900) | 2.4292E-02 (2003,261,0100) |
| 2165 | -325.822 | -284.560 | 2.2355E-02 (2003,057,0300) | 2.1157E-02 (2003,061,0800) | 1.8742E-02 (2003,061,0700) | 1.7119E-02 (2003,057,0400) |
| 2166 | -324.350 | -284.621 | 2.2735E-02 (2003,057,0300) | 2.0700E-02 (2003,061,0800) | 1.9602E-02 (2003,061,0700) | 1.7665E-02 (2003,057,0400) |
| 2167 | -322.878 | -284.681 | 2.2927E-02 (2003,057,0300) | 2.0898E-02 (2003,061,0700) | 2.0244E-02 (2003,061,0800) | 1.8074E-02 (2003,057,0400) |
| 2168 | -321.407 | -284.742 | 2.2897E-02 (2003,057,0300) | 2.1359E-02 (2003,061,0700) | 1.9440E-02 (2003,061,0800) | 1.8363E-02 (2003,057,0400) |
| 2169 | -319.935 | -284.802 | 2.2657E-02 (2003,057,0300) | 2.0771E-02 (2003,061,0700) | 1.8534E-02 (2003,057,0400) | 1.8326E-02 (2003,061,0800) |
| 2170 | -318.463 | -284.861 | 2.2218E-02 (2003,057,0300) | 2.0992E-02 (2003,061,0700) | 1.8655E-02 (2003,057,0200) | 1.8591E-02 (2003,057,0400) |
| 2171 | -314.047 | -285.039 | 1.9857E-02 (2003,057,0300) | 1.9267E-02 (2003,061,0700) | 1.8551E-02 (2003,057,0200) | 1.7981E-02 (2003,057,0400) |
| 2172 | -312.575 | -285.097 | 1.9648E-02 (2003,261,0000) | 1.8784E-02 (2003,057,0300) | 1.8412E-02 (2003,061,0700) | 1.8120E-02 (2003,057,0200) |
| 2173 | -311.103 | -285.156 | 2.2319E-02 (2003,261,0000) | 1.7610E-02 (2003,057,0300) | 1.7503E-02 (2003,057,0200) | 1.7485E-02 (2003,260,2300) |
| 2174 | -309.632 | -285.214 | 2.4710E-02 (2003,261,0000) | 2.0142E-02 (2003,260,2300) | 1.6747E-02 (2003,057,0500) | 1.6725E-02 (2003,057,0200) |
| 2175 | -327.217 | -282.647 | 2.3082E-02 (2003,061,0800) | 2.1561E-02 (2003,057,0300) | 2.0857E-02 (2003,061,0700) | 1.5462E-02 (2003,057,0400) |
| 2176 | -325.745 | -282.708 | 2.2254E-02 (2003,061,0800) | 2.2231E-02 (2003,057,0300) | 1.9945E-02 (2003,061,0700) | 1.6136E-02 (2003,057,0400) |
| 2177 | -324.274 | -282.769 | 2.2709E-02 (2003,057,0300) | 2.2121E-02 (2003,061,0800) | 1.1738E-02 (2003,061,0700) | 1.6785E-02 (2003,057,0200) |
| 2178 | -322.802 | -282.829 | 2.2987E-02 (2003,057,0300) | 2.2556E-02 (2003,061,0700) | 2.1528E-02 (2003,061,0800) | 1.7662E-02 (2003,057,0200) |
| 2179 | -321.331 | -282.889 | 2.3054E-02 (2003,057,0300) | 2.2160E-02 (2003,061,0700) | 2.0550E-02 (2003,061,0800) | 1.8415E-02 (2003,057,0200) |
| 2180 | -319.859 | -282.949 | 2.2919E-02 (2003,057,0300) | 2.2593E-02 (2003,061,0700) | 1.9676E-02 (2003,061,0800) | 1.9024E-02 (2003,057,0200) |
| 2181 | -318.388 | -283.009 | 2.2582E-02 (2003,057,0300) | 2.2469E-02 (2003,061,0700) | 1.9461E-02 (2003,057,0200) | 1.8600E-02 (2003,061,0800) |
| 2182 | -309.559 | -283.361 | 2.2394E-02 (2003,261,0000) | 1.8773E-02 (2003,260,2300) | 1.7934E-02 (2003,057,0200) | 1.7787E-02 (2003,061,0700) |
| 2183 | -327.140 | -280.795 | 2.3984E-02 (2003,061,0800) | 2.1654E-02 (2003,061,0700) | 2.1190E-02 (2003,057,0300) | 1.4890E-02 (2003,057,0200) |
| 2184 | -325.669 | -280.856 | 2.3500E-02 (2003,061,0800) | 2.1938E-02 (2003,057,0300) | 2.1733E-02 (2003,061,0700) | 1.6016E-02 (2003,057,0200) |
| 2185 | -324.198 | -280.917 | 2.2938E-02 (2003,061,0800) | 2.2506E-02 (2003,057,0300) | 2.1940E-02 (2003,061,0700) | 1.7076E-02 (2003,057,0200) |
| 2186 | -322.726 | -280.977 | 2.2885E-02 (2003,057,0300) | 2.2228E-02 (2003,061,0800) | 2.2015E-02 (2003,061,0700) | 1.8057E-02 (2003,057,0200) |
| 2187 | -321.255 | -281.037 | 2.3847E-02 (2003,061,0700) | 2.3066E-02 (2003,057,0300) | 2.1871E-02 (2003,061,0800) | 1.8917E-02 (2003,057,0200) |
| 2188 | -319.784 | -281.097 | 2.4070E-02 (2003,061,0700) | 2.3041E-02 (2003,057,0300) | 2.0968E-02 (2003,061,0800) | 1.9619E-02 (2003,057,0200) |
| 2189 | -318.313 | -281.157 | 2.3977E-02 (2003,061,0700) | 2.2803E-02 (2003,057,0300) | 2.0158E-02 (2003,057,0200) | 1.9928E-02 (2003,061,0800) |
| 2190 | -327.063 | -278.943 | 2.4854E-02 (2003,061,0800) | 2.2699E-02 (2003,061,0700) | 2.0645E-02 (2003,057,0300) | 1.5185E-02 (2003,061,0900) |
| 2191 | -325.592 | -279.004 | 2.4394E-02 (2003,061,0800) | 2.2585E-02 (2003,061,0700) | 2.1469E-02 (2003,057,0300) | 1.6115E-02 (2003,057,0200) |
| 2192 | -324.121 | -279.064 | 2.4379E-02 (2003,061,0700) | 2.4349E-02 (2003,061,0800) | 2.2132E-02 (2003,057,0300) | 1.7266E-02 (2003,057,0200) |
| 2193 | -322.650 | -279.125 | 2.4915E-02 (2003,061,0700) | 2.3811E-02 (2003,061,0800) | 2.2615E-02 (2003,057,0300) | 1.8331E-02 (2003,057,0200) |
| 2194 | -321.180 | -279.185 | 2.5312E-02 (2003,061,0700) | 2.3123E-02 (2003,061,0800) | 2.2900E-02 (2003,057,0300) | 1.9288E-02 (2003,057,0200) |
| 2195 | -319.709 | -279.245 | 2.4884E-02 (2003,061,0700) | 2.2980E-02 (2003,057,0300) | 2.2130E-02 (2003,061,0800) | 2.0103E-02 (2003,057,0200) |
| 2196 | -318.238 | -279.305 | 2.5253E-02 (2003,061,0700) | 2.2865E-02 (2003,057,0300) | 2.1226E-02 (2003,061,0800) | 2.0767E-02 (2003,057,0200) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2197 | -326.986 | -277.091 | 2.5599E-02 (2003,061,0800) | 2.3572E-02 (2003,061,0700) | 1.9937E-02 (2003,057,0300) | 1.6665E-02 (2003,061,0900) |
| 2198 | -325.515 | -277.152 | 2.5370E-02 (2003,061,0800) | 2.3868E-02 (2003,061,0700) | 2.0832E-02 (2003,057,0300) | 1.6089E-02 (2003,057,0200) |
| 2199 | -324.045 | -277.212 | 2.5319E-02 (2003,061,0700) | 2.5310E-02 (2003,061,0800) | 2.1586E-02 (2003,057,0300) | 1.7318E-02 (2003,057,0200) |
| 2200 | -322.574 | -277.273 | 2.6036E-02 (2003,061,0700) | 2.4896E-02 (2003,061,0800) | 2.2159E-02 (2003,057,0300) | 1.8473E-02 (2003,057,0200) |
| 2201 | -328.379 | -275.177 | 2.5302E-02 (2003,061,0800) | 2.1089E-02 (2003,061,0700) | 1.7996E-02 (2003,057,0300) | 1.4174E-02 (2003,061,0900) |
| 2202 | -326.909 | -275.239 | 2.5782E-02 (2003,061,0800) | 2.2798E-02 (2003,061,0700) | 1.9065E-02 (2003,057,0300) | 1.4612E-02 (2003,057,0200) |
| 2203 | -325.439 | -275.300 | 2.5999E-02 (2003,061,0800) | 2.4241E-02 (2003,061,0700) | 2.0030E-02 (2003,057,0300) | 1.5937E-02 (2003,057,0200) |
| 2204 | -323.969 | -275.360 | 2.6192E-02 (2003,061,0700) | 2.6177E-02 (2003,061,0800) | 2.0848E-02 (2003,057,0300) | 1.7243E-02 (2003,057,0200) |
| 2205 | -322.498 | -275.421 | 2.7021E-02 (2003,061,0700) | 2.5887E-02 (2003,061,0800) | 2.1520E-02 (2003,057,0300) | 1.8497E-02 (2003,057,0200) |
| 2206 | -326.832 | -273.387 | 2.6439E-02 (2003,061,0800) | 2.3901E-02 (2003,061,0700) | 1.8058E-02 (2003,057,0300) | 1.4291E-02 (2003,057,0200) |
| 2207 | -325.362 | -273.448 | 2.6866E-02 (2003,061,0800) | 2.5773E-02 (2003,061,0700) | 1.9060E-02 (2003,057,0300) | 1.5670E-02 (2003,057,0200) |
| 2208 | -323.892 | -273.508 | 2.6917E-02 (2003,061,0800) | 2.6892E-02 (2003,061,0700) | 1.9952E-02 (2003,057,0300) | 1.7043E-02 (2003,057,0200) |
| 2209 | -322.422 | -273.569 | 2.7904E-02 (2003,061,0700) | 2.6788E-02 (2003,061,0800) | 2.0701E-02 (2003,057,0300) | 1.8370E-02 (2003,057,0200) |
| 2210 | -325.285 | -271.595 | 2.7253E-02 (2003,061,0800) | 2.5933E-02 (2003,061,0700) | 1.7954E-02 (2003,057,0300) | 1.5286E-02 (2003,057,0200) |
| 2211 | -323.816 | -271.656 | 2.7390E-02 (2003,061,0800) | 2.6911E-02 (2003,061,0700) | 1.8895E-02 (2003,057,0300) | 1.6699E-02 (2003,057,0200) |
| 2212 | -322.346 | -271.717 | 2.8593E-02 (2003,061,0700) | 2.7567E-02 (2003,061,0800) | 1.9718E-02 (2003,057,0300) | 1.8088E-02 (2003,057,0200) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: NOX 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 6.1587E-05 | 2101 | -315.890 | -294.242 | 5.3799E-05 |
| 1990 | -306.221 | -311.322 | 6.3234E-05 | 2102 | -314.417 | -294.301 | 6.3981E-05 |
| 1991 | -304.745 | -311.379 | 7.5443E-05 | 2103 | -312.943 | -294.359 | 6.3459E-05 |
| 1992 | -303.268 | -311.436 | 9.4031E-05 | 2104 | -311.470 | -294.418 | 6.8700E-05 |
| 1993 | -301.791 | -311.492 | 9.5180E-05 | 2105 | -309.996 | -294.476 | 7.1069E-05 |
| 1994 | -307.626 | -309.412 | 6.0042E-05 | 2106 | -308.522 | -294.534 | 7.3757E-05 |
| 1995 | -306.150 | -309.469 | 5.9738E-05 | 2107 | -307.049 | -294.591 | 7.6429E-05 |
| 1996 | -304.673 | -309.526 | 7.0108E-05 | 2108 | -305.575 | -294.648 | 7.5814E-05 |
| 1997 | -303.197 | -309.583 | 8.9874E-05 | 2109 | -304.101 | -294.705 | 7.8994E-05 |
| 1998 | -301.720 | -309.640 | 8.0026E-05 | 2110 | -302.627 | -294.762 | 8.5351E-05 |
| 1999 | -300.244 | -309.696 | 9.6951E-05 | 2111 | -301.154 | -294.819 | 8.8669E-05 |
| 2000 | -298.767 | -309.752 | 1.0097E-04 | 2112 | -318.763 | -292.271 | 5.5247E-05 |
| 2001 | -317.886 | -307.150 | 5.2320E-05 | 2113 | -317.289 | -292.330 | 5.6132E-05 |
| 2002 | -316.410 | -307.209 | 5.3541E-05 | 2114 | -315.816 | -292.389 | 6.0101E-05 |
| 2003 | -314.934 | -307.268 | 5.4284E-05 | 2115 | -314.343 | -292.448 | 6.2765E-05 |
| 2004 | -313.458 | -307.327 | 5.7012E-05 | 2116 | -312.870 | -292.507 | 6.3721E-05 |
| 2005 | -311.982 | -307.385 | 5.9750E-05 | 2117 | -311.396 | -292.565 | 6.7405E-05 |
| 2006 | -309.030 | -307.501 | 6.3752E-05 | 2118 | -309.923 | -292.623 | 6.8908E-05 |
| 2007 | -307.554 | -307.559 | 8.3979E-05 | 2119 | -308.450 | -292.681 | 7.2346E-05 |
| 2008 | -306.078 | -307.616 | 7.0746E-05 | 2120 | -306.976 | -292.739 | 7.3806E-05 |
| 2009 | -304.602 | -307.673 | 8.6662E-05 | 2121 | -305.503 | -292.796 | 6.6328E-05 |
| 2010 | -303.125 | -307.730 | 7.1492E-05 | 2122 | -304.030 | -292.853 | 6.7724E-05 |
| 2011 | -301.649 | -307.787 | 6.2785E-05 | 2123 | -302.556 | -292.910 | 6.7516E-05 |
| 2012 | -300.173 | -307.843 | 7.9331E-05 | 2124 | -301.083 | -292.966 | 7.2425E-05 |
| 2013 | -298.697 | -307.899 | 6.8986E-05 | 2125 | -318.688 | -290.418 | 5.5159E-05 |
| 2014 | -317.812 | -305.297 | 5.3906E-05 | 2126 | -317.215 | -290.478 | 5.6957E-05 |
| 2015 | -316.336 | -305.356 | 5.1392E-05 | 2127 | -315.742 | -290.537 | 5.9460E-05 |
| 2016 | -314.860 | -305.415 | 5.6730E-05 | 2128 | -314.269 | -290.596 | 6.1633E-05 |
| 2017 | -313.385 | -305.474 | 7.0570E-05 | 2129 | -312.796 | -290.654 | 6.3860E-05 |
| 2018 | -311.909 | -305.533 | 7.3803E-05 | 2130 | -311.323 | -290.713 | 6.4401E-05 |
| 2019 | -308.957 | -305.649 | 5.6540E-05 | 2131 | -309.850 | -290.771 | 6.8510E-05 |
| 2020 | -307.482 | -305.706 | 6.3765E-05 | 2132 | -308.377 | -290.829 | 7.0983E-05 |
| 2021 | -306.006 | -305.764 | 8.3793E-05 | 2133 | -306.904 | -290.886 | 7.3556E-05 |
| 2022 | -304.530 | -305.821 | 8.9417E-05 | 2134 | -305.431 | -290.943 | 6.1185E-05 |
| 2023 | -303.054 | -305.878 | 8.2426E-05 | 2135 | -303.958 | -291.000 | 7.9056E-05 |
| 2024 | -301.579 | -305.934 | 9.2763E-05 | 2136 | -302.485 | -291.057 | 8.2141E-05 |
| 2025 | -300.103 | -305.990 | 9.4100E-05 | 2137 | -301.012 | -291.114 | 8.5414E-05 |
| 2026 | -298.627 | -306.046 | 8.9878E-05 | 2138 | -318.613 | -288.566 | 5.4118E-05 |
| 2027 | -319.212 | -303.385 | 5.4135E-05 | 2139 | -317.140 | -288.625 | 5.6282E-05 |
| 2028 | -317.737 | -303.445 | 5.3475E-05 | 2140 | -315.668 | -288.684 | 5.8430E-05 |
| 2029 | -316.262 | -303.504 | 5.5123E-05 | 2141 | -314.195 | -288.743 | 6.0585E-05 |
| 2030 | -314.786 | -303.563 | 5.4965E-05 | 2142 | -312.722 | -288.802 | 6.2732E-05 |
| 2031 | -313.311 | -303.622 | 5.7645E-05 | 2143 | -311.250 | -288.860 | 6.4955E-05 |
| 2032 | -311.836 | -303.680 | 7.6187E-05 | 2144 | -309.777 | -288.918 | 6.7273E-05 |
| 2033 | -310.360 | -303.738 | 6.1164E-05 | 2145 | -308.305 | -288.976 | 6.9721E-05 |
| 2034 | -308.885 | -303.796 | 5.8238E-05 | 2146 | -306.832 | -289.034 | 7.1306E-05 |
| 2035 | -307.409 | -303.854 | 5.8840E-05 | 2147 | -305.359 | -289.091 | 7.3900E-05 |
| 2036 | -305.934 | -303.911 | 6.7495E-05 | 2148 | -303.887 | -289.148 | 7.5686E-05 |
| 2037 | -304.459 | -303.968 | 7.5208E-05 | 2149 | -302.414 | -289.205 | 8.0707E-05 |
| 2038 | -302.983 | -304.025 | 8.2411E-05 | 2150 | -300.941 | -289.261 | 8.3919E-05 |
| 2039 | -301.508 | -304.082 | 9.4531E-05 | 2151 | -320.010 | -286.654 | 5.0740E-05 |
| 2040 | -300.032 | -304.138 | 1.0067E-04 | 2152 | -318.538 | -286.714 | 5.3013E-05 |
| 2041 | -298.557 | -304.194 | 1.0217E-04 | 2153 | -317.066 | -286.773 | 5.5251E-05 |
| 2042 | -319.137 | -301.533 | 5.2181E-05 | 2154 | -315.593 | -286.832 | 5.7434E-05 |
| 2043 | -317.662 | -301.592 | 5.2488E-05 | 2155 | -314.121 | -286.891 | 5.9613E-05 |
| 2044 | -316.187 | -301.651 | 5.4749E-05 | 2156 | -312.649 | -286.950 | 6.1707E-05 |
| 2045 | -314.712 | -301.710 | 5.5004E-05 | 2157 | -311.177 | -287.008 | 6.3872E-05 |
| 2046 | -313.237 | -301.769 | 5.8316E-05 | 2158 | -309.704 | -287.066 | 6.6170E-05 |
| 2047 | -311.762 | -301.827 | 7.4641E-05 | 2159 | -308.232 | -287.124 | 6.6004E-05 |
| 2048 | -310.287 | -301.886 | 7.7200E-05 | 2160 | -306.760 | -287.181 | 7.1073E-05 |
| 2049 | -308.812 | -301.944 | 7.9869E-05 | 2161 | -305.288 | -287.239 | 7.2094E-05 |
| 2050 | -307.337 | -302.001 | 6.4586E-05 | 2162 | -303.815 | -287.296 | 6.7976E-05 |
| 2051 | -305.862 | -302.059 | 7.9859E-05 | 2163 | -302.343 | -287.352 | 7.9309E-05 |
| 2052 | -304.387 | -302.116 | 8.5269E-05 | 2164 | -300.871 | -287.409 | 8.1796E-05 |
| 2053 | -302.912 | -302.172 | 9.1522E-05 | 2165 | -325.822 | -284.560 | 3.5611E-05 |
| 2054 | -301.437 | -302.229 | 9.2522E-05 | 2166 | -324.350 | -284.621 | 3.8961E-05 |
| 2055 | -299.962 | -302.285 | 9.5912E-05 | 2167 | -322.878 | -284.681 | 4.4055E-05 |
| 2056 | -298.487 | -302.341 | 9.6569E-05 | 2168 | -321.407 | -284.742 | 4.7222E-05 |
| 2057 | -319.062 | -299.680 | 5.5042E-05 | 2169 | -319.935 | -284.802 | 4.8481E-05 |
| 2058 | -317.588 | -299.740 | 5.8958E-05 | 2170 | -318.463 | -284.861 | 5.1923E-05 |
| 2059 | -316.113 | -299.799 | 6.3404E-05 | 2171 | -314.047 | -285.039 | 5.8638E-05 |
| 2060 | -314.639 | -299.858 | 5.7075E-05 | 2172 | -312.575 | -285.097 | 6.0725E-05 |
| 2061 | -313.164 | -299.917 | 6.0814E-05 | 2173 | -311.103 | -285.156 | 6.2897E-05 |
| 2062 | -311.689 | -299.975 | 6.2325E-05 | 2174 | -309.632 | -285.214 | 6.5162E-05 |
| 2063 | -310.214 | -300.033 | 7.5674E-05 | 2175 | -327.217 | -282.647 | 3.6317E-05 |
| 2064 | -308.740 | -300.091 | 7.8364E-05 | 2176 | -325.745 | -282.708 | 3.5136E-05 |
| 2065 | -307.265 | -300.149 | 8.0406E-05 | 2177 | -324.274 | -282.769 | 4.0352E-05 |
| 2066 | -305.790 | -300.206 | 6.0957E-05 | 2178 | -322.802 | -282.829 | 4.3648E-05 |
| 2067 | -304.316 | -300.263 | 8.4995E-05 | 2179 | -321.331 | -282.889 | 4.4927E-05 |
| 2068 | -302.841 | -300.320 | 9.0264E-05 | 2180 | -319.859 | -282.949 | 4.8305E-05 |
| 2069 | -301.366 | -300.376 | 9.3794E-05 | 2181 | -318.388 | -283.009 | 5.0821E-05 |
| 2070 | -299.891 | -300.432 | 9.7665E-05 | 2182 | -309.559 | -283.361 | 6.3946E-05 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | 1.0081E-04 | 2183 | -327.140 | -280.795 | 3.5233E-05 |
| 2072 | -318.988 | -297.828 | 4.7922E-05 | 2184 | -325.669 | -280.856 | 3.5876E-05 |
| 2073 | -317.513 | -297.887 | 5.3107E-05 | 2185 | -324.198 | -280.917 | 3.7283E-05 |
| 2074 | -316.039 | -297.946 | 5.4440E-05 | 2186 | -322.726 | -280.977 | 3.8787E-05 |
| 2075 | -314.565 | -298.005 | 6.6401E-05 | 2187 | -321.255 | -281.037 | 4.4603E-05 |
| 2076 | -313.090 | -298.064 | 6.5848E-05 | 2188 | -319.784 | -281.097 | 4.7187E-05 |
| 2077 | -311.616 | -298.122 | 7.1654E-05 | 2189 | -318.313 | -281.157 | 4.9590E-05 |
| 2078 | -310.142 | -298.181 | 7.4154E-05 | 2190 | -327.063 | -278.943 | 3.4889E-05 |
| 2079 | -308.667 | -298.238 | 7.6696E-05 | 2191 | -325.592 | -279.004 | 3.4939E-05 |
| 2080 | -307.193 | -298.296 | 7.8185E-05 | 2192 | -324.121 | -279.064 | 3.9154E-05 |
| 2081 | -305.719 | -298.353 | 7.6401E-05 | 2193 | -322.650 | -279.125 | 4.1252E-05 |
| 2082 | -304.244 | -298.410 | 8.4565E-05 | 2194 | -321.180 | -279.185 | 4.3474E-05 |
| 2083 | -302.770 | -298.467 | 8.8528E-05 | 2195 | -319.709 | -279.245 | 4.4698E-05 |
| 2084 | -301.295 | -298.524 | 9.2161E-05 | 2196 | -318.238 | -279.305 | 4.7939E-05 |
| 2085 | -299.821 | -298.580 | 9.5926E-05 | 2197 | -326.986 | -277.091 | 3.4594E-05 |
| 2086 | -318.913 | -295.975 | 4.9689E-05 | 2198 | -325.515 | -277.152 | 3.5031E-05 |
| 2087 | -317.439 | -296.035 | 5.3492E-05 | 2199 | -324.045 | -277.212 | 3.7946E-05 |
| 2088 | -315.965 | -296.094 | 5.1581E-05 | 2200 | -322.574 | -277.273 | 4.0085E-05 |
| 2089 | -314.491 | -296.153 | 5.6071E-05 | 2201 | -328.379 | -275.177 | 2.8593E-05 |
| 2090 | -313.017 | -296.212 | 5.6329E-05 | 2202 | -326.909 | -275.239 | 3.1178E-05 |
| 2091 | -311.543 | -296.270 | 6.1673E-05 | 2203 | -325.439 | -275.300 | 3.3541E-05 |
| 2092 | -310.069 | -296.328 | 7.2624E-05 | 2204 | -323.969 | -275.360 | 3.7198E-05 |
| 2093 | -308.595 | -296.386 | 7.4353E-05 | 2205 | -322.498 | -275.421 | 3.9108E-05 |
| 2094 | -307.121 | -296.444 | 7.7953E-05 | 2206 | -326.832 | -273.387 | 3.2134E-05 |
| 2095 | -305.647 | -296.501 | 7.8455E-05 | 2207 | -325.362 | -273.448 | 3.4823E-05 |
| 2096 | -304.173 | -296.558 | 8.1287E-05 | 2208 | -323.892 | -273.508 | 3.6486E-05 |
| 2097 | -302.699 | -296.615 | 7.9014E-05 | 2209 | -322.422 | -273.569 | 3.8251E-05 |
| 2098 | -301.225 | -296.671 | 9.0449E-05 | 2210 | -325.285 | -271.595 | 3.4037E-05 |
| 2099 | -318.838 | -294.123 | 5.4360E-05 | 2211 | -323.816 | -271.656 | 3.4991E-05 |
| 2100 | -317.364 | -294.182 | 5.8253E-05 | 2212 | -322.346 | -271.717 | 3.7593E-05 |

**********
CALPOST Version 5.6394 Level 070622
**********

SUMMARY SECTION

NOX 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 2000 | -298.767 | -309.752 | DISCRETE | 3.9267E-02 (2003,139,0300) | RANK 1 | 1 | HOUR |
| 2000 | -298.767 | -309.752 | DISCRETE | 3.5653E-02 (2003,256,0200) | RANK 2 | 1 | HOUR |
| 2000 | -298.767 | -309.752 | DISCRETE | 2.9613E-02 (2003,139,0400) | RANK 3 | 1 | HOUR |
| 2071 | -298.417 | -300.488 | DISCRETE | 2.6576E-02 (2003,036,0900) | RANK 4 | 1 | HOUR |
| 2041 | -298.557 | -304.194 | DISCRETE | 1.0217E-04 | RANK 1 | 8736 | HOUR |

**$PM_{10}$**

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Arches

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1


  Visibility Processing is NOT Selected



  Output options
                      Units requested for output:   (ug/m**3)
```

```
 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                   1-hr averages:     F
                                   3-hr averages:     F
                                  24-hr averages:     T
                                 NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                   Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                   Echo tables for selected days:     F
                   Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                        Plot file format is DATA:  .DAT


 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2001 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8735

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1


 ------------------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2001\POST_2001_PM_AR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2001\SPC2001.CON


 ------------------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2001\2001_ARCH_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_AR.DAT

*****************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR      COORDINATES (km)             1 RANK                    2 RANK                    3 RANK                    4 RANK
      1       -9.046  -154.175   1.9981E-02 (2001,007,0000)  1.3850E-02 (2001,346,0000)  1.1999E-02 (2001,071,0000)  9.7101E-03 (2001,364,0000)
      2       -7.599  -154.176   1.9632E-02 (2001,007,0000)  1.3576E-02 (2001,346,0000)  1.1891E-02 (2001,071,0000)  9.5794E-03 (2001,364,0000)
      3       -6.152  -154.178   1.9286E-02 (2001,007,0000)  1.3306E-02 (2001,346,0000)  1.1776E-02 (2001,071,0000)  9.4554E-03 (2001,364,0000)
      4       -3.257  -154.179   1.8619E-02 (2001,007,0000)  1.2768E-02 (2001,346,0000)  1.1540E-02 (2001,071,0000)  9.2058E-03 (2001,364,0000)
      5      -10.491  -152.321   2.0464E-02 (2001,007,0000)  1.3916E-02 (2001,346,0000)  1.1780E-02 (2001,071,0000)  9.9007E-03 (2001,364,0000)
      6       -9.044  -152.322   2.0100E-02 (2001,007,0000)  1.3642E-02 (2001,346,0000)  1.1680E-02 (2001,071,0000)  9.7756E-03 (2001,364,0000)
      7       -7.597  -152.324   1.9750E-02 (2001,007,0000)  1.3371E-02 (2001,346,0000)  1.1575E-02 (2001,071,0000)  9.6539E-03 (2001,364,0000)
      8       -6.150  -152.325   1.9405E-02 (2001,007,0000)  1.3105E-02 (2001,346,0000)  1.1469E-02 (2001,071,0000)  9.5284E-03 (2001,364,0000)
      9       -4.703  -152.326   1.9064E-02 (2001,007,0000)  1.2844E-02 (2001,346,0000)  1.1359E-02 (2001,071,0000)  9.4028E-03 (2001,364,0000)
     10       -3.256  -152.327   1.8740E-02 (2001,007,0000)  1.2583E-02 (2001,346,0000)  1.1242E-02 (2001,071,0000)  9.2813E-03 (2001,364,0000)
     11       -1.809  -152.328   1.8407E-02 (2001,007,0000)  1.2329E-02 (2001,346,0000)  1.1125E-02 (2001,071,0000)  9.1567E-03 (2001,364,0000)
     12       -0.362  -152.328   1.8092E-02 (2001,007,0000)  1.2072E-02 (2001,346,0000)  1.1003E-02 (2001,071,0000)  9.0337E-03 (2001,364,0000)
     13      -11.936  -150.466   2.0936E-02 (2001,007,0000)  1.3954E-02 (2001,346,0000)  1.1548E-02 (2001,071,0000)  1.0076E-02 (2001,364,0000)
     14      -10.489  -150.468   2.0570E-02 (2001,007,0000)  1.3678E-02 (2001,346,0000)  1.1459E-02 (2001,071,0000)  9.9519E-03 (2001,364,0000)
     15       -9.042  -150.470   2.0211E-02 (2001,007,0000)  1.3412E-02 (2001,346,0000)  1.1364E-02 (2001,071,0000)  9.8312E-03 (2001,364,0000)
     16       -7.595  -150.472   1.9859E-02 (2001,007,0000)  1.3153E-02 (2001,346,0000)  1.1265E-02 (2001,071,0000)  9.7111E-03 (2001,364,0000)
     17       -6.149  -150.473   1.9513E-02 (2001,007,0000)  1.2887E-02 (2001,346,0000)  1.1165E-02 (2001,071,0000)  9.5896E-03 (2001,364,0000)
     18       -4.702  -150.474   1.9175E-02 (2001,007,0000)  1.2632E-02 (2001,346,0000)  1.1058E-02 (2001,071,0000)  9.4675E-03 (2001,364,0000)
     19       -3.255  -150.475   1.8845E-02 (2001,007,0000)  1.2382E-02 (2001,346,0000)  1.0948E-02 (2001,071,0000)  9.3457E-03 (2001,364,0000)
     20       -1.808  -150.475   1.8517E-02 (2001,007,0000)  1.2131E-02 (2001,346,0000)  1.0836E-02 (2001,071,0000)  9.2238E-03 (2001,364,0000)
     21        1.085  -150.475   1.7884E-02 (2001,007,0000)  1.1633E-02 (2001,346,0000)  1.0601E-02 (2001,071,0000)  8.9773E-03 (2001,364,0000)
     22      -11.933  -148.614   2.1031E-02 (2001,007,0000)  1.3697E-02 (2001,346,0000)  1.1227E-02 (2001,071,0000)  1.0164E-02 (2001,365,0000)
     23      -10.486  -148.616   2.0666E-02 (2001,007,0000)  1.3437E-02 (2001,346,0000)  1.1143E-02 (2001,071,0000)  1.0009E-02 (2001,365,0000)
     24       -9.040  -148.618   2.0304E-02 (2001,007,0000)  1.3178E-02 (2001,346,0000)  1.1051E-02 (2001,071,0000)  9.8751E-03 (2001,364,0000)
     25       -7.594  -148.619   1.9955E-02 (2001,007,0000)  1.2920E-02 (2001,346,0000)  1.0958E-02 (2001,071,0000)  9.7553E-03 (2001,364,0000)
     26       -6.147  -148.621   1.9609E-02 (2001,007,0000)  1.2664E-02 (2001,346,0000)  1.0861E-02 (2001,071,0000)  9.6374E-03 (2001,364,0000)
     27       -4.701  -148.622   1.9271E-02 (2001,007,0000)  1.2411E-02 (2001,346,0000)  1.0761E-02 (2001,071,0000)  9.5210E-03 (2001,364,0000)
     28       -3.254  -148.622   1.8936E-02 (2001,007,0000)  1.2166E-02 (2001,346,0000)  1.0656E-02 (2001,071,0000)  9.4000E-03 (2001,364,0000)
     29       -1.808  -148.623   1.8610E-02 (2001,007,0000)  1.1919E-02 (2001,346,0000)  1.0549E-02 (2001,071,0000)  9.2777E-03 (2001,364,0000)
     30       -0.362  -148.623   1.8287E-02 (2001,007,0000)  1.1676E-02 (2001,346,0000)  1.0439E-02 (2001,071,0000)  9.1586E-03 (2001,364,0000)
     31      -11.930  -146.762   2.1110E-02 (2001,007,0000)  1.3432E-02 (2001,346,0000)  1.0909E-02 (2001,071,0000)  1.0273E-02 (2001,365,0000)
     32      -10.484  -146.764   2.0750E-02 (2001,007,0000)  1.3178E-02 (2001,346,0000)  1.0827E-02 (2001,071,0000)  1.0113E-02 (2001,365,0000)
     33       -9.038  -146.765   2.0386E-02 (2001,007,0000)  1.2926E-02 (2001,346,0000)  1.0744E-02 (2001,071,0000)  9.9547E-03 (2001,365,0000)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 34 | -7.592 | -146.767 | 2.0037E-02 (2001,007,0000) | 1.2671E-02 (2001,346,0000) | 1.0655E-02 (2001,071,0000) | 9.7959E-03 (2001,365,0000) |
| 35 | -6.146 | -146.768 | 1.9690E-02 (2001,007,0000) | 1.2425E-02 (2001,346,0000) | 1.0562E-02 (2001,071,0000) | 9.6731E-03 (2001,364,0000) |
| 36 | -4.700 | -146.769 | 1.9351E-02 (2001,007,0000) | 1.2181E-02 (2001,346,0000) | 1.0466E-02 (2001,071,0000) | 9.5599E-03 (2001,364,0000) |
| 37 | -3.254 | -146.770 | 1.9017E-02 (2001,007,0000) | 1.1940E-02 (2001,346,0000) | 1.0368E-02 (2001,071,0000) | 9.4417E-03 (2001,364,0000) |
| 38 | -1.808 | -146.770 | 1.8691E-02 (2001,007,0000) | 1.1698E-02 (2001,346,0000) | 1.0264E-02 (2001,071,0000) | 9.3254E-03 (2001,364,0000) |
| 39 | -0.362 | -146.771 | 1.8366E-02 (2001,007,0000) | 1.1457E-02 (2001,346,0000) | 1.0161E-02 (2001,071,0000) | 9.2027E-03 (2001,364,0000) |
| 40 | -10.481 | -144.911 | 2.0816E-02 (2001,007,0000) | 1.2905E-02 (2001,346,0000) | 1.0520E-02 (2001,071,0000) | 1.0215E-02 (2001,365,0000) |
| 41 | -9.036 | -144.913 | 2.0452E-02 (2001,007,0000) | 1.2661E-02 (2001,346,0000) | 1.0440E-02 (2001,071,0000) | 1.0052E-02 (2001,365,0000) |
| 42 | -7.590 | -144.915 | 2.0099E-02 (2001,007,0000) | 1.2415E-02 (2001,346,0000) | 1.0356E-02 (2001,071,0000) | 9.8891E-03 (2001,365,0000) |
| 43 | -6.144 | -144.916 | 1.9761E-02 (2001,007,0000) | 1.2172E-02 (2001,346,0000) | 1.0267E-02 (2001,071,0000) | 9.7255E-03 (2001,365,0000) |
| 44 | -4.699 | -144.917 | 1.9415E-02 (2001,007,0000) | 1.1939E-02 (2001,346,0000) | 1.0176E-02 (2001,071,0000) | 9.5866E-03 (2001,364,0000) |
| 45 | -3.253 | -144.918 | 1.9088E-02 (2001,007,0000) | 1.1699E-02 (2001,346,0000) | 1.0082E-02 (2001,071,0000) | 9.4699E-03 (2001,364,0000) |
| 46 | -1.807 | -144.918 | 1.8761E-02 (2001,007,0000) | 1.1466E-02 (2001,346,0000) | 9.9846E-03 (2001,071,0000) | 9.3585E-03 (2001,364,0000) |
| 47 | -10.479 | -143.059 | 2.0872E-02 (2001,007,0000) | 1.2623E-02 (2001,346,0000) | 1.0315E-02 (2001,365,0000) | 1.0214E-02 (2001,071,0000) |
| 48 | -9.033 | -143.061 | 2.0509E-02 (2001,007,0000) | 1.2378E-02 (2001,346,0000) | 1.0147E-02 (2001,365,0000) | 1.0139E-02 (2001,071,0000) |
| 49 | -7.588 | -143.062 | 2.0159E-02 (2001,007,0000) | 1.2145E-02 (2001,346,0000) | 1.0059E-02 (2001,071,0000) | 9.9804E-03 (2001,365,0000) |
| 50 | -6.143 | -143.064 | 1.9823E-02 (2001,007,0000) | 1.1914E-02 (2001,346,0000) | 9.9767E-03 (2001,071,0000) | 9.8118E-03 (2001,365,0000) |
| 51 | -4.697 | -143.065 | 1.9473E-02 (2001,007,0000) | 1.1682E-02 (2001,346,0000) | 9.8898E-03 (2001,071,0000) | 9.6457E-03 (2001,365,0000) |
| 52 | -3.252 | -143.065 | 1.9150E-02 (2001,007,0000) | 1.1451E-02 (2001,346,0000) | 9.8007E-03 (2001,071,0000) | 9.4902E-03 (2001,364,0000) |
| 53 | -1.807 | -143.066 | 1.8821E-02 (2001,007,0000) | 1.1224E-02 (2001,346,0000) | 9.7070E-03 (2001,071,0000) | 9.3803E-03 (2001,364,0000) |
| 54 | -10.476 | -141.207 | 2.0910E-02 (2001,007,0000) | 1.2328E-02 (2001,346,0000) | 1.0412E-02 (2001,365,0000) | 1.0038E-02 (2001,364,0000) |
| 55 | -9.031 | -141.209 | 2.0550E-02 (2001,007,0000) | 1.2097E-02 (2001,346,0000) | 1.0240E-02 (2001,365,0000) | 9.9338E-03 (2001,364,0000) |
| 56 | -7.586 | -141.210 | 2.0201E-02 (2001,007,0000) | 1.1867E-02 (2001,346,0000) | 1.0067E-02 (2001,365,0000) | 9.8246E-03 (2001,364,0000) |
| 57 | -6.141 | -141.211 | 1.9865E-02 (2001,007,0000) | 1.1644E-02 (2001,346,0000) | 9.8956E-03 (2001,365,0000) | 9.7177E-03 (2001,364,0000) |
| 58 | -4.696 | -141.212 | 1.9518E-02 (2001,007,0000) | 1.1417E-02 (2001,346,0000) | 9.7227E-03 (2001,365,0000) | 9.6129E-03 (2001,364,0000) |
| 59 | -3.251 | -141.213 | 1.9190E-02 (2001,007,0000) | 1.1196E-02 (2001,346,0000) | 9.5529E-03 (2001,365,0000) | 9.5214E-03 (2001,071,0000) |
| 60 | -1.806 | -141.214 | 1.8863E-02 (2001,007,0000) | 1.0973E-02 (2001,346,0000) | 9.4337E-03 (2001,071,0000) | 9.3925E-03 (2001,364,0000) |
| 61 | -0.361 | -141.214 | 1.8546E-02 (2001,007,0000) | 1.0760E-02 (2001,346,0000) | 9.3427E-03 (2001,071,0000) | 9.2799E-03 (2001,364,0000) |
| 62 | -14.808 | -139.347 | 2.2015E-02 (2001,007,0000) | 1.2690E-02 (2001,346,0000) | 1.1036E-02 (2001,365,0000) | 1.0324E-02 (2001,364,0000) |
| 63 | -13.363 | -139.350 | 2.1647E-02 (2001,007,0000) | 1.2467E-02 (2001,346,0000) | 1.0858E-02 (2001,365,0000) | 1.0222E-02 (2001,364,0000) |
| 64 | -11.918 | -139.352 | 2.1282E-02 (2001,007,0000) | 1.2248E-02 (2001,346,0000) | 1.0682E-02 (2001,365,0000) | 1.0122E-02 (2001,364,0000) |
| 65 | -10.474 | -139.354 | 2.0930E-02 (2001,007,0000) | 1.2020E-02 (2001,346,0000) | 1.0505E-02 (2001,365,0000) | 1.0022E-02 (2001,364,0000) |
| 66 | -9.029 | -139.356 | 2.0571E-02 (2001,007,0000) | 1.1798E-02 (2001,346,0000) | 1.0330E-02 (2001,365,0000) | 9.9206E-03 (2001,364,0000) |
| 67 | -7.584 | -139.358 | 2.0224E-02 (2001,007,0000) | 1.1585E-02 (2001,346,0000) | 1.0152E-02 (2001,365,0000) | 9.8166E-03 (2001,364,0000) |
| 68 | -6.140 | -139.359 | 1.9884E-02 (2001,007,0000) | 1.1366E-02 (2001,346,0000) | 9.9753E-03 (2001,365,0000) | 9.7108E-03 (2001,364,0000) |
| 69 | -4.695 | -139.360 | 1.9548E-02 (2001,007,0000) | 1.1149E-02 (2001,346,0000) | 9.7987E-03 (2001,365,0000) | 9.6073E-03 (2001,364,0000) |
| 70 | -3.250 | -139.361 | 1.9220E-02 (2001,007,0000) | 1.0935E-02 (2001,346,0000) | 9.6231E-03 (2001,365,0000) | 9.5035E-03 (2001,364,0000) |
| 71 | -1.806 | -139.361 | 1.8893E-02 (2001,007,0000) | 1.0721E-02 (2001,346,0000) | 9.4486E-03 (2001,365,0000) | 9.3975E-03 (2001,364,0000) |
| 72 | -0.361 | -139.361 | 1.8573E-02 (2001,007,0000) | 1.0513E-02 (2001,346,0000) | 9.2841E-03 (2001,364,0000) | 9.2731E-03 (2001,365,0000) |
| 73 | 1.083 | -139.361 | 1.8259E-02 (2001,007,0000) | 1.0305E-02 (2001,346,0000) | 9.1782E-03 (2001,364,0000) | 9.1014E-03 (2001,365,0000) |
| 74 | -14.804 | -137.495 | 2.2011E-02 (2001,007,0000) | 1.2353E-02 (2001,346,0000) | 1.1139E-02 (2001,365,0000) | 1.0285E-02 (2001,364,0000) |
| 75 | -13.360 | -137.498 | 2.1647E-02 (2001,007,0000) | 1.2144E-02 (2001,346,0000) | 1.0959E-02 (2001,365,0000) | 1.0191E-02 (2001,364,0000) |
| 76 | -11.915 | -137.500 | 2.1292E-02 (2001,007,0000) | 1.1925E-02 (2001,346,0000) | 1.0777E-02 (2001,365,0000) | 1.0095E-02 (2001,364,0000) |
| 77 | -10.471 | -137.502 | 2.0931E-02 (2001,007,0000) | 1.1712E-02 (2001,346,0000) | 1.0596E-02 (2001,365,0000) | 9.9941E-03 (2001,364,0000) |
| 78 | -9.027 | -137.504 | 2.0584E-02 (2001,007,0000) | 1.1502E-02 (2001,346,0000) | 1.0413E-02 (2001,365,0000) | 9.8974E-03 (2001,364,0000) |
| 79 | -7.583 | -137.506 | 2.0245E-02 (2001,007,0000) | 1.1293E-02 (2001,346,0000) | 1.0234E-02 (2001,365,0000) | 9.7958E-03 (2001,364,0000) |
| 80 | -6.138 | -137.507 | 1.9903E-02 (2001,007,0000) | 1.1082E-02 (2001,346,0000) | 1.0052E-02 (2001,365,0000) | 9.6988E-03 (2001,364,0000) |
| 81 | -4.694 | -137.508 | 1.9569E-02 (2001,007,0000) | 1.0873E-02 (2001,346,0000) | 9.8709E-03 (2001,365,0000) | 9.5924E-03 (2001,364,0000) |
| 82 | -3.250 | -137.509 | 1.9239E-02 (2001,007,0000) | 1.0665E-02 (2001,346,0000) | 9.6898E-03 (2001,365,0000) | 9.4934E-03 (2001,364,0000) |
| 83 | -1.805 | -137.509 | 1.8917E-02 (2001,007,0000) | 1.0463E-02 (2001,346,0000) | 9.5114E-03 (2001,365,0000) | 9.3881E-03 (2001,364,0000) |
| 84 | -16.245 | -135.640 | 2.2363E-02 (2001,007,0000) | 1.2215E-02 (2001,346,0000) | 1.1426E-02 (2001,365,0000) | 1.0331E-02 (2001,364,0000) |
| 85 | -14.801 | -135.643 | 2.1988E-02 (2001,007,0000) | 1.2013E-02 (2001,346,0000) | 1.1240E-02 (2001,365,0000) | 1.0239E-02 (2001,364,0000) |
| 86 | -13.357 | -135.645 | 2.1626E-02 (2001,007,0000) | 1.1806E-02 (2001,346,0000) | 1.1054E-02 (2001,365,0000) | 1.0149E-02 (2001,364,0000) |
| 87 | -11.913 | -135.648 | 2.1278E-02 (2001,007,0000) | 1.1603E-02 (2001,346,0000) | 1.0868E-02 (2001,365,0000) | 1.0056E-02 (2001,364,0000) |
| 88 | -10.469 | -135.650 | 2.0921E-02 (2001,007,0000) | 1.1398E-02 (2001,346,0000) | 1.0681E-02 (2001,365,0000) | 9.9614E-03 (2001,364,0000) |
| 89 | -9.025 | -135.652 | 2.0577E-02 (2001,007,0000) | 1.1199E-02 (2001,346,0000) | 1.0494E-02 (2001,365,0000) | 9.8649E-03 (2001,364,0000) |
| 90 | -7.581 | -135.653 | 2.0237E-02 (2001,007,0000) | 1.0994E-02 (2001,346,0000) | 1.0307E-02 (2001,365,0000) | 9.7697E-03 (2001,364,0000) |
| 91 | -6.137 | -135.655 | 1.9900E-02 (2001,007,0000) | 1.0792E-02 (2001,346,0000) | 1.0123E-02 (2001,365,0000) | 9.6735E-03 (2001,364,0000) |
| 92 | -4.693 | -135.656 | 1.9567E-02 (2001,007,0000) | 1.0590E-02 (2001,346,0000) | 9.9382E-03 (2001,365,0000) | 9.5744E-03 (2001,364,0000) |
| 93 | -3.249 | -135.656 | 1.9242E-02 (2001,007,0000) | 1.0393E-02 (2001,346,0000) | 9.7535E-03 (2001,365,0000) | 9.4733E-03 (2001,364,0000) |
| 94 | -1.805 | -135.657 | 1.8922E-02 (2001,007,0000) | 1.0196E-02 (2001,346,0000) | 9.5688E-03 (2001,365,0000) | 9.3721E-03 (2001,364,0000) |
| 95 | -16.241 | -133.788 | 2.2310E-02 (2001,007,0000) | 1.1860E-02 (2001,346,0000) | 1.1527E-02 (2001,365,0000) | 1.0316E-02 (2001,061,0000) |
| 96 | -14.797 | -133.791 | 2.1943E-02 (2001,007,0000) | 1.1666E-02 (2001,346,0000) | 1.1336E-02 (2001,365,0000) | 1.0186E-02 (2001,364,0000) |
| 97 | -13.353 | -133.793 | 2.1586E-02 (2001,007,0000) | 1.1467E-02 (2001,346,0000) | 1.1144E-02 (2001,365,0000) | 1.0096E-02 (2001,364,0000) |
| 98 | -11.910 | -133.796 | 2.1245E-02 (2001,007,0000) | 1.1272E-02 (2001,346,0000) | 1.0953E-02 (2001,365,0000) | 1.0005E-02 (2001,364,0000) |
| 99 | -10.466 | -133.798 | 2.0889E-02 (2001,007,0000) | 1.1084E-02 (2001,346,0000) | 1.0761E-02 (2001,365,0000) | 9.9179E-03 (2001,364,0000) |
| 100 | -9.023 | -133.799 | 2.0547E-02 (2001,007,0000) | 1.0888E-02 (2001,346,0000) | 1.0570E-02 (2001,365,0000) | 9.8258E-03 (2001,364,0000) |
| 101 | -7.579 | -133.801 | 2.0216E-02 (2001,007,0000) | 1.0691E-02 (2001,346,0000) | 1.0379E-02 (2001,365,0000) | 9.7316E-03 (2001,364,0000) |
| 102 | -4.692 | -133.803 | 1.9550E-02 (2001,007,0000) | 1.0307E-02 (2001,346,0000) | 9.9998E-03 (2001,365,0000) | 9.5429E-03 (2001,364,0000) |
| 103 | -3.248 | -133.804 | 1.9232E-02 (2001,007,0000) | 1.0119E-02 (2001,346,0000) | 9.8117E-03 (2001,365,0000) | 9.4509E-03 (2001,364,0000) |
| 104 | -14.793 | -131.938 | 2.1881E-02 (2001,007,0000) | 1.1426E-02 (2001,365,0000) | 1.1311E-02 (2001,346,0000) | 1.0381E-02 (2001,061,0000) |
| 105 | -13.350 | -131.941 | 2.1532E-02 (2001,007,0000) | 1.1230E-02 (2001,365,0000) | 1.1125E-02 (2001,346,0000) | 1.0076E-02 (2001,061,0000) |
| 106 | -11.907 | -131.943 | 2.1194E-02 (2001,007,0000) | 1.1033E-02 (2001,365,0000) | 1.0946E-02 (2001,346,0000) | 9.9503E-03 (2001,364,0000) |
| 107 | -10.464 | -131.945 | 2.0844E-02 (2001,007,0000) | 1.0836E-02 (2001,365,0000) | 1.0760E-02 (2001,346,0000) | 9.8663E-03 (2001,364,0000) |
| 108 | -9.020 | -131.947 | 2.0503E-02 (2001,007,0000) | 1.0641E-02 (2001,365,0000) | 1.0571E-02 (2001,346,0000) | 9.7756E-03 (2001,364,0000) |
| 109 | -16.233 | -130.083 | 2.2154E-02 (2001,007,0000) | 1.1712E-02 (2001,365,0000) | 1.1135E-02 (2001,346,0000) | 1.1123E-02 (2001,061,0000) |
| 110 | -14.790 | -130.086 | 2.1804E-02 (2001,007,0000) | 1.1511E-02 (2001,365,0000) | 1.0959E-02 (2001,346,0000) | 1.0786E-02 (2001,061,0000) |
| 111 | -13.347 | -130.089 | 2.1465E-02 (2001,007,0000) | 1.1309E-02 (2001,365,0000) | 1.0790E-02 (2001,346,0000) | 1.0460E-02 (2001,061,0000) |
| 112 | -11.904 | -130.091 | 2.1118E-02 (2001,007,0000) | 1.1106E-02 (2001,365,0000) | 1.0614E-02 (2001,346,0000) | 1.0124E-02 (2001,061,0000) |
| 113 | -17.671 | -128.228 | 2.2406E-02 (2001,007,0000) | 1.1999E-02 (2001,365,0000) | 1.1865E-02 (2001,061,0000) | 1.0942E-02 (2001,346,0000) |
| 114 | -16.229 | -128.231 | 2.2059E-02 (2001,007,0000) | 1.1793E-02 (2001,365,0000) | 1.1494E-02 (2001,061,0000) | 1.0775E-02 (2001,346,0000) |
| 115 | -14.786 | -128.234 | 2.1719E-02 (2001,007,0000) | 1.1587E-02 (2001,365,0000) | 1.1144E-02 (2001,061,0000) | 1.0614E-02 (2001,346,0000) |

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CALPOST Version 5.6394 Level 070622

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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1 | -9.046 | -154.175 | 7.8021E-04 | 58 | -4.696 | -141.212 | 7.7084E-04 |
| 2 | -7.599 | -154.176 | 7.6872E-04 | 59 | -3.251 | -141.213 | 7.5765E-04 |
| 3 | -6.152 | -154.178 | 7.5783E-04 | 60 | -1.806 | -141.214 | 7.4507E-04 |
| 4 | -3.257 | -154.179 | 7.2794E-04 | 61 | -0.361 | -141.214 | 7.3287E-04 |
| 5 | -10.491 | -152.321 | 8.0157E-04 | 62 | -14.808 | -139.347 | 8.7839E-04 |
| 6 | -9.044 | -152.322 | 7.8720E-04 | 63 | -13.363 | -139.350 | 8.6356E-04 |
| 7 | -7.597 | -152.324 | 7.7140E-04 | 64 | -11.918 | -139.352 | 8.5011E-04 |
| 8 | -6.150 | -152.325 | 7.5655E-04 | 65 | -10.474 | -139.354 | 8.3482E-04 |
| 9 | -4.703 | -152.326 | 7.4752E-04 | 66 | -9.029 | -139.356 | 8.1873E-04 |
| 10 | -3.256 | -152.327 | 7.3679E-04 | 67 | -7.584 | -139.358 | 8.0494E-04 |
| 11 | -1.809 | -152.328 | 7.2614E-04 | 68 | -6.140 | -139.359 | 7.9267E-04 |
| 12 | -0.362 | -152.328 | 7.0742E-04 | 69 | -4.695 | -139.360 | 7.8005E-04 |
| 13 | -11.936 | -150.466 | 8.1483E-04 | 70 | -3.250 | -139.361 | 7.6511E-04 |
| 14 | -10.489 | -150.468 | 7.9817E-04 | 71 | -1.806 | -139.361 | 7.5239E-04 |
| 15 | -9.042 | -150.470 | 7.8506E-04 | 72 | -0.361 | -139.361 | 7.4067E-04 |
| 16 | -7.595 | -150.472 | 7.7284E-04 | 73 | 1.083 | -139.361 | 7.2798E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | -6.149 | -150.473 | 7.6012E-04 | 74 | -14.804 | -137.495 | 8.8572E-04 |
| 18 | -4.702 | -150.474 | 7.5108E-04 | 75 | -13.360 | -137.498 | 8.7052E-04 |
| 19 | -3.255 | -150.475 | 7.4230E-04 | 76 | -11.915 | -137.500 | 8.5412E-04 |
| 20 | -1.808 | -150.475 | 7.3249E-04 | 77 | -10.471 | -137.502 | 8.3935E-04 |
| 21 | 1.085 | -150.475 | 7.0355E-04 | 78 | -9.027 | -137.504 | 8.2579E-04 |
| 22 | -11.933 | -148.614 | 8.1575E-04 | 79 | -7.583 | -137.506 | 8.1299E-04 |
| 23 | -10.486 | -148.616 | 8.0561E-04 | 80 | -6.138 | -137.507 | 7.9980E-04 |
| 24 | -9.040 | -148.618 | 7.9499E-04 | 81 | -4.694 | -137.508 | 7.8418E-04 |
| 25 | -7.594 | -148.619 | 7.7894E-04 | 82 | -3.250 | -137.509 | 7.7019E-04 |
| 26 | -6.147 | -148.621 | 7.6634E-04 | 83 | -1.805 | -137.509 | 7.5549E-04 |
| 27 | -4.701 | -148.622 | 7.5688E-04 | 84 | -16.245 | -135.640 | 9.0587E-04 |
| 28 | -3.254 | -148.622 | 7.4623E-04 | 85 | -14.801 | -135.643 | 8.9119E-04 |
| 29 | -1.808 | -148.623 | 7.3592E-04 | 86 | -13.357 | -135.645 | 8.7499E-04 |
| 30 | -0.362 | -148.623 | 7.1965E-04 | 87 | -11.913 | -135.648 | 8.5971E-04 |
| 31 | -11.930 | -146.762 | 8.2305E-04 | 88 | -10.469 | -135.650 | 8.4489E-04 |
| 32 | -10.484 | -146.764 | 8.1159E-04 | 89 | -9.025 | -135.652 | 8.3152E-04 |
| 33 | -9.038 | -146.765 | 8.0023E-04 | 90 | -7.581 | -135.653 | 8.1827E-04 |
| 34 | -7.592 | -146.767 | 7.8626E-04 | 91 | -6.137 | -135.655 | 8.0189E-04 |
| 35 | -6.146 | -146.768 | 7.7377E-04 | 92 | -4.693 | -135.656 | 7.8747E-04 |
| 36 | -4.700 | -146.769 | 7.6275E-04 | 93 | -3.249 | -135.656 | 7.7365E-04 |
| 37 | -3.254 | -146.770 | 7.5183E-04 | 94 | -1.805 | -135.657 | 7.5730E-04 |
| 38 | -1.808 | -146.770 | 7.3999E-04 | 95 | -16.241 | -133.788 | 9.1364E-04 |
| 39 | -0.362 | -146.771 | 7.1896E-04 | 96 | -14.797 | -133.791 | 8.9594E-04 |
| 40 | -10.481 | -144.911 | 8.1819E-04 | 97 | -13.353 | -133.793 | 8.7991E-04 |
| 41 | -9.036 | -144.913 | 8.0550E-04 | 98 | -11.910 | -133.796 | 8.6534E-04 |
| 42 | -7.590 | -144.915 | 7.9294E-04 | 99 | -10.466 | -133.798 | 8.5252E-04 |
| 43 | -6.144 | -144.916 | 7.8005E-04 | 100 | -9.023 | -133.799 | 8.3700E-04 |
| 44 | -4.699 | -144.917 | 7.6783E-04 | 101 | -7.579 | -133.801 | 8.2037E-04 |
| 45 | -3.253 | -144.918 | 7.5580E-04 | 102 | -4.692 | -133.803 | 7.9094E-04 |
| 46 | -1.807 | -144.918 | 7.4059E-04 | 103 | -3.248 | -133.804 | 7.7471E-04 |
| 47 | -10.479 | -143.059 | 8.2415E-04 | 104 | -14.793 | -131.938 | 9.0042E-04 |
| 48 | -9.033 | -143.061 | 8.1141E-04 | 105 | -13.350 | -131.941 | 8.8623E-04 |
| 49 | -7.588 | -143.062 | 7.9782E-04 | 106 | -11.907 | -131.943 | 8.7242E-04 |
| 50 | -6.143 | -143.064 | 7.8343E-04 | 107 | -10.464 | -131.945 | 8.5442E-04 |
| 51 | -4.697 | -143.065 | 7.7041E-04 | 108 | -9.020 | -131.947 | 8.3816E-04 |
| 52 | -3.252 | -143.065 | 7.5755E-04 | 109 | -16.233 | -130.083 | 9.2222E-04 |
| 53 | -1.807 | -143.066 | 7.4114E-04 | 110 | -14.790 | -130.086 | 9.0612E-04 |
| 54 | -10.476 | -141.207 | 8.3071E-04 | 111 | -13.347 | -130.089 | 8.8999E-04 |
| 55 | -9.031 | -141.209 | 8.1662E-04 | 112 | -11.904 | -130.091 | 8.7240E-04 |
| 56 | -7.586 | -141.210 | 8.0007E-04 | 113 | -17.671 | -128.228 | 9.4389E-04 |
| 57 | -6.141 | -141.211 | 7.8673E-04 | 114 | -16.229 | -128.231 | 9.2508E-04 |
| | | | | 115 | -14.786 | -128.234 | 9.0763E-04 |

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CALPOST Version 5.6394 Level 070622

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SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 113 | -17.671 | -128.228 | DISCRETE | 2.2406E-02 (2001,007,0000) | RANK 1 | 24 | HOUR |
| 13 | -11.936 | -150.466 | DISCRETE | 1.3954E-02 (2001,346,0000) | RANK 2 | 24 | HOUR |
| 1 | -9.046 | -154.175 | DISCRETE | 1.1999E-02 (2001,071,0000) | RANK 3 | 24 | HOUR |
| 109 | -16.233 | -130.083 | DISCRETE | 1.1123E-02 (2001,061,0000) | RANK 4 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 9.4389E-04 | RANK 1 | 8735 | HOUR |

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                                                  CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Bryce Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*0, 213*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************




  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                         Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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 1 1 1 1 1 1 1

  Visibility Processing is NOT Selected
```

```
 Output options
                    Units requested for output:   (ug/m**3)

 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                  1-hr averages:     F
                                  3-hr averages:     F
                                 24-hr averages:     T
                               NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                  Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                  Echo tables for selected days:     F
                  Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                        Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2001 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8735

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2001\POST_2001_PM_BR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2001\SPC2001.CON


 ------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2001\2001_BRYCE_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_BR.DAT

*************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                     2 RANK                     3 RANK                     4 RANK
    116     -243.891  -280.107   1.3708E-02 (2001,125,0000)  8.6882E-03 (2001,101,0000)  8.0520E-03 (2001,005,0000)  7.7218E-03 (2001,332,0000)
    117     -243.156  -280.129   1.3983E-02 (2001,125,0000)  9.1756E-03 (2001,101,0000)  8.0923E-03 (2001,005,0000)  7.7505E-03 (2001,332,0000)
    118     -242.420  -280.152   1.4229E-02 (2001,125,0000)  9.6787E-03 (2001,101,0000)  8.1325E-03 (2001,005,0000)  7.7809E-03 (2001,332,0000)
    119     -241.685  -280.175   1.4442E-02 (2001,125,0000)  1.0197E-02 (2001,101,0000)  8.1719E-03 (2001,005,0000)  7.8396E-03 (2001,033,0000)
    120     -243.862  -279.180   1.3816E-02 (2001,125,0000)  8.7202E-03 (2001,101,0000)  7.9471E-03 (2001,005,0000)  7.7987E-03 (2001,332,0000)
    121     -243.127  -279.203   1.4083E-02 (2001,125,0000)  9.2196E-03 (2001,101,0000)  7.9870E-03 (2001,005,0000)  7.8343E-03 (2001,332,0000)
    122     -242.392  -279.226   1.4327E-02 (2001,125,0000)  9.7312E-03 (2001,101,0000)  8.0267E-03 (2001,005,0000)  7.8674E-03 (2001,332,0000)
    123     -241.656  -279.248   1.4546E-02 (2001,125,0000)  1.0247E-02 (2001,101,0000)  8.0662E-03 (2001,005,0000)  7.8927E-03 (2001,332,0000)
    124     -240.921  -279.271   1.4737E-02 (2001,125,0000)  1.0777E-02 (2001,101,0000)  8.1914E-03 (2001,033,0000)  8.1051E-03 (2001,005,0000)
    125     -243.834  -278.254   1.3953E-02 (2001,125,0000)  8.7608E-03 (2001,101,0000)  7.8763E-03 (2001,332,0000)  7.8370E-03 (2001,005,0000)
    126     -243.098  -278.277   1.4220E-02 (2001,125,0000)  9.2613E-03 (2001,101,0000)  7.9147E-03 (2001,332,0000)  7.8763E-03 (2001,005,0000)
    127     -242.363  -278.299   1.4459E-02 (2001,125,0000)  9.7739E-03 (2001,101,0000)  7.9495E-03 (2001,332,0000)  7.9161E-03 (2001,005,0000)
    128     -241.628  -278.322   1.4670E-02 (2001,125,0000)  1.0302E-02 (2001,101,0000)  7.9839E-03 (2001,332,0000)  7.9552E-03 (2001,005,0000)
    129     -240.892  -278.345   1.4856E-02 (2001,125,0000)  1.0836E-02 (2001,101,0000)  8.1250E-03 (2001,033,0000)  8.0090E-03 (2001,332,0000)
    130     -240.157  -278.367   1.5010E-02 (2001,125,0000)  1.1387E-02 (2001,101,0000)  8.5673E-03 (2001,033,0000)  8.0314E-03 (2001,005,0000)
    131     -243.805  -277.328   1.4073E-02 (2001,125,0000)  8.8128E-03 (2001,101,0000)  7.9316E-03 (2001,332,0000)  7.7205E-03 (2001,005,0000)
    132     -243.070  -277.350   1.4352E-02 (2001,125,0000)  9.3065E-03 (2001,101,0000)  7.9759E-03 (2001,332,0000)  7.7606E-03 (2001,005,0000)
    133     -242.335  -277.373   1.4600E-02 (2001,125,0000)  9.8197E-03 (2001,101,0000)  8.0199E-03 (2001,332,0000)  7.8007E-03 (2001,005,0000)
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| 237 | -237.475 | -262.686 | 1.6680E-02 (2001,125,0000) | 1.4673E-02 (2001,101,0000) | 1.0648E-02 (2001,332,0000) | 9.3062E-03 (2001,033,0000) |
| 238 | -236.741 | -262.708 | 1.6685E-02 (2001,125,0000) | 1.5259E-02 (2001,101,0000) | 1.0767E-02 (2001,332,0000) | 9.8428E-03 (2001,033,0000) |
| 239 | -236.007 | -262.731 | 1.6644E-02 (2001,125,0000) | 1.5855E-02 (2001,101,0000) | 1.0876E-02 (2001,332,0000) | 1.0410E-02 (2001,033,0000) |
| 240 | -235.273 | -262.753 | 1.6556E-02 (2001,125,0000) | 1.6434E-02 (2001,101,0000) | 1.1007E-02 (2001,033,0000) | 1.0959E-02 (2001,332,0000) |
| 241 | -234.539 | -262.775 | 1.7008E-02 (2001,101,0000) | 1.6428E-02 (2001,125,0000) | 1.1629E-02 (2001,033,0000) | 1.1025E-02 (2001,332,0000) |
| 242 | -233.805 | -262.796 | 1.7587E-02 (2001,101,0000) | 1.6258E-02 (2001,125,0000) | 1.2314E-02 (2001,033,0000) | 1.1073E-02 (2001,332,0000) |
| 243 | -233.071 | -262.818 | 1.8162E-02 (2001,101,0000) | 1.6049E-02 (2001,125,0000) | 1.3064E-02 (2001,033,0000) | 1.1099E-02 (2001,332,0000) |
| 244 | -232.338 | -262.840 | 1.8727E-02 (2001,101,0000) | 1.5801E-02 (2001,125,0000) | 1.3799E-02 (2001,033,0000) | 1.1100E-02 (2001,332,0000) |
| 245 | -238.180 | -261.738 | 1.6718E-02 (2001,125,0000) | 1.4233E-02 (2001,101,0000) | 1.0715E-02 (2001,332,0000) | 8.7872E-03 (2001,033,0000) |
| 246 | -237.447 | -261.760 | 1.6768E-02 (2001,125,0000) | 1.4813E-02 (2001,101,0000) | 1.0855E-02 (2001,332,0000) | 9.2810E-03 (2001,033,0000) |
| 247 | -236.713 | -261.782 | 1.6774E-02 (2001,125,0000) | 1.5409E-02 (2001,101,0000) | 1.0980E-02 (2001,332,0000) | 9.8094E-03 (2001,033,0000) |
| 248 | -235.979 | -261.804 | 1.6733E-02 (2001,125,0000) | 1.5995E-02 (2001,101,0000) | 1.1088E-02 (2001,332,0000) | 1.0380E-02 (2001,033,0000) |
| 249 | -235.245 | -261.826 | 1.6645E-02 (2001,125,0000) | 1.6571E-02 (2001,101,0000) | 1.1180E-02 (2001,332,0000) | 1.0979E-02 (2001,033,0000) |
| 250 | -234.511 | -261.848 | 1.7148E-02 (2001,101,0000) | 1.6510E-02 (2001,125,0000) | 1.1600E-02 (2001,033,0000) | 1.1244E-02 (2001,332,0000) |
| 251 | -233.778 | -261.870 | 1.7727E-02 (2001,101,0000) | 1.6337E-02 (2001,125,0000) | 1.2239E-02 (2001,033,0000) | 1.1292E-02 (2001,332,0000) |
| 252 | -233.044 | -261.892 | 1.8294E-02 (2001,101,0000) | 1.6124E-02 (2001,125,0000) | 1.2931E-02 (2001,033,0000) | 1.1315E-02 (2001,332,0000) |
| 253 | -232.310 | -261.914 | 1.8851E-02 (2001,101,0000) | 1.5875E-02 (2001,125,0000) | 1.3686E-02 (2001,033,0000) | 1.1315E-02 (2001,332,0000) |
| 254 | -235.951 | -260.878 | 1.6831E-02 (2001,125,0000) | 1.6138E-02 (2001,101,0000) | 1.1311E-02 (2001,332,0000) | 1.0345E-02 (2001,033,0000) |
| 255 | -235.217 | -260.900 | 1.6741E-02 (2001,125,0000) | 1.6719E-02 (2001,101,0000) | 1.1404E-02 (2001,332,0000) | 1.0947E-02 (2001,033,0000) |
| 256 | -234.484 | -260.922 | 1.7299E-02 (2001,101,0000) | 1.6609E-02 (2001,125,0000) | 1.1576E-02 (2001,033,0000) | 1.1468E-02 (2001,332,0000) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 257 | -233.750 | -260.944 | 1.7871E-02 (2001,101,0000) | 1.6431E-02 (2001,125,0000) | 1.2218E-02 (2001,033,0000) | 1.1514E-02 (2001,332,0000) |
| 258 | -233.016 | -260.966 | 1.8431E-02 (2001,101,0000) | 1.6211E-02 (2001,125,0000) | 1.2873E-02 (2001,033,0000) | 1.1536E-02 (2001,332,0000) |
| 259 | -232.283 | -260.987 | 1.8988E-02 (2001,101,0000) | 1.5954E-02 (2001,125,0000) | 1.3557E-02 (2001,033,0000) | 1.1525E-02 (2001,332,0000) |
| 260 | -231.549 | -261.009 | 1.9539E-02 (2001,101,0000) | 1.5666E-02 (2001,125,0000) | 1.4313E-02 (2001,033,0000) | 1.1494E-02 (2001,332,0000) |
| 261 | -230.815 | -261.031 | 2.0079E-02 (2001,101,0000) | 1.5335E-02 (2001,125,0000) | 1.5069E-02 (2001,033,0000) | 1.1435E-02 (2001,332,0000) |
| 262 | -235.923 | -259.952 | 1.6932E-02 (2001,125,0000) | 1.6286E-02 (2001,101,0000) | 1.1518E-02 (2001,332,0000) | 1.0324E-02 (2001,033,0000) |
| 263 | -235.190 | -259.974 | 1.6869E-02 (2001,101,0000) | 1.6842E-02 (2001,125,0000) | 1.1608E-02 (2001,332,0000) | 1.0907E-02 (2001,033,0000) |
| 264 | -234.456 | -259.996 | 1.7447E-02 (2001,101,0000) | 1.6707E-02 (2001,125,0000) | 1.1677E-02 (2001,332,0000) | 1.1540E-02 (2001,033,0000) |
| 265 | -233.723 | -260.018 | 1.8011E-02 (2001,101,0000) | 1.6526E-02 (2001,125,0000) | 1.2199E-02 (2001,033,0000) | 1.1722E-02 (2001,332,0000) |
| 266 | -232.989 | -260.039 | 1.8569E-02 (2001,101,0000) | 1.6303E-02 (2001,125,0000) | 1.2879E-02 (2001,033,0000) | 1.1742E-02 (2001,332,0000) |
| 267 | -232.255 | -260.061 | 1.9128E-02 (2001,101,0000) | 1.6044E-02 (2001,125,0000) | 1.3556E-02 (2001,033,0000) | 1.1731E-02 (2001,332,0000) |
| 268 | -231.522 | -260.083 | 1.9675E-02 (2001,101,0000) | 1.5749E-02 (2001,125,0000) | 1.4230E-02 (2001,033,0000) | 1.1690E-02 (2001,332,0000) |
| 269 | -230.788 | -260.104 | 2.0211E-02 (2001,101,0000) | 1.5413E-02 (2001,125,0000) | 1.4947E-02 (2001,033,0000) | 1.1626E-02 (2001,332,0000) |
| 270 | -230.054 | -260.126 | 2.0729E-02 (2001,101,0000) | 1.5679E-02 (2001,033,0000) | 1.5050E-02 (2001,125,0000) | 1.1537E-02 (2001,332,0000) |
| 271 | -235.895 | -259.025 | 1.7039E-02 (2001,125,0000) | 1.6433E-02 (2001,101,0000) | 1.1727E-02 (2001,332,0000) | 1.0294E-02 (2001,033,0000) |
| 272 | -235.162 | -259.047 | 1.7022E-02 (2001,101,0000) | 1.6946E-02 (2001,125,0000) | 1.1827E-02 (2001,332,0000) | 1.0892E-02 (2001,033,0000) |
| 273 | -234.428 | -259.069 | 1.7597E-02 (2001,101,0000) | 1.6806E-02 (2001,125,0000) | 1.1903E-02 (2001,332,0000) | 1.1514E-02 (2001,033,0000) |
| 274 | -233.695 | -259.091 | 1.8162E-02 (2001,101,0000) | 1.6626E-02 (2001,125,0000) | 1.2181E-02 (2001,033,0000) | 1.1940E-02 (2001,332,0000) |
| 275 | -232.961 | -259.113 | 1.8725E-02 (2001,101,0000) | 1.6403E-02 (2001,125,0000) | 1.2870E-02 (2001,033,0000) | 1.1955E-02 (2001,332,0000) |
| 276 | -232.228 | -259.135 | 1.9272E-02 (2001,101,0000) | 1.6140E-02 (2001,125,0000) | 1.3554E-02 (2001,033,0000) | 1.1940E-02 (2001,332,0000) |
| 277 | -231.494 | -259.156 | 1.9816E-02 (2001,101,0000) | 1.5837E-02 (2001,125,0000) | 1.4235E-02 (2001,033,0000) | 1.1891E-02 (2001,332,0000) |
| 278 | -230.761 | -259.178 | 2.0343E-02 (2001,101,0000) | 1.5501E-02 (2001,125,0000) | 1.4901E-02 (2001,033,0000) | 1.1820E-02 (2001,332,0000) |
| 279 | -230.027 | -259.200 | 2.0854E-02 (2001,101,0000) | 1.5578E-02 (2001,033,0000) | 1.5136E-02 (2001,125,0000) | 1.1725E-02 (2001,332,0000) |
| 280 | -229.294 | -259.221 | 2.1364E-02 (2001,101,0000) | 1.6259E-02 (2001,033,0000) | 1.4740E-02 (2001,125,0000) | 1.1600E-02 (2001,332,0000) |
| 281 | -235.134 | -258.121 | 1.7180E-02 (2001,101,0000) | 1.7061E-02 (2001,125,0000) | 1.2065E-02 (2001,332,0000) | 1.0880E-02 (2001,033,0000) |
| 282 | -234.401 | -258.143 | 1.7751E-02 (2001,101,0000) | 1.6921E-02 (2001,125,0000) | 1.2135E-02 (2001,332,0000) | 1.1505E-02 (2001,033,0000) |
| 283 | -233.667 | -258.165 | 1.8316E-02 (2001,101,0000) | 1.6736E-02 (2001,125,0000) | 1.2170E-02 (2001,332,0000) | 1.2155E-02 (2001,033,0000) |
| 284 | -232.934 | -258.187 | 1.8871E-02 (2001,101,0000) | 1.6509E-02 (2001,125,0000) | 1.2846E-02 (2001,033,0000) | 1.2179E-02 (2001,332,0000) |
| 285 | -232.200 | -258.208 | 1.9422E-02 (2001,101,0000) | 1.6238E-02 (2001,125,0000) | 1.3552E-02 (2001,033,0000) | 1.2158E-02 (2001,332,0000) |
| 286 | -231.467 | -258.230 | 1.9954E-02 (2001,101,0000) | 1.5934E-02 (2001,125,0000) | 1.4248E-02 (2001,033,0000) | 1.2103E-02 (2001,332,0000) |
| 287 | -230.734 | -258.252 | 2.0477E-02 (2001,101,0000) | 1.5595E-02 (2001,125,0000) | 1.4923E-02 (2001,033,0000) | 1.2020E-02 (2001,332,0000) |
| 288 | -230.000 | -258.273 | 2.0998E-02 (2001,101,0000) | 1.5567E-02 (2001,033,0000) | 1.5227E-02 (2001,125,0000) | 1.1909E-02 (2001,332,0000) |
| 289 | -229.267 | -258.295 | 2.1500E-02 (2001,101,0000) | 1.6188E-02 (2001,033,0000) | 1.4830E-02 (2001,125,0000) | 1.1778E-02 (2001,332,0000) |
| 290 | -234.373 | -257.217 | 1.7902E-02 (2001,101,0000) | 1.7040E-02 (2001,125,0000) | 1.2364E-02 (2001,332,0000) | 1.1492E-02 (2001,033,0000) |
| 291 | -233.640 | -257.239 | 1.8469E-02 (2001,101,0000) | 1.6855E-02 (2001,125,0000) | 1.2401E-02 (2001,332,0000) | 1.2148E-02 (2001,033,0000) |
| 292 | -232.906 | -257.260 | 1.9028E-02 (2001,101,0000) | 1.6625E-02 (2001,125,0000) | 1.2824E-02 (2001,033,0000) | 1.2407E-02 (2001,332,0000) |
| 293 | -232.173 | -257.282 | 1.9564E-02 (2001,101,0000) | 1.6353E-02 (2001,125,0000) | 1.3535E-02 (2001,033,0000) | 1.2376E-02 (2001,332,0000) |
| 294 | -231.440 | -257.304 | 2.0095E-02 (2001,101,0000) | 1.6043E-02 (2001,125,0000) | 1.4254E-02 (2001,033,0000) | 1.2317E-02 (2001,332,0000) |
| 295 | -230.706 | -257.326 | 2.0619E-02 (2001,101,0000) | 1.5693E-02 (2001,125,0000) | 1.4953E-02 (2001,033,0000) | 1.2221E-02 (2001,332,0000) |
| 296 | -229.973 | -257.347 | 2.1132E-02 (2001,101,0000) | 1.5614E-02 (2001,033,0000) | 1.5318E-02 (2001,125,0000) | 1.2096E-02 (2001,332,0000) |
| 297 | -229.240 | -257.369 | 2.1628E-02 (2001,101,0000) | 1.6222E-02 (2001,033,0000) | 1.4914E-02 (2001,125,0000) | 1.1945E-02 (2001,332,0000) |
| 298 | -232.879 | -256.334 | 1.9179E-02 (2001,101,0000) | 1.6741E-02 (2001,125,0000) | 1.2825E-02 (2001,033,0000) | 1.2625E-02 (2001,332,0000) |
| 299 | -232.146 | -256.356 | 1.9713E-02 (2001,101,0000) | 1.6466E-02 (2001,125,0000) | 1.3530E-02 (2001,033,0000) | 1.2587E-02 (2001,332,0000) |
| 300 | -231.412 | -256.378 | 2.0247E-02 (2001,101,0000) | 1.6155E-02 (2001,125,0000) | 1.4261E-02 (2001,033,0000) | 1.2517E-02 (2001,332,0000) |
| 301 | -230.679 | -256.399 | 2.0770E-02 (2001,101,0000) | 1.5808E-02 (2001,125,0000) | 1.4984E-02 (2001,033,0000) | 1.2401E-02 (2001,332,0000) |
| 302 | -229.946 | -256.421 | 2.1272E-02 (2001,101,0000) | 1.5669E-02 (2001,033,0000) | 1.5423E-02 (2001,125,0000) | 1.2268E-02 (2001,332,0000) |
| 303 | -229.213 | -256.442 | 2.1759E-02 (2001,101,0000) | 1.6292E-02 (2001,033,0000) | 1.5003E-02 (2001,125,0000) | 1.2101E-02 (2001,332,0000) |
| 304 | -232.118 | -255.430 | 1.9870E-02 (2001,101,0000) | 1.6587E-02 (2001,125,0000) | 1.3533E-02 (2001,033,0000) | 1.2789E-02 (2001,332,0000) |
| 305 | -231.385 | -255.451 | 2.0404E-02 (2001,101,0000) | 1.6270E-02 (2001,125,0000) | 1.4263E-02 (2001,033,0000) | 1.2706E-02 (2001,332,0000) |
| 306 | -230.652 | -255.473 | 2.0918E-02 (2001,101,0000) | 1.5917E-02 (2001,125,0000) | 1.4994E-02 (2001,033,0000) | 1.2584E-02 (2001,332,0000) |
| 307 | -229.919 | -255.494 | 2.1410E-02 (2001,101,0000) | 1.5708E-02 (2001,033,0000) | 1.5530E-02 (2001,125,0000) | 1.2437E-02 (2001,332,0000) |
| 308 | -229.185 | -255.516 | 2.1894E-02 (2001,101,0000) | 1.6361E-02 (2001,033,0000) | 1.5118E-02 (2001,125,0000) | 1.2263E-02 (2001,332,0000) |
| 309 | -228.452 | -255.537 | 2.2365E-02 (2001,101,0000) | 1.6931E-02 (2001,033,0000) | 1.4677E-02 (2001,125,0000) | 1.2063E-02 (2001,332,0000) |
| 310 | -227.719 | -255.559 | 2.2817E-02 (2001,101,0000) | 1.7398E-02 (2001,033,0000) | 1.4208E-02 (2001,125,0000) | 1.1853E-02 (2001,332,0000) |
| 311 | -232.091 | -254.503 | 2.0034E-02 (2001,101,0000) | 1.6727E-02 (2001,125,0000) | 1.3494E-02 (2001,033,0000) | 1.3003E-02 (2001,332,0000) |
| 312 | -231.358 | -254.525 | 2.0557E-02 (2001,101,0000) | 1.6404E-02 (2001,125,0000) | 1.4240E-02 (2001,033,0000) | 1.2906E-02 (2001,332,0000) |
| 313 | -230.625 | -254.547 | 2.1066E-02 (2001,101,0000) | 1.6042E-02 (2001,125,0000) | 1.4989E-02 (2001,033,0000) | 1.2774E-02 (2001,332,0000) |
| 314 | -229.891 | -254.568 | 2.1560E-02 (2001,101,0000) | 1.5714E-02 (2001,033,0000) | 1.5650E-02 (2001,125,0000) | 1.2614E-02 (2001,332,0000) |
| 315 | -229.158 | -254.590 | 2.2039E-02 (2001,101,0000) | 1.6405E-02 (2001,033,0000) | 1.5230E-02 (2001,125,0000) | 1.2422E-02 (2001,332,0000) |
| 316 | -228.425 | -254.611 | 2.2502E-02 (2001,101,0000) | 1.7004E-02 (2001,033,0000) | 1.4783E-02 (2001,125,0000) | 1.2207E-02 (2001,332,0000) |
| 317 | -227.692 | -254.632 | 2.2946E-02 (2001,101,0000) | 1.7496E-02 (2001,033,0000) | 1.4315E-02 (2001,125,0000) | 1.1984E-02 (2001,332,0000) |
| 318 | -232.063 | -253.577 | 2.0185E-02 (2001,101,0000) | 1.6868E-02 (2001,125,0000) | 1.3498E-02 (2001,033,0000) | 1.3215E-02 (2001,332,0000) |
| 319 | -231.330 | -253.599 | 2.0701E-02 (2001,101,0000) | 1.6542E-02 (2001,125,0000) | 1.4228E-02 (2001,033,0000) | 1.3101E-02 (2001,332,0000) |
| 320 | -230.597 | -253.620 | 2.1210E-02 (2001,101,0000) | 1.6180E-02 (2001,125,0000) | 1.4966E-02 (2001,033,0000) | 1.2959E-02 (2001,332,0000) |
| 321 | -229.864 | -253.642 | 2.1702E-02 (2001,101,0000) | 1.5782E-02 (2001,125,0000) | 1.5700E-02 (2001,033,0000) | 1.2781E-02 (2001,332,0000) |
| 322 | -229.131 | -253.663 | 2.2180E-02 (2001,101,0000) | 1.6407E-02 (2001,033,0000) | 1.5355E-02 (2001,125,0000) | 1.2575E-02 (2001,332,0000) |
| 323 | -228.398 | -253.685 | 2.2643E-02 (2001,101,0000) | 1.7061E-02 (2001,033,0000) | 1.4903E-02 (2001,125,0000) | 1.2344E-02 (2001,332,0000) |
| 324 | -227.665 | -253.706 | 2.3079E-02 (2001,101,0000) | 1.7593E-02 (2001,033,0000) | 1.4429E-02 (2001,125,0000) | 1.2104E-02 (2001,332,0000) |
| 325 | -229.837 | -252.716 | 2.1842E-02 (2001,101,0000) | 1.5920E-02 (2001,125,0000) | 1.5725E-02 (2001,033,0000) | 1.2944E-02 (2001,332,0000) |
| 326 | -229.104 | -252.737 | 2.2309E-02 (2001,101,0000) | 1.6408E-02 (2001,033,0000) | 1.5488E-02 (2001,125,0000) | 1.2723E-02 (2001,332,0000) |
| 327 | -228.371 | -252.759 | 2.2761E-02 (2001,101,0000) | 1.7059E-02 (2001,033,0000) | 1.5027E-02 (2001,125,0000) | 1.2477E-02 (2001,332,0000) |
| 328 | -227.638 | -252.780 | 2.3197E-02 (2001,101,0000) | 1.7644E-02 (2001,033,0000) | 1.4544E-02 (2001,125,0000) | 1.2220E-02 (2001,332,0000) |



8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 116 | -243.891 | -280.107 | 5.6525E-04 | 222 | -233.126 | -264.671 | 7.1250E-04 |
| 117 | -243.156 | -280.129 | 5.6891E-04 | 223 | -232.392 | -264.693 | 7.2010E-04 |
| 118 | -242.420 | -280.152 | 5.7283E-04 | 224 | -231.658 | -264.714 | 7.2720E-04 |
| 119 | -241.685 | -280.175 | 5.7709E-04 | 225 | -238.971 | -263.568 | 6.6886E-04 |
| 120 | -243.862 | -279.180 | 5.6856E-04 | 226 | -238.237 | -263.590 | 6.7332E-04 |
| 121 | -243.127 | -279.203 | 5.7205E-04 | 227 | -237.503 | -263.613 | 6.7823E-04 |
| 122 | -242.392 | -279.226 | 5.7581E-04 | 228 | -236.769 | -263.635 | 6.8366E-04 |
| 123 | -241.656 | -279.248 | 5.7991E-04 | 229 | -236.035 | -263.657 | 6.8967E-04 |
| 124 | -240.921 | -279.271 | 5.8445E-04 | 230 | -235.301 | -263.679 | 6.9604E-04 |
| 125 | -243.834 | -278.254 | 5.7207E-04 | 231 | -234.567 | -263.701 | 7.0304E-04 |
| 126 | -243.098 | -278.277 | 5.7543E-04 | 232 | -233.833 | -263.723 | 7.1042E-04 |
| 127 | -242.363 | -278.299 | 5.7908E-04 | 233 | -233.099 | -263.745 | 7.1784E-04 |
| 128 | -241.628 | -278.322 | 5.8308E-04 | 234 | -232.365 | -263.766 | 7.2541E-04 |
| 129 | -240.892 | -278.345 | 5.8747E-04 | 235 | -231.631 | -263.788 | 7.3296E-04 |
| 130 | -240.157 | -278.367 | 5.9237E-04 | 236 | -238.208 | -262.664 | 6.7953E-04 |
| 131 | -243.805 | -277.328 | 5.7568E-04 | 237 | -237.475 | -262.686 | 6.8430E-04 |
| 132 | -243.070 | -277.350 | 5.7898E-04 | 238 | -236.741 | -262.708 | 6.8978E-04 |
| 133 | -242.335 | -277.373 | 5.8254E-04 | 239 | -236.007 | -262.731 | 6.9560E-04 |
| 134 | -241.599 | -277.396 | 5.8646E-04 | 240 | -235.273 | -262.753 | 7.0190E-04 |
| 135 | -240.864 | -277.418 | 5.9085E-04 | 241 | -234.539 | -262.775 | 7.0855E-04 |
| 136 | -240.129 | -277.441 | 5.9558E-04 | 242 | -233.805 | -262.796 | 7.1565E-04 |
| 137 | -243.776 | -276.401 | 5.7940E-04 | 243 | -233.071 | -262.818 | 7.2312E-04 |
| 138 | -243.041 | -276.424 | 5.8260E-04 | 244 | -232.338 | -262.840 | 7.3083E-04 |
| 139 | -242.306 | -276.447 | 5.8614E-04 | 245 | -238.180 | -261.738 | 6.8586E-04 |
| 140 | -241.571 | -276.469 | 5.9001E-04 | 246 | -237.447 | -261.760 | 6.9062E-04 |
| 141 | -240.836 | -276.492 | 5.9432E-04 | 247 | -236.713 | -261.782 | 6.9590E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 142 | -240.101 | -276.514 | 5.9905E-04 | 248 | -235.979 | -261.804 | 7.0170E-04 |
| 143 | -243.747 | -275.475 | 5.8344E-04 | 249 | -235.245 | -261.826 | 7.0789E-04 |
| 144 | -243.012 | -275.498 | 5.8655E-04 | 250 | -234.511 | -261.848 | 7.1447E-04 |
| 145 | -242.277 | -275.520 | 5.8991E-04 | 251 | -233.778 | -261.870 | 7.2120E-04 |
| 146 | -241.542 | -275.543 | 5.9371E-04 | 252 | -233.044 | -261.892 | 7.2844E-04 |
| 147 | -240.807 | -275.565 | 5.9793E-04 | 253 | -232.310 | -261.914 | 7.3617E-04 |
| 148 | -240.072 | -275.588 | 6.0260E-04 | 254 | -235.951 | -260.878 | 7.0798E-04 |
| 149 | -244.454 | -274.526 | 5.8493E-04 | 255 | -235.217 | -260.900 | 7.1410E-04 |
| 150 | -243.719 | -274.548 | 5.8767E-04 | 256 | -234.484 | -260.922 | 7.2055E-04 |
| 151 | -242.984 | -274.571 | 5.9069E-04 | 257 | -233.750 | -260.944 | 7.2708E-04 |
| 152 | -244.425 | -273.599 | 5.8925E-04 | 258 | -233.016 | -260.966 | 7.3419E-04 |
| 153 | -243.690 | -273.622 | 5.9187E-04 | 259 | -232.283 | -260.987 | 7.4153E-04 |
| 154 | -242.955 | -273.645 | 5.9492E-04 | 260 | -231.549 | -261.009 | 7.4912E-04 |
| 155 | -244.396 | -272.673 | 5.9375E-04 | 261 | -230.815 | -261.031 | 7.5654E-04 |
| 156 | -243.661 | -272.696 | 5.9632E-04 | 262 | -235.923 | -259.952 | 7.1421E-04 |
| 157 | -242.927 | -272.719 | 5.9917E-04 | 263 | -235.190 | -259.974 | 7.2019E-04 |
| 158 | -244.367 | -271.747 | 5.9849E-04 | 264 | -234.456 | -259.996 | 7.2649E-04 |
| 159 | -243.633 | -271.769 | 6.0089E-04 | 265 | -233.723 | -260.018 | 7.3304E-04 |
| 160 | -242.898 | -271.792 | 6.0363E-04 | 266 | -232.989 | -260.039 | 7.4008E-04 |
| 161 | -244.339 | -270.820 | 6.0351E-04 | 267 | -232.255 | -260.061 | 7.4734E-04 |
| 162 | -243.604 | -270.843 | 6.0570E-04 | 268 | -231.522 | -260.083 | 7.5473E-04 |
| 163 | -242.869 | -270.866 | 6.0837E-04 | 269 | -230.788 | -260.104 | 7.6213E-04 |
| 164 | -242.135 | -270.889 | 6.1132E-04 | 270 | -230.054 | -260.126 | 7.6923E-04 |
| 165 | -244.310 | -269.894 | 6.0892E-04 | 271 | -235.895 | -259.025 | 7.2050E-04 |
| 166 | -243.575 | -269.917 | 6.1109E-04 | 272 | -235.162 | -259.047 | 7.2639E-04 |
| 167 | -242.841 | -269.940 | 6.1346E-04 | 273 | -234.428 | -259.069 | 7.3249E-04 |
| 168 | -242.106 | -269.962 | 6.1608E-04 | 274 | -233.695 | -259.091 | 7.3918E-04 |
| 169 | -242.812 | -269.013 | 6.1865E-04 | 275 | -232.961 | -259.113 | 7.4623E-04 |
| 170 | -242.078 | -269.036 | 6.2108E-04 | 276 | -232.228 | -259.135 | 7.5324E-04 |
| 171 | -241.343 | -269.059 | 6.2414E-04 | 277 | -231.494 | -259.156 | 7.6056E-04 |
| 172 | -240.609 | -269.081 | 6.2776E-04 | 278 | -230.761 | -259.178 | 7.6789E-04 |
| 173 | -239.874 | -269.104 | 6.3184E-04 | 279 | -230.027 | -259.200 | 7.7530E-04 |
| 174 | -242.049 | -268.110 | 6.2633E-04 | 280 | -229.294 | -259.221 | 7.8266E-04 |
| 175 | -241.315 | -268.132 | 6.2931E-04 | 281 | -235.134 | -258.121 | 7.3274E-04 |
| 176 | -240.580 | -268.155 | 6.3278E-04 | 282 | -234.401 | -258.143 | 7.3885E-04 |
| 177 | -239.846 | -268.177 | 6.3679E-04 | 283 | -233.667 | -258.165 | 7.4542E-04 |
| 178 | -239.112 | -268.200 | 6.4124E-04 | 284 | -232.934 | -258.187 | 7.5232E-04 |
| 179 | -242.020 | -267.183 | 6.3182E-04 | 285 | -232.200 | -258.208 | 7.5930E-04 |
| 180 | -241.286 | -267.206 | 6.3469E-04 | 286 | -231.467 | -258.230 | 7.6643E-04 |
| 181 | -240.552 | -267.228 | 6.3813E-04 | 287 | -230.734 | -258.252 | 7.7354E-04 |
| 182 | -239.818 | -267.251 | 6.4201E-04 | 288 | -230.000 | -258.273 | 7.8066E-04 |
| 183 | -239.083 | -267.273 | 6.4632E-04 | 289 | -229.267 | -258.295 | 7.8793E-04 |
| 184 | -241.258 | -266.280 | 6.4030E-04 | 290 | -234.373 | -257.217 | 7.4566E-04 |
| 185 | -240.524 | -266.302 | 6.4359E-04 | 291 | -233.640 | -257.239 | 7.5214E-04 |
| 186 | -239.789 | -266.325 | 6.4740E-04 | 292 | -232.906 | -257.260 | 7.5883E-04 |
| 187 | -239.055 | -266.347 | 6.5152E-04 | 293 | -232.173 | -257.282 | 7.6551E-04 |
| 188 | -238.321 | -266.369 | 6.5617E-04 | 294 | -231.440 | -257.304 | 7.7247E-04 |
| 189 | -237.587 | -266.392 | 6.6147E-04 | 295 | -230.706 | -257.326 | 7.7952E-04 |
| 190 | -236.853 | -266.414 | 6.6734E-04 | 296 | -229.973 | -257.347 | 7.8663E-04 |
| 191 | -236.118 | -266.436 | 6.7361E-04 | 297 | -229.240 | -257.369 | 7.9381E-04 |
| 192 | -235.384 | -266.458 | 6.8024E-04 | 298 | -232.879 | -256.334 | 7.6526E-04 |
| 193 | -234.650 | -266.480 | 6.8729E-04 | 299 | -232.146 | -256.356 | 7.7181E-04 |
| 194 | -233.916 | -266.502 | 6.9462E-04 | 300 | -231.412 | -256.378 | 7.7874E-04 |
| 195 | -233.181 | -266.524 | 7.0229E-04 | 301 | -230.679 | -256.399 | 7.8591E-04 |
| 196 | -232.447 | -266.545 | 7.0953E-04 | 302 | -229.946 | -256.421 | 7.9306E-04 |
| 197 | -231.713 | -266.567 | 7.1725E-04 | 303 | -229.213 | -256.442 | 7.9939E-04 |
| 198 | -241.229 | -265.353 | 6.4605E-04 | 304 | -232.118 | -255.430 | 7.7838E-04 |
| 199 | -240.495 | -265.376 | 6.4915E-04 | 305 | -231.385 | -255.451 | 7.8526E-04 |
| 200 | -239.761 | -265.398 | 6.5284E-04 | 306 | -230.652 | -255.473 | 7.9254E-04 |
| 201 | -239.027 | -265.421 | 6.5689E-04 | 307 | -229.919 | -255.494 | 7.9952E-04 |
| 202 | -238.293 | -265.443 | 6.6155E-04 | 308 | -229.185 | -255.516 | 8.0643E-04 |
| 203 | -237.559 | -265.465 | 6.6674E-04 | 309 | -228.452 | -255.537 | 8.1318E-04 |
| 204 | -236.825 | -265.487 | 6.7243E-04 | 310 | -227.719 | -255.559 | 8.1915E-04 |
| 205 | -236.090 | -265.509 | 6.7867E-04 | 311 | -232.091 | -254.503 | 7.8521E-04 |
| 206 | -235.356 | -265.532 | 6.8536E-04 | 312 | -231.358 | -254.525 | 7.9212E-04 |
| 207 | -234.622 | -265.553 | 6.9235E-04 | 313 | -230.625 | -254.547 | 7.9920E-04 |
| 208 | -233.888 | -265.575 | 6.9970E-04 | 314 | -229.891 | -254.568 | 8.0613E-04 |
| 209 | -233.154 | -265.597 | 7.0731E-04 | 315 | -229.158 | -254.590 | 8.1310E-04 |
| 210 | -232.420 | -265.619 | 7.1463E-04 | 316 | -228.425 | -254.611 | 8.1989E-04 |
| 211 | -231.686 | -265.641 | 7.2230E-04 | 317 | -227.692 | -254.632 | 8.2645E-04 |
| 212 | -240.467 | -264.449 | 6.5518E-04 | 318 | -232.063 | -253.577 | 7.9233E-04 |
| 213 | -239.733 | -264.472 | 6.5870E-04 | 319 | -231.330 | -253.599 | 7.9896E-04 |
| 214 | -238.999 | -264.494 | 6.6269E-04 | 320 | -230.597 | -253.620 | 8.0575E-04 |
| 215 | -238.265 | -264.517 | 6.6737E-04 | 321 | -229.864 | -253.642 | 8.1278E-04 |
| 216 | -237.531 | -264.539 | 6.7242E-04 | 322 | -229.131 | -253.663 | 8.1967E-04 |
| 217 | -236.797 | -264.561 | 6.7794E-04 | 323 | -228.398 | -253.685 | 8.2648E-04 |
| 218 | -236.063 | -264.583 | 6.8391E-04 | 324 | -227.665 | -253.706 | 8.3319E-04 |
| 219 | -235.329 | -264.605 | 6.9057E-04 | 325 | -229.837 | -252.716 | 8.1947E-04 |
| 220 | -234.595 | -264.627 | 6.9772E-04 | 326 | -229.104 | -252.737 | 8.2637E-04 |
| 221 | -233.860 | -264.649 | 7.0517E-04 | 327 | -228.371 | -252.759 | 8.3316E-04 |
| | | | | 328 | -227.638 | -252.780 | 8.3989E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 328 | -227.638 | -252.780 | DISCRETE | 2.3197E-02 (2001,101,0000) | RANK | 1 | 24 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 1.7644E-02 (2001,033,0000) | RANK | 2 | 24 | HOUR |
| 325 | -229.837 | -252.716 | DISCRETE | 1.5725E-02 (2001,033,0000) | RANK | 3 | 24 | HOUR |
| 318 | -232.063 | -253.577 | DISCRETE | 1.3215E-02 (2001,332,0000) | RANK | 4 | 24 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 8.3989E-04 | RANK | 1 | 8735 | HOUR |

```
*************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Canyonlands

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  328*0, 506*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                         Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                         Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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| | | | | | | |
|---|---|---|---|---|---|---|
| 344 | -22.263 | -220.844 | 1.9996E-02 (2001,071,0000) | 1.0767E-02 (2001,007,0000) | 1.0367E-02 (2001,346,0000) | 8.9139E-03 (2001,030,0000) |
| 345 | -20.803 | -220.848 | 1.9889E-02 (2001,071,0000) | 1.0689E-02 (2001,007,0000) | 1.0296E-02 (2001,346,0000) | 8.7768E-03 (2001,030,0000) |
| 346 | -19.344 | -220.851 | 1.9768E-02 (2001,071,0000) | 1.0617E-02 (2001,007,0000) | 1.0217E-02 (2001,346,0000) | 8.6349E-03 (2001,030,0000) |
| 347 | -17.884 | -220.855 | 1.9630E-02 (2001,071,0000) | 1.0538E-02 (2001,007,0000) | 1.0134E-02 (2001,346,0000) | 8.4890E-03 (2001,030,0000) |
| 348 | -16.424 | -220.858 | 1.9475E-02 (2001,071,0000) | 1.0459E-02 (2001,007,0000) | 1.0050E-02 (2001,346,0000) | 8.3347E-03 (2001,030,0000) |
| 349 | -14.964 | -220.861 | 1.9304E-02 (2001,071,0000) | 1.0380E-02 (2001,007,0000) | 9.9557E-03 (2001,346,0000) | 8.1793E-03 (2001,030,0000) |
| 350 | -25.177 | -218.982 | 2.0346E-02 (2001,071,0000) | 1.1250E-02 (2001,007,0000) | 1.0887E-02 (2001,346,0000) | 9.0910E-03 (2001,030,0000) |
| 351 | -23.718 | -218.986 | 2.0257E-02 (2001,071,0000) | 1.1175E-02 (2001,007,0000) | 1.0815E-02 (2001,346,0000) | 8.9447E-03 (2001,030,0000) |
| 352 | -22.258 | -218.991 | 2.0161E-02 (2001,071,0000) | 1.1098E-02 (2001,007,0000) | 1.0741E-02 (2001,346,0000) | 8.7957E-03 (2001,030,0000) |
| 353 | -20.799 | -218.995 | 2.0048E-02 (2001,071,0000) | 1.1011E-02 (2001,007,0000) | 1.0659E-02 (2001,346,0000) | 8.6423E-03 (2001,030,0000) |
| 354 | -19.339 | -218.998 | 1.9922E-02 (2001,071,0000) | 1.0930E-02 (2001,007,0000) | 1.0575E-02 (2001,346,0000) | 8.4837E-03 (2001,030,0000) |
| 355 | -17.879 | -219.002 | 1.9781E-02 (2001,071,0000) | 1.0849E-02 (2001,007,0000) | 1.0482E-02 (2001,346,0000) | 8.3247E-03 (2001,030,0000) |
| 356 | -16.420 | -219.005 | 1.9624E-02 (2001,071,0000) | 1.0763E-02 (2001,007,0000) | 1.0392E-02 (2001,346,0000) | 8.1626E-03 (2001,030,0000) |
| 357 | -26.630 | -217.124 | 2.0576E-02 (2001,071,0000) | 1.1686E-02 (2001,007,0000) | 1.1352E-02 (2001,346,0000) | 9.1113E-03 (2001,030,0000) |
| 358 | -25.171 | -217.129 | 2.0491E-02 (2001,071,0000) | 1.1603E-02 (2001,007,0000) | 1.1279E-02 (2001,346,0000) | 8.9497E-03 (2001,030,0000) |
| 359 | -23.712 | -217.133 | 2.0398E-02 (2001,071,0000) | 1.1510E-02 (2001,007,0000) | 1.1200E-02 (2001,346,0000) | 8.7859E-03 (2001,030,0000) |
| 360 | -22.253 | -217.138 | 2.0295E-02 (2001,071,0000) | 1.1435E-02 (2001,007,0000) | 1.1114E-02 (2001,346,0000) | 8.6210E-03 (2001,030,0000) |
| 361 | -20.794 | -217.142 | 2.0179E-02 (2001,071,0000) | 1.1343E-02 (2001,007,0000) | 1.1028E-02 (2001,346,0000) | 8.4558E-03 (2001,030,0000) |
| 362 | -19.334 | -217.145 | 2.0049E-02 (2001,071,0000) | 1.1254E-02 (2001,007,0000) | 1.0936E-02 (2001,346,0000) | 8.2845E-03 (2001,030,0000) |
| 363 | -17.875 | -217.149 | 1.9905E-02 (2001,071,0000) | 1.1162E-02 (2001,007,0000) | 1.0836E-02 (2001,346,0000) | 8.1192E-03 (2001,030,0000) |
| 364 | -16.416 | -217.152 | 1.9745E-02 (2001,071,0000) | 1.1075E-02 (2001,007,0000) | 1.0733E-02 (2001,346,0000) | 7.9507E-03 (2001,030,0000) |
| 365 | -47.048 | -215.175 | 2.1475E-02 (2001,071,0000) | 1.3070E-02 (2001,007,0000) | 1.2559E-02 (2001,346,0000) | 1.1365E-02 (2001,006,0000) |
| 366 | -45.589 | -215.183 | 2.1424E-02 (2001,071,0000) | 1.3020E-02 (2001,007,0000) | 1.2528E-02 (2001,346,0000) | 1.1133E-02 (2001,006,0000) |
| 367 | -44.130 | -215.192 | 2.1375E-02 (2001,071,0000) | 1.2959E-02 (2001,007,0000) | 1.2485E-02 (2001,346,0000) | 1.0904E-02 (2001,006,0000) |
| 368 | -42.671 | -215.200 | 2.1325E-02 (2001,071,0000) | 1.2899E-02 (2001,007,0000) | 1.2444E-02 (2001,346,0000) | 1.0679E-02 (2001,006,0000) |
| 369 | -41.212 | -215.208 | 2.1277E-02 (2001,071,0000) | 1.2836E-02 (2001,007,0000) | 1.2402E-02 (2001,346,0000) | 1.0534E-02 (2001,030,0000) |
| 370 | -39.754 | -215.215 | 2.1228E-02 (2001,071,0000) | 1.2767E-02 (2001,007,0000) | 1.2350E-02 (2001,346,0000) | 1.0407E-02 (2001,030,0000) |
| 371 | -38.295 | -215.223 | 2.1181E-02 (2001,071,0000) | 1.2705E-02 (2001,007,0000) | 1.2300E-02 (2001,346,0000) | 1.0268E-02 (2001,030,0000) |
| 372 | -36.836 | -215.230 | 2.1133E-02 (2001,071,0000) | 1.2629E-02 (2001,007,0000) | 1.2244E-02 (2001,346,0000) | 1.0120E-02 (2001,030,0000) |
| 373 | -35.377 | -215.236 | 2.1088E-02 (2001,071,0000) | 1.2549E-02 (2001,007,0000) | 1.2186E-02 (2001,346,0000) | 9.9627E-03 (2001,030,0000) |
| 374 | -33.918 | -215.243 | 2.1037E-02 (2001,071,0000) | 1.2476E-02 (2001,007,0000) | 1.2124E-02 (2001,346,0000) | 9.8008E-03 (2001,030,0000) |
| 375 | -32.459 | -215.249 | 2.0982E-02 (2001,071,0000) | 1.2390E-02 (2001,007,0000) | 1.2059E-02 (2001,346,0000) | 9.6296E-03 (2001,030,0000) |
| 376 | -31.001 | -215.255 | 2.0922E-02 (2001,071,0000) | 1.2314E-02 (2001,007,0000) | 1.1990E-02 (2001,346,0000) | 9.4569E-03 (2001,030,0000) |
| 377 | -29.542 | -215.261 | 2.0853E-02 (2001,071,0000) | 1.2227E-02 (2001,007,0000) | 1.1916E-02 (2001,346,0000) | 9.2827E-03 (2001,030,0000) |
| 378 | -28.083 | -215.266 | 2.0779E-02 (2001,071,0000) | 1.2137E-02 (2001,007,0000) | 1.1840E-02 (2001,346,0000) | 9.1073E-03 (2001,030,0000) |
| 379 | -26.624 | -215.271 | 2.0696E-02 (2001,071,0000) | 1.2052E-02 (2001,007,0000) | 1.1762E-02 (2001,346,0000) | 8.9297E-03 (2001,030,0000) |
| 380 | -25.165 | -215.276 | 2.0608E-02 (2001,071,0000) | 1.1967E-02 (2001,007,0000) | 1.1674E-02 (2001,346,0000) | 8.7537E-03 (2001,030,0000) |
| 381 | -23.706 | -215.280 | 2.0509E-02 (2001,071,0000) | 1.1871E-02 (2001,007,0000) | 1.1587E-02 (2001,346,0000) | 8.5772E-03 (2001,030,0000) |
| 382 | -22.247 | -215.285 | 2.0403E-02 (2001,071,0000) | 1.1781E-02 (2001,007,0000) | 1.1494E-02 (2001,346,0000) | 8.4009E-03 (2001,030,0000) |
| 383 | -20.789 | -215.289 | 2.0284E-02 (2001,071,0000) | 1.1689E-02 (2001,007,0000) | 1.1397E-02 (2001,346,0000) | 8.2288E-03 (2001,030,0000) |
| 384 | -19.330 | -215.293 | 2.0150E-02 (2001,071,0000) | 1.1594E-02 (2001,007,0000) | 1.1294E-02 (2001,346,0000) | 8.0521E-03 (2001,030,0000) |
| 385 | -17.871 | -215.296 | 2.0005E-02 (2001,071,0000) | 1.1490E-02 (2001,007,0000) | 1.1192E-02 (2001,346,0000) | 7.8807E-03 (2001,030,0000) |
| 386 | -16.412 | -215.299 | 1.9840E-02 (2001,071,0000) | 1.1397E-02 (2001,007,0000) | 1.1079E-02 (2001,346,0000) | 7.7328E-03 (2001,363,0000) |
| 387 | -51.412 | -213.294 | 2.1746E-02 (2001,071,0000) | 1.3738E-02 (2001,007,0000) | 1.3258E-02 (2001,346,0000) | 1.2186E-02 (2001,006,0000) |
| 388 | -49.953 | -213.304 | 2.1696E-02 (2001,071,0000) | 1.3684E-02 (2001,007,0000) | 1.3220E-02 (2001,346,0000) | 1.1949E-02 (2001,006,0000) |
| 389 | -48.495 | -213.313 | 2.1643E-02 (2001,071,0000) | 1.3622E-02 (2001,007,0000) | 1.3179E-02 (2001,346,0000) | 1.1713E-02 (2001,006,0000) |
| 390 | -47.037 | -213.322 | 2.1561E-02 (2001,071,0000) | 1.3558E-02 (2001,007,0000) | 1.3138E-02 (2001,346,0000) | 1.1472E-02 (2001,006,0000) |
| 391 | -45.578 | -213.330 | 2.1540E-02 (2001,071,0000) | 1.3496E-02 (2001,007,0000) | 1.3092E-02 (2001,346,0000) | 1.1239E-02 (2001,006,0000) |
| 392 | -44.120 | -213.339 | 2.1490E-02 (2001,071,0000) | 1.3434E-02 (2001,007,0000) | 1.3044E-02 (2001,346,0000) | 1.1009E-02 (2001,006,0000) |
| 393 | -42.661 | -213.347 | 2.1440E-02 (2001,071,0000) | 1.3365E-02 (2001,007,0000) | 1.2990E-02 (2001,346,0000) | 1.0782E-02 (2001,006,0000) |
| 394 | -41.203 | -213.355 | 2.1388E-02 (2001,071,0000) | 1.3290E-02 (2001,007,0000) | 1.2932E-02 (2001,346,0000) | 1.0560E-02 (2001,006,0000) |
| 395 | -39.744 | -213.362 | 2.1341E-02 (2001,071,0000) | 1.3215E-02 (2001,007,0000) | 1.2872E-02 (2001,346,0000) | 1.0363E-02 (2001,030,0000) |
| 396 | -38.286 | -213.370 | 2.1293E-02 (2001,071,0000) | 1.3139E-02 (2001,007,0000) | 1.2805E-02 (2001,346,0000) | 1.0194E-02 (2001,030,0000) |
| 397 | -36.827 | -213.377 | 2.1242E-02 (2001,071,0000) | 1.3062E-02 (2001,007,0000) | 1.2740E-02 (2001,346,0000) | 1.0018E-02 (2001,030,0000) |
| 398 | -35.369 | -213.383 | 2.1193E-02 (2001,071,0000) | 1.2978E-02 (2001,007,0000) | 1.2667E-02 (2001,346,0000) | 9.8336E-03 (2001,030,0000) |
| 399 | -33.910 | -213.390 | 2.1139E-02 (2001,071,0000) | 1.2894E-02 (2001,007,0000) | 1.2592E-02 (2001,346,0000) | 9.6478E-03 (2001,030,0000) |
| 400 | -32.452 | -213.396 | 2.1083E-02 (2001,071,0000) | 1.2802E-02 (2001,007,0000) | 1.2516E-02 (2001,346,0000) | 9.4571E-03 (2001,030,0000) |
| 401 | -30.993 | -213.402 | 2.1022E-02 (2001,071,0000) | 1.2715E-02 (2001,007,0000) | 1.2435E-02 (2001,346,0000) | 9.2679E-03 (2001,030,0000) |
| 402 | -29.535 | -213.408 | 2.0950E-02 (2001,071,0000) | 1.2626E-02 (2001,007,0000) | 1.2351E-02 (2001,346,0000) | 9.0762E-03 (2001,030,0000) |
| 403 | -28.076 | -213.413 | 2.0873E-02 (2001,071,0000) | 1.2533E-02 (2001,007,0000) | 1.2262E-02 (2001,346,0000) | 8.8859E-03 (2001,030,0000) |
| 404 | -26.618 | -213.418 | 2.0787E-02 (2001,071,0000) | 1.2428E-02 (2001,007,0000) | 1.2173E-02 (2001,346,0000) | 8.6983E-03 (2001,030,0000) |
| 405 | -25.159 | -213.423 | 2.0694E-02 (2001,071,0000) | 1.2333E-02 (2001,007,0000) | 1.2078E-02 (2001,346,0000) | 8.5113E-03 (2001,030,0000) |
| 406 | -23.701 | -213.428 | 2.0592E-02 (2001,071,0000) | 1.2242E-02 (2001,007,0000) | 1.1977E-02 (2001,346,0000) | 8.3982E-03 (2001,035,0000) |
| 407 | -22.242 | -213.432 | 2.0482E-02 (2001,071,0000) | 1.2138E-02 (2001,007,0000) | 1.1874E-02 (2001,346,0000) | 8.2915E-03 (2001,035,0000) |
| 408 | -20.784 | -213.436 | 2.0363E-02 (2001,071,0000) | 1.2037E-02 (2001,007,0000) | 1.1769E-02 (2001,346,0000) | 8.1709E-03 (2001,035,0000) |
| 409 | -19.325 | -213.440 | 2.0228E-02 (2001,071,0000) | 1.1937E-02 (2001,007,0000) | 1.1659E-02 (2001,346,0000) | 8.0520E-03 (2001,035,0000) |
| 410 | -17.867 | -213.443 | 2.0078E-02 (2001,071,0000) | 1.1832E-02 (2001,007,0000) | 1.1544E-02 (2001,346,0000) | 7.9324E-03 (2001,035,0000) |
| 411 | -16.408 | -213.446 | 1.9913E-02 (2001,071,0000) | 1.1722E-02 (2001,007,0000) | 1.1427E-02 (2001,346,0000) | 7.8032E-03 (2001,035,0000) |
| 412 | -51.400 | -211.441 | 2.1826E-02 (2001,071,0000) | 1.4273E-02 (2001,007,0000) | 1.3893E-02 (2001,346,0000) | 1.2287E-02 (2001,006,0000) |
| 413 | -49.942 | -211.451 | 2.1777E-02 (2001,071,0000) | 1.4213E-02 (2001,007,0000) | 1.3845E-02 (2001,346,0000) | 1.2051E-02 (2001,006,0000) |
| 414 | -48.483 | -211.460 | 2.1726E-02 (2001,071,0000) | 1.4142E-02 (2001,007,0000) | 1.3796E-02 (2001,346,0000) | 1.1809E-02 (2001,006,0000) |
| 415 | -47.025 | -211.469 | 2.1677E-02 (2001,071,0000) | 1.4077E-02 (2001,007,0000) | 1.3740E-02 (2001,346,0000) | 1.1572E-02 (2001,006,0000) |
| 416 | -45.567 | -211.478 | 2.1619E-02 (2001,071,0000) | 1.3996E-02 (2001,007,0000) | 1.3680E-02 (2001,346,0000) | 1.1338E-02 (2001,006,0000) |
| 417 | -44.109 | -211.486 | 2.1574E-02 (2001,071,0000) | 1.3918E-02 (2001,007,0000) | 1.3617E-02 (2001,346,0000) | 1.1106E-02 (2001,006,0000) |
| 418 | -42.651 | -211.494 | 2.1500E-02 (2001,071,0000) | 1.3836E-02 (2001,007,0000) | 1.3546E-02 (2001,346,0000) | 1.0880E-02 (2001,006,0000) |
| 419 | -41.193 | -211.502 | 2.1472E-02 (2001,071,0000) | 1.3766E-02 (2001,007,0000) | 1.3477E-02 (2001,346,0000) | 1.0656E-02 (2001,006,0000) |
| 420 | -39.735 | -211.510 | 2.1422E-02 (2001,071,0000) | 1.3680E-02 (2001,007,0000) | 1.3400E-02 (2001,346,0000) | 1.0436E-02 (2001,006,0000) |
| 421 | -38.277 | -211.517 | 2.1374E-02 (2001,071,0000) | 1.3591E-02 (2001,007,0000) | 1.3323E-02 (2001,346,0000) | 1.0220E-02 (2001,006,0000) |
| 422 | -36.818 | -211.524 | 2.1319E-02 (2001,071,0000) | 1.3505E-02 (2001,007,0000) | 1.3242E-02 (2001,346,0000) | 1.0009E-02 (2001,006,0000) |
| 423 | -35.360 | -211.531 | 2.1269E-02 (2001,071,0000) | 1.3414E-02 (2001,007,0000) | 1.3159E-02 (2001,346,0000) | 9.7990E-03 (2001,006,0000) |
| 424 | -33.902 | -211.537 | 2.1214E-02 (2001,071,0000) | 1.3324E-02 (2001,007,0000) | 1.3070E-02 (2001,346,0000) | 9.5890E-03 (2001,006,0000) |
| 425 | -32.444 | -211.543 | 2.1155E-02 (2001,071,0000) | 1.3226E-02 (2001,007,0000) | 1.2978E-02 (2001,346,0000) | 9.4433E-03 (2001,035,0000) |
| 426 | -30.986 | -211.549 | 2.1090E-02 (2001,071,0000) | 1.3131E-02 (2001,007,0000) | 1.2886E-02 (2001,346,0000) | 9.3115E-03 (2001,035,0000) |
| 427 | -29.528 | -211.555 | 2.1018E-02 (2001,071,0000) | 1.3026E-02 (2001,007,0000) | 1.2787E-02 (2001,346,0000) | 9.2015E-03 (2001,035,0000) |
| 428 | -28.070 | -211.560 | 2.0937E-02 (2001,071,0000) | 1.2931E-02 (2001,007,0000) | 1.2691E-02 (2001,346,0000) | 9.0711E-03 (2001,035,0000) |
| 429 | -26.611 | -211.565 | 2.0850E-02 (2001,071,0000) | 1.2828E-02 (2001,007,0000) | 1.2585E-02 (2001,346,0000) | 8.9451E-03 (2001,035,0000) |
| 430 | -25.153 | -211.570 | 2.0751E-02 (2001,071,0000) | 1.2718E-02 (2001,007,0000) | 1.2481E-02 (2001,346,0000) | 8.8209E-03 (2001,035,0000) |
| 431 | -23.695 | -211.575 | 2.0647E-02 (2001,071,0000) | 1.2612E-02 (2001,007,0000) | 1.2371E-02 (2001,346,0000) | 8.6937E-03 (2001,035,0000) |
| 432 | -22.237 | -211.579 | 2.0535E-02 (2001,071,0000) | 1.2505E-02 (2001,007,0000) | 1.2256E-02 (2001,346,0000) | 8.5799E-03 (2001,035,0000) |
| 433 | -20.779 | -211.583 | 2.0412E-02 (2001,071,0000) | 1.2389E-02 (2001,007,0000) | 1.2140E-02 (2001,346,0000) | 8.4466E-03 (2001,035,0000) |
| 434 | -19.321 | -211.587 | 2.0277E-02 (2001,071,0000) | 1.2285E-02 (2001,007,0000) | 1.2023E-02 (2001,346,0000) | 8.3193E-03 (2001,035,0000) |
| 435 | -17.862 | -211.590 | 2.0123E-02 (2001,071,0000) | 1.2176E-02 (2001,007,0000) | 1.1897E-02 (2001,346,0000) | 8.1861E-03 (2001,035,0000) |
| 436 | -16.404 | -211.594 | 1.9959E-02 (2001,071,0000) | 1.2063E-02 (2001,007,0000) | 1.1770E-02 (2001,346,0000) | 8.0477E-03 (2001,035,0000) |
| 437 | -48.472 | -209.607 | 2.1779E-02 (2001,071,0000) | 1.4689E-02 (2001,007,0000) | 1.4437E-02 (2001,346,0000) | 1.1902E-02 (2001,006,0000) |
| 438 | -47.014 | -209.616 | 2.1729E-02 (2001,071,0000) | 1.4605E-02 (2001,007,0000) | 1.4364E-02 (2001,346,0000) | 1.1666E-02 (2001,006,0000) |
| 439 | -45.556 | -209.625 | 2.1679E-02 (2001,071,0000) | 1.4521E-02 (2001,007,0000) | 1.4290E-02 (2001,346,0000) | 1.1429E-02 (2001,006,0000) |
| 440 | -44.099 | -209.633 | 2.1627E-02 (2001,071,0000) | 1.4436E-02 (2001,007,0000) | 1.4210E-02 (2001,346,0000) | 1.1196E-02 (2001,006,0000) |
| 441 | -42.641 | -209.641 | 2.1577E-02 (2001,071,0000) | 1.4344E-02 (2001,007,0000) | 1.4122E-02 (2001,346,0000) | 1.0969E-02 (2001,006,0000) |
| 442 | -41.183 | -209.649 | 2.1499E-02 (2001,071,0000) | 1.4245E-02 (2001,007,0000) | 1.4034E-02 (2001,346,0000) | 1.0745E-02 (2001,006,0000) |
| 443 | -39.725 | -209.657 | 2.1471E-02 (2001,071,0000) | 1.4155E-02 (2001,007,0000) | 1.3946E-02 (2001,346,0000) | 1.0523E-02 (2001,006,0000) |
| 444 | -38.267 | -209.664 | 2.1421E-02 (2001,071,0000) | 1.4065E-02 (2001,007,0000) | 1.3853E-02 (2001,346,0000) | 1.0342E-02 (2001,035,0000) |
| 445 | -36.810 | -209.671 | 2.1367E-02 (2001,071,0000) | 1.3963E-02 (2001,007,0000) | 1.3757E-02 (2001,346,0000) | 1.0205E-02 (2001,035,0000) |
| 446 | -35.352 | -209.678 | 2.1314E-02 (2001,071,0000) | 1.3863E-02 (2001,007,0000) | 1.3658E-02 (2001,346,0000) | 1.0076E-02 (2001,035,0000) |
| 447 | -33.894 | -209.684 | 2.1255E-02 (2001,071,0000) | 1.3762E-02 (2001,007,0000) | 1.3555E-02 (2001,346,0000) | 9.9383E-03 (2001,035,0000) |
| 448 | -32.436 | -209.690 | 2.1196E-02 (2001,071,0000) | 1.3659E-02 (2001,007,0000) | 1.3448E-02 (2001,346,0000) | 9.7984E-03 (2001,035,0000) |
| 449 | -30.978 | -209.696 | 2.1129E-02 (2001,071,0000) | 1.3553E-02 (2001,007,0000) | 1.3342E-02 (2001,346,0000) | 9.6659E-03 (2001,035,0000) |
| 450 | -29.521 | -209.702 | 2.1054E-02 (2001,071,0000) | 1.3449E-02 (2001,007,0000) | 1.3233E-02 (2001,346,0000) | 9.5293E-03 (2001,035,0000) |
| 451 | -28.063 | -209.707 | 2.0972E-02 (2001,071,0000) | 1.3330E-02 (2001,007,0000) | 1.3117E-02 (2001,346,0000) | 9.4015E-03 (2001,035,0000) |
| 452 | -26.605 | -209.713 | 2.0882E-02 (2001,071,0000) | 1.3226E-02 (2001,007,0000) | 1.3004E-02 (2001,346,0000) | 9.2635E-03 (2001,035,0000) |
| 453 | -25.147 | -209.717 | 2.0781E-02 (2001,071,0000) | 1.3106E-02 (2001,007,0000) | 1.2885E-02 (2001,346,0000) | 9.1240E-03 (2001,035,0000) |
| 454 | -23.689 | -209.722 | 2.0676E-02 (2001,071,0000) | 1.2994E-02 (2001,007,0000) | 1.2765E-02 (2001,346,0000) | 8.9875E-03 (2001,035,0000) |
| 455 | -22.232 | -209.726 | 2.0559E-02 (2001,071,0000) | 1.2878E-02 (2001,007,0000) | 1.2639E-02 (2001,346,0000) | 8.8536E-03 (2001,035,0000) |
| 456 | -20.774 | -209.730 | 2.0434E-02 (2001,071,0000) | 1.2768E-02 (2001,007,0000) | 1.2513E-02 (2001,346,0000) | 8.7170E-03 (2001,035,0000) |
| 457 | -19.316 | -209.734 | 2.0296E-02 (2001,071,0000) | 1.2639E-02 (2001,007,0000) | 1.2383E-02 (2001,346,0000) | 8.5756E-03 (2001,035,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 458 | -17.858 | -209.737 | 2.0144E-02 (2001,071,0000) | 1.2521E-02 (2001,007,0000) | 1.2248E-02 (2001,346,0000) | 8.4333E-03 (2001,035,0000) |
| 459 | -16.400 | -209.741 | 1.9976E-02 (2001,071,0000) | 1.2403E-02 (2001,007,0000) | 1.2114E-02 (2001,346,0000) | 8.2891E-03 (2001,035,0000) |
| 460 | -48.460 | -207.754 | 2.1798E-02 (2001,071,0000) | 1.5259E-02 (2001,007,0000) | 1.5105E-02 (2001,346,0000) | 1.1987E-02 (2001,006,0000) |
| 461 | -47.003 | -207.763 | 2.1752E-02 (2001,071,0000) | 1.5166E-02 (2001,007,0000) | 1.5013E-02 (2001,346,0000) | 1.1751E-02 (2001,006,0000) |
| 462 | -45.546 | -207.772 | 2.1700E-02 (2001,071,0000) | 1.5063E-02 (2001,007,0000) | 1.4916E-02 (2001,346,0000) | 1.1510E-02 (2001,006,0000) |
| 463 | -44.088 | -207.780 | 2.1649E-02 (2001,071,0000) | 1.4965E-02 (2001,007,0000) | 1.4822E-02 (2001,346,0000) | 1.1325E-02 (2001,035,0000) |
| 464 | -42.631 | -207.789 | 2.1599E-02 (2001,071,0000) | 1.4870E-02 (2001,007,0000) | 1.4715E-02 (2001,346,0000) | 1.1186E-02 (2001,035,0000) |
| 465 | -41.173 | -207.796 | 2.1544E-02 (2001,071,0000) | 1.4761E-02 (2001,007,0000) | 1.4611E-02 (2001,346,0000) | 1.1042E-02 (2001,035,0000) |
| 466 | -39.716 | -207.804 | 2.1490E-02 (2001,071,0000) | 1.4656E-02 (2001,007,0000) | 1.4503E-02 (2001,346,0000) | 1.0604E-02 (2001,006,0000) |
| 467 | -38.258 | -207.811 | 2.1438E-02 (2001,071,0000) | 1.4549E-02 (2001,007,0000) | 1.4390E-02 (2001,346,0000) | 1.0736E-02 (2001,035,0000) |
| 468 | -36.801 | -207.818 | 2.1383E-02 (2001,071,0000) | 1.4443E-02 (2001,007,0000) | 1.4277E-02 (2001,346,0000) | 1.0599E-02 (2001,035,0000) |
| 469 | -35.343 | -207.825 | 2.1328E-02 (2001,071,0000) | 1.4326E-02 (2001,007,0000) | 1.4161E-02 (2001,346,0000) | 1.0451E-02 (2001,035,0000) |
| 470 | -33.886 | -207.831 | 2.1268E-02 (2001,071,0000) | 1.4219E-02 (2001,007,0000) | 1.4044E-02 (2001,346,0000) | 1.0311E-02 (2001,035,0000) |
| 471 | -32.429 | -207.838 | 2.1206E-02 (2001,071,0000) | 1.4107E-02 (2001,007,0000) | 1.3925E-02 (2001,346,0000) | 1.0164E-02 (2001,035,0000) |
| 472 | -30.971 | -207.844 | 2.1139E-02 (2001,071,0000) | 1.3991E-02 (2001,007,0000) | 1.3801E-02 (2001,346,0000) | 1.0020E-02 (2001,035,0000) |
| 473 | -29.514 | -207.849 | 2.1061E-02 (2001,071,0000) | 1.3870E-02 (2001,007,0000) | 1.3676E-02 (2001,346,0000) | 9.8699E-03 (2001,035,0000) |
| 474 | -28.056 | -207.855 | 2.0978E-02 (2001,071,0000) | 1.3755E-02 (2001,007,0000) | 1.3550E-02 (2001,346,0000) | 9.7238E-03 (2001,035,0000) |
| 475 | -26.599 | -207.860 | 2.0887E-02 (2001,071,0000) | 1.3632E-02 (2001,007,0000) | 1.3421E-02 (2001,346,0000) | 9.5787E-03 (2001,035,0000) |
| 476 | -25.141 | -207.865 | 2.0782E-02 (2001,071,0000) | 1.3510E-02 (2001,007,0000) | 1.3290E-02 (2001,346,0000) | 9.4309E-03 (2001,035,0000) |
| 477 | -23.684 | -207.869 | 2.0675E-02 (2001,071,0000) | 1.3388E-02 (2001,007,0000) | 1.3157E-02 (2001,346,0000) | 9.2760E-03 (2001,035,0000) |
| 478 | -22.226 | -207.873 | 2.0553E-02 (2001,071,0000) | 1.3258E-02 (2001,007,0000) | 1.3023E-02 (2001,346,0000) | 9.1312E-03 (2001,035,0000) |
| 479 | -20.769 | -207.877 | 2.0427E-02 (2001,071,0000) | 1.3138E-02 (2001,007,0000) | 1.2882E-02 (2001,346,0000) | 8.9916E-03 (2001,035,0000) |
| 480 | -19.311 | -207.881 | 2.0288E-02 (2001,071,0000) | 1.3014E-02 (2001,007,0000) | 1.2744E-02 (2001,346,0000) | 8.8377E-03 (2001,035,0000) |
| 481 | -48.449 | -205.902 | 2.1787E-02 (2001,071,0000) | 1.5847E-02 (2001,007,0000) | 1.5794E-02 (2001,346,0000) | 1.2228E-02 (2001,035,0000) |
| 482 | -46.992 | -205.911 | 2.1740E-02 (2001,071,0000) | 1.5748E-02 (2001,007,0000) | 1.5681E-02 (2001,346,0000) | 1.2071E-02 (2001,035,0000) |
| 483 | -45.535 | -205.919 | 2.1689E-02 (2001,071,0000) | 1.5630E-02 (2001,007,0000) | 1.5562E-02 (2001,346,0000) | 1.1919E-02 (2001,035,0000) |
| 484 | -44.078 | -205.928 | 2.1637E-02 (2001,071,0000) | 1.5523E-02 (2001,007,0000) | 1.5443E-02 (2001,346,0000) | 1.1768E-02 (2001,035,0000) |
| 485 | -42.621 | -205.936 | 2.1587E-02 (2001,071,0000) | 1.5408E-02 (2001,007,0000) | 1.5321E-02 (2001,346,0000) | 1.1616E-02 (2001,035,0000) |
| 486 | -41.163 | -205.944 | 2.1533E-02 (2001,071,0000) | 1.5290E-02 (2001,007,0000) | 1.5195E-02 (2001,346,0000) | 1.1462E-02 (2001,035,0000) |
| 487 | -39.706 | -205.951 | 2.1481E-02 (2001,071,0000) | 1.5172E-02 (2001,007,0000) | 1.5065E-02 (2001,346,0000) | 1.1307E-02 (2001,035,0000) |
| 488 | -38.249 | -205.958 | 2.1426E-02 (2001,071,0000) | 1.5057E-02 (2001,007,0000) | 1.4935E-02 (2001,346,0000) | 1.1145E-02 (2001,035,0000) |
| 489 | -36.792 | -205.965 | 2.1367E-02 (2001,071,0000) | 1.4936E-02 (2001,007,0000) | 1.4805E-02 (2001,346,0000) | 1.0996E-02 (2001,035,0000) |
| 490 | -35.335 | -205.972 | 2.1312E-02 (2001,071,0000) | 1.4813E-02 (2001,007,0000) | 1.4671E-02 (2001,346,0000) | 1.0840E-02 (2001,035,0000) |
| 491 | -33.878 | -205.979 | 2.1251E-02 (2001,071,0000) | 1.4690E-02 (2001,007,0000) | 1.4536E-02 (2001,346,0000) | 1.0684E-02 (2001,035,0000) |
| 492 | -32.421 | -205.985 | 2.1188E-02 (2001,071,0000) | 1.4557E-02 (2001,007,0000) | 1.4398E-02 (2001,346,0000) | 1.0532E-02 (2001,035,0000) |
| 493 | -30.964 | -205.991 | 2.1117E-02 (2001,071,0000) | 1.4436E-02 (2001,007,0000) | 1.4262E-02 (2001,346,0000) | 1.0373E-02 (2001,035,0000) |
| 494 | -29.507 | -205.996 | 2.1040E-02 (2001,071,0000) | 1.4311E-02 (2001,007,0000) | 1.4122E-02 (2001,346,0000) | 1.0211E-02 (2001,035,0000) |
| 495 | -28.049 | -206.002 | 2.0956E-02 (2001,071,0000) | 1.4179E-02 (2001,007,0000) | 1.3979E-02 (2001,346,0000) | 1.0052E-02 (2001,035,0000) |
| 496 | -26.592 | -206.007 | 2.0861E-02 (2001,071,0000) | 1.4051E-02 (2001,007,0000) | 1.3839E-02 (2001,346,0000) | 9.8930E-03 (2001,035,0000) |
| 497 | -25.135 | -206.012 | 2.0756E-02 (2001,071,0000) | 1.3917E-02 (2001,007,0000) | 1.3694E-02 (2001,346,0000) | 9.7323E-03 (2001,035,0000) |
| 498 | -23.678 | -206.016 | 2.0645E-02 (2001,071,0000) | 1.3788E-02 (2001,007,0000) | 1.3547E-02 (2001,346,0000) | 9.5705E-03 (2001,035,0000) |
| 499 | -22.221 | -206.021 | 2.0521E-02 (2001,071,0000) | 1.3654E-02 (2001,007,0000) | 1.3400E-02 (2001,346,0000) | 9.4113E-03 (2001,035,0000) |
| 500 | -20.764 | -206.025 | 2.0394E-02 (2001,071,0000) | 1.3513E-02 (2001,007,0000) | 1.3252E-02 (2001,346,0000) | 9.2659E-03 (2001,035,0000) |
| 501 | -19.307 | -206.028 | 2.0253E-02 (2001,071,0000) | 1.3381E-02 (2001,007,0000) | 1.3096E-02 (2001,346,0000) | 9.0978E-03 (2001,035,0000) |
| 502 | -46.981 | -204.058 | 2.1696E-02 (2001,071,0000) | 1.6365E-02 (2001,346,0000) | 1.6356E-02 (2001,007,0000) | 1.2560E-02 (2001,056,0000) |
| 503 | -45.524 | -204.066 | 2.1646E-02 (2001,071,0000) | 1.6224E-02 (2001,007,0000) | 1.6222E-02 (2001,346,0000) | 1.2374E-02 (2001,035,0000) |
| 504 | -44.067 | -204.075 | 2.1595E-02 (2001,071,0000) | 1.6099E-02 (2001,007,0000) | 1.6077E-02 (2001,346,0000) | 1.2211E-02 (2001,035,0000) |
| 505 | -42.610 | -204.083 | 2.1544E-02 (2001,071,0000) | 1.5966E-02 (2001,007,0000) | 1.5935E-02 (2001,346,0000) | 1.2052E-02 (2001,035,0000) |
| 506 | -41.154 | -204.091 | 2.1491E-02 (2001,071,0000) | 1.5848E-02 (2001,007,0000) | 1.5784E-02 (2001,346,0000) | 1.1889E-02 (2001,035,0000) |
| 507 | -39.697 | -204.098 | 2.1439E-02 (2001,071,0000) | 1.5707E-02 (2001,007,0000) | 1.5635E-02 (2001,346,0000) | 1.1726E-02 (2001,035,0000) |
| 508 | -38.240 | -204.106 | 2.1382E-02 (2001,071,0000) | 1.5574E-02 (2001,007,0000) | 1.5483E-02 (2001,346,0000) | 1.1242E-02 (2001,035,0000) |
| 509 | -36.783 | -204.113 | 2.1317E-02 (2001,071,0000) | 1.5438E-02 (2001,007,0000) | 1.5333E-02 (2001,346,0000) | 1.1016E-02 (2001,035,0000) |
| 510 | -35.327 | -204.119 | 2.1266E-02 (2001,071,0000) | 1.5308E-02 (2001,007,0000) | 1.5182E-02 (2001,346,0000) | 1.1233E-02 (2001,035,0000) |
| 511 | -33.870 | -204.126 | 2.1204E-02 (2001,071,0000) | 1.5171E-02 (2001,007,0000) | 1.5030E-02 (2001,346,0000) | 1.1063E-02 (2001,035,0000) |
| 512 | -32.413 | -204.132 | 2.1138E-02 (2001,071,0000) | 1.5032E-02 (2001,007,0000) | 1.4874E-02 (2001,346,0000) | 1.0899E-02 (2001,035,0000) |
| 513 | -30.956 | -204.138 | 2.1070E-02 (2001,071,0000) | 1.4895E-02 (2001,007,0000) | 1.4718E-02 (2001,346,0000) | 1.0725E-02 (2001,035,0000) |
| 514 | -29.500 | -204.144 | 2.0989E-02 (2001,071,0000) | 1.4758E-02 (2001,007,0000) | 1.4565E-02 (2001,346,0000) | 1.0549E-02 (2001,035,0000) |
| 515 | -28.043 | -204.149 | 2.0903E-02 (2001,071,0000) | 1.4615E-02 (2001,007,0000) | 1.4408E-02 (2001,346,0000) | 1.0373E-02 (2001,035,0000) |
| 516 | -26.586 | -204.154 | 2.0806E-02 (2001,071,0000) | 1.4476E-02 (2001,007,0000) | 1.4249E-02 (2001,346,0000) | 1.0204E-02 (2001,035,0000) |
| 517 | -25.129 | -204.159 | 2.0703E-02 (2001,071,0000) | 1.4336E-02 (2001,007,0000) | 1.4094E-02 (2001,346,0000) | 1.0036E-02 (2001,035,0000) |
| 518 | -23.673 | -204.164 | 2.0589E-02 (2001,071,0000) | 1.4190E-02 (2001,007,0000) | 1.3934E-02 (2001,346,0000) | 9.8617E-03 (2001,035,0000) |
| 519 | -22.216 | -204.168 | 2.0463E-02 (2001,071,0000) | 1.4052E-02 (2001,007,0000) | 1.3773E-02 (2001,346,0000) | 9.6874E-03 (2001,035,0000) |
| 520 | -20.759 | -204.172 | 2.0334E-02 (2001,071,0000) | 1.3905E-02 (2001,007,0000) | 1.3612E-02 (2001,346,0000) | 9.5229E-03 (2001,035,0000) |
| 521 | -19.302 | -204.176 | 2.0193E-02 (2001,071,0000) | 1.3758E-02 (2001,007,0000) | 1.3449E-02 (2001,346,0000) | 9.3555E-03 (2001,035,0000) |
| 522 | -46.969 | -202.205 | 2.1619E-02 (2001,071,0000) | 1.7056E-02 (2001,346,0000) | 1.6967E-02 (2001,007,0000) | 1.3450E-02 (2001,056,0000) |
| 523 | -45.513 | -202.214 | 2.1568E-02 (2001,071,0000) | 1.6888E-02 (2001,346,0000) | 1.6835E-02 (2001,007,0000) | 1.3233E-02 (2001,056,0000) |
| 524 | -44.057 | -202.222 | 2.1519E-02 (2001,071,0000) | 1.6721E-02 (2001,346,0000) | 1.6703E-02 (2001,007,0000) | 1.3025E-02 (2001,056,0000) |
| 525 | -42.600 | -202.230 | 2.1474E-02 (2001,071,0000) | 1.6548E-02 (2001,007,0000) | 1.6547E-02 (2001,346,0000) | 1.2844E-02 (2001,056,0000) |
| 526 | -41.144 | -202.238 | 2.1418E-02 (2001,071,0000) | 1.6398E-02 (2001,007,0000) | 1.6378E-02 (2001,346,0000) | 1.2628E-02 (2001,056,0000) |
| 527 | -39.687 | -202.246 | 2.1366E-02 (2001,071,0000) | 1.6262E-02 (2001,007,0000) | 1.6205E-02 (2001,346,0000) | 1.2402E-02 (2001,056,0000) |
| 528 | -38.231 | -202.253 | 2.1310E-02 (2001,071,0000) | 1.6116E-02 (2001,007,0000) | 1.6031E-02 (2001,346,0000) | 1.2176E-02 (2001,056,0000) |
| 529 | -36.775 | -202.260 | 2.1251E-02 (2001,071,0000) | 1.5963E-02 (2001,007,0000) | 1.5862E-02 (2001,346,0000) | 1.1956E-02 (2001,056,0000) |
| 530 | -35.318 | -202.267 | 2.1176E-02 (2001,071,0000) | 1.5805E-02 (2001,007,0000) | 1.5687E-02 (2001,346,0000) | 1.1200E-02 (2001,035,0000) |
| 531 | -33.862 | -202.273 | 2.1126E-02 (2001,071,0000) | 1.5670E-02 (2001,007,0000) | 1.5516E-02 (2001,346,0000) | 1.1439E-02 (2001,035,0000) |
| 532 | -32.405 | -202.279 | 2.1062E-02 (2001,071,0000) | 1.5512E-02 (2001,007,0000) | 1.5345E-02 (2001,346,0000) | 1.1326E-02 (2001,056,0000) |
| 533 | -30.949 | -202.285 | 2.0991E-02 (2001,071,0000) | 1.5362E-02 (2001,007,0000) | 1.5172E-02 (2001,346,0000) | 1.1123E-02 (2001,056,0000) |
| 534 | -29.493 | -202.291 | 2.0911E-02 (2001,071,0000) | 1.5211E-02 (2001,007,0000) | 1.5004E-02 (2001,346,0000) | 1.0917E-02 (2001,056,0000) |
| 535 | -28.036 | -202.296 | 2.0824E-02 (2001,071,0000) | 1.5054E-02 (2001,007,0000) | 1.4830E-02 (2001,346,0000) | 1.0705E-02 (2001,056,0000) |
| 536 | -26.580 | -202.301 | 2.0727E-02 (2001,071,0000) | 1.4907E-02 (2001,007,0000) | 1.4657E-02 (2001,346,0000) | 1.0521E-02 (2001,056,0000) |
| 537 | -25.123 | -202.306 | 2.0622E-02 (2001,071,0000) | 1.4758E-02 (2001,007,0000) | 1.4486E-02 (2001,346,0000) | 1.0337E-02 (2001,056,0000) |
| 538 | -23.667 | -202.311 | 2.0507E-02 (2001,071,0000) | 1.4601E-02 (2001,007,0000) | 1.4318E-02 (2001,346,0000) | 1.0149E-02 (2001,035,0000) |
| 539 | -22.210 | -202.315 | 2.0381E-02 (2001,071,0000) | 1.4446E-02 (2001,007,0000) | 1.4138E-02 (2001,346,0000) | 9.9709E-03 (2001,056,0000) |
| 540 | -46.958 | -200.352 | 2.1508E-02 (2001,071,0000) | 1.7754E-02 (2001,346,0000) | 1.7602E-02 (2001,007,0000) | 1.4316E-02 (2001,056,0000) |
| 541 | -45.502 | -200.361 | 2.1462E-02 (2001,071,0000) | 1.7555E-02 (2001,346,0000) | 1.7456E-02 (2001,007,0000) | 1.4019E-02 (2001,056,0000) |
| 542 | -44.046 | -200.369 | 2.1415E-02 (2001,071,0000) | 1.7362E-02 (2001,346,0000) | 1.7304E-02 (2001,007,0000) | 1.3822E-02 (2001,056,0000) |
| 543 | -42.590 | -200.377 | 2.1368E-02 (2001,071,0000) | 1.7163E-02 (2001,346,0000) | 1.7153E-02 (2001,007,0000) | 1.3601E-02 (2001,056,0000) |
| 544 | -41.134 | -200.385 | 2.1315E-02 (2001,071,0000) | 1.6983E-02 (2001,007,0000) | 1.6966E-02 (2001,346,0000) | 1.3379E-02 (2001,056,0000) |
| 545 | -39.678 | -200.393 | 2.1263E-02 (2001,071,0000) | 1.6825E-02 (2001,007,0000) | 1.6773E-02 (2001,346,0000) | 1.3133E-02 (2001,056,0000) |
| 546 | -38.222 | -200.400 | 2.1207E-02 (2001,071,0000) | 1.6667E-02 (2001,007,0000) | 1.6572E-02 (2001,346,0000) | 1.2894E-02 (2001,056,0000) |
| 547 | -36.766 | -200.407 | 2.1148E-02 (2001,071,0000) | 1.6503E-02 (2001,007,0000) | 1.6383E-02 (2001,346,0000) | 1.2677E-02 (2001,056,0000) |
| 548 | -35.310 | -200.414 | 2.1085E-02 (2001,071,0000) | 1.6329E-02 (2001,007,0000) | 1.6190E-02 (2001,346,0000) | 1.1640E-02 (2001,035,0000) |
| 549 | -33.854 | -200.420 | 2.1022E-02 (2001,071,0000) | 1.6167E-02 (2001,007,0000) | 1.5995E-02 (2001,346,0000) | 1.2222E-02 (2001,056,0000) |
| 550 | -32.398 | -200.427 | 2.0958E-02 (2001,071,0000) | 1.6009E-02 (2001,007,0000) | 1.5810E-02 (2001,346,0000) | 1.1704E-02 (2001,056,0000) |
| 551 | -30.942 | -200.432 | 2.0886E-02 (2001,071,0000) | 1.5839E-02 (2001,007,0000) | 1.5618E-02 (2001,346,0000) | 1.1804E-02 (2001,056,0000) |
| 552 | -29.486 | -200.438 | 2.0806E-02 (2001,071,0000) | 1.5677E-02 (2001,007,0000) | 1.5430E-02 (2001,346,0000) | 1.1588E-02 (2001,056,0000) |
| 553 | -28.030 | -200.444 | 2.0720E-02 (2001,071,0000) | 1.5516E-02 (2001,007,0000) | 1.5242E-02 (2001,346,0000) | 1.1117E-02 (2001,056,0000) |
| 554 | -26.573 | -200.449 | 2.0620E-02 (2001,071,0000) | 1.5352E-02 (2001,007,0000) | 1.5052E-02 (2001,346,0000) | 1.1164E-02 (2001,056,0000) |
| 555 | -25.117 | -200.453 | 2.0515E-02 (2001,071,0000) | 1.5186E-02 (2001,007,0000) | 1.4869E-02 (2001,346,0000) | 1.0951E-02 (2001,056,0000) |
| 556 | -23.661 | -200.458 | 2.0399E-02 (2001,071,0000) | 1.5028E-02 (2001,007,0000) | 1.4684E-02 (2001,346,0000) | 1.0768E-02 (2001,056,0000) |
| 557 | -46.947 | -198.500 | 2.1367E-02 (2001,071,0000) | 1.8450E-02 (2001,346,0000) | 1.8287E-02 (2001,007,0000) | 1.5047E-02 (2001,056,0000) |
| 558 | -45.491 | -198.508 | 2.1323E-02 (2001,071,0000) | 1.8223E-02 (2001,346,0000) | 1.8106E-02 (2001,007,0000) | 1.4738E-02 (2001,056,0000) |
| 559 | -44.036 | -198.517 | 2.1282E-02 (2001,071,0000) | 1.8001E-02 (2001,346,0000) | 1.7932E-02 (2001,007,0000) | 1.4478E-02 (2001,056,0000) |
| 560 | -42.580 | -198.525 | 2.1234E-02 (2001,071,0000) | 1.7771E-02 (2001,346,0000) | 1.7760E-02 (2001,007,0000) | 1.4245E-02 (2001,056,0000) |
| 561 | -41.124 | -198.533 | 2.1184E-02 (2001,071,0000) | 1.7593E-02 (2001,007,0000) | 1.7551E-02 (2001,346,0000) | 1.4012E-02 (2001,056,0000) |
| 562 | -39.669 | -198.540 | 2.1131E-02 (2001,071,0000) | 1.7409E-02 (2001,007,0000) | 1.7329E-02 (2001,346,0000) | 1.3779E-02 (2001,056,0000) |
| 563 | -38.213 | -198.547 | 2.1077E-02 (2001,071,0000) | 1.7232E-02 (2001,007,0000) | 1.7110E-02 (2001,346,0000) | 1.3528E-02 (2001,056,0000) |
| 564 | -36.757 | -198.554 | 2.1019E-02 (2001,071,0000) | 1.7057E-02 (2001,007,0000) | 1.6892E-02 (2001,346,0000) | 1.2569E-02 (2001,056,0000) |
| 565 | -35.301 | -198.561 | 2.0957E-02 (2001,071,0000) | 1.6876E-02 (2001,007,0000) | 1.6679E-02 (2001,346,0000) | 1.2394E-02 (2001,056,0000) |
| 566 | -33.846 | -198.568 | 2.0893E-02 (2001,071,0000) | 1.6688E-02 (2001,007,0000) | 1.6469E-02 (2001,346,0000) | 1.2827E-02 (2001,056,0000) |
| 567 | -32.390 | -198.574 | 2.0827E-02 (2001,071,0000) | 1.6508E-02 (2001,007,0000) | 1.6259E-02 (2001,346,0000) | 1.2621E-02 (2001,056,0000) |
| 568 | -30.934 | -198.580 | 2.0741E-02 (2001,071,0000) | 1.6335E-02 (2001,007,0000) | 1.6053E-02 (2001,346,0000) | 1.1289E-02 (2001,035,0000) |
| 569 | -29.479 | -198.585 | 2.0664E-02 (2001,071,0000) | 1.6156E-02 (2001,007,0000) | 1.5844E-02 (2001,346,0000) | 1.1290E-02 (2001,056,0000) |
| 570 | -28.023 | -198.591 | 2.0588E-02 (2001,071,0000) | 1.5979E-02 (2001,007,0000) | 1.5642E-02 (2001,346,0000) | 1.1445E-02 (2001,056,0000) |
| 571 | -26.567 | -198.596 | 2.0489E-02 (2001,071,0000) | 1.5802E-02 (2001,007,0000) | 1.5439E-02 (2001,346,0000) | 1.1740E-02 (2001,056,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 572 | -46.936 | -196.647 | 2.1194E-02 (2001,071,0000) | 1.9139E-02 (2001,346,0000) | 1.8963E-02 (2001,007,0000) | 1.5494E-02 (2001,056,0000) |
| 573 | -45.481 | -196.656 | 2.1157E-02 (2001,071,0000) | 1.8881E-02 (2001,346,0000) | 1.8781E-02 (2001,007,0000) | 1.5294E-02 (2001,056,0000) |
| 574 | -44.025 | -196.664 | 2.1117E-02 (2001,071,0000) | 1.8624E-02 (2001,346,0000) | 1.8579E-02 (2001,007,0000) | 1.4988E-02 (2001,056,0000) |
| 575 | -42.570 | -196.672 | 2.1072E-02 (2001,071,0000) | 1.8386E-02 (2001,007,0000) | 1.8372E-02 (2001,346,0000) | 1.4734E-02 (2001,056,0000) |
| 576 | -41.115 | -196.680 | 2.1023E-02 (2001,071,0000) | 1.8197E-02 (2001,007,0000) | 1.8120E-02 (2001,346,0000) | 1.4510E-02 (2001,056,0000) |
| 577 | -39.659 | -196.687 | 2.0974E-02 (2001,071,0000) | 1.8012E-02 (2001,007,0000) | 1.7876E-02 (2001,346,0000) | 1.4257E-02 (2001,056,0000) |
| 578 | -38.204 | -196.695 | 2.0918E-02 (2001,071,0000) | 1.7815E-02 (2001,007,0000) | 1.7631E-02 (2001,346,0000) | 1.4035E-02 (2001,056,0000) |
| 579 | -36.748 | -196.702 | 2.0861E-02 (2001,071,0000) | 1.7622E-02 (2001,007,0000) | 1.7393E-02 (2001,346,0000) | 1.3791E-02 (2001,056,0000) |
| 580 | -35.293 | -196.708 | 2.0789E-02 (2001,071,0000) | 1.7418E-02 (2001,007,0000) | 1.7155E-02 (2001,346,0000) | 1.2536E-02 (2001,056,0000) |
| 581 | -33.838 | -196.715 | 2.0726E-02 (2001,071,0000) | 1.7230E-02 (2001,007,0000) | 1.6925E-02 (2001,346,0000) | 1.2335E-02 (2001,056,0000) |
| 582 | -32.382 | -196.721 | 2.0669E-02 (2001,071,0000) | 1.7030E-02 (2001,007,0000) | 1.6697E-02 (2001,346,0000) | 1.3110E-02 (2001,056,0000) |
| 583 | -30.927 | -196.727 | 2.0594E-02 (2001,071,0000) | 1.6834E-02 (2001,007,0000) | 1.6473E-02 (2001,346,0000) | 1.2874E-02 (2001,056,0000) |
| 584 | -29.472 | -196.733 | 2.0519E-02 (2001,071,0000) | 1.6644E-02 (2001,007,0000) | 1.6251E-02 (2001,346,0000) | 1.2652E-02 (2001,056,0000) |
| 585 | -28.016 | -196.738 | 2.0421E-02 (2001,071,0000) | 1.6452E-02 (2001,007,0000) | 1.6030E-02 (2001,346,0000) | 1.1544E-02 (2001,056,0000) |
| 586 | -26.561 | -196.743 | 2.0331E-02 (2001,071,0000) | 1.6255E-02 (2001,007,0000) | 1.5812E-02 (2001,346,0000) | 1.1446E-02 (2001,056,0000) |
| 587 | -46.925 | -194.794 | 2.0991E-02 (2001,071,0000) | 1.9812E-02 (2001,346,0000) | 1.9672E-02 (2001,007,0000) | 1.5787E-02 (2001,056,0000) |
| 588 | -45.470 | -194.803 | 2.0958E-02 (2001,071,0000) | 1.9517E-02 (2001,346,0000) | 1.9465E-02 (2001,007,0000) | 1.5567E-02 (2001,056,0000) |
| 589 | -44.015 | -194.811 | 2.0923E-02 (2001,071,0000) | 1.9251E-02 (2001,007,0000) | 1.9239E-02 (2001,346,0000) | 1.5338E-02 (2001,056,0000) |
| 590 | -42.560 | -194.819 | 2.0881E-02 (2001,071,0000) | 1.9034E-02 (2001,007,0000) | 1.8953E-02 (2001,346,0000) | 1.4956E-02 (2001,056,0000) |
| 591 | -41.105 | -194.827 | 2.0838E-02 (2001,071,0000) | 1.8820E-02 (2001,007,0000) | 1.8675E-02 (2001,346,0000) | 1.4859E-02 (2001,056,0000) |
| 592 | -39.650 | -194.835 | 2.0790E-02 (2001,071,0000) | 1.8610E-02 (2001,007,0000) | 1.8408E-02 (2001,346,0000) | 1.4652E-02 (2001,056,0000) |
| 593 | -38.195 | -194.842 | 2.0735E-02 (2001,071,0000) | 1.8406E-02 (2001,007,0000) | 1.8135E-02 (2001,346,0000) | 1.4025E-02 (2001,056,0000) |
| 594 | -36.740 | -194.849 | 2.0677E-02 (2001,071,0000) | 1.8186E-02 (2001,007,0000) | 1.7874E-02 (2001,346,0000) | 1.3139E-02 (2001,056,0000) |
| 595 | -35.285 | -194.856 | 2.0618E-02 (2001,071,0000) | 1.7979E-02 (2001,007,0000) | 1.7616E-02 (2001,346,0000) | 1.3302E-02 (2001,056,0000) |
| 596 | -33.830 | -194.862 | 2.0555E-02 (2001,071,0000) | 1.7769E-02 (2001,007,0000) | 1.7365E-02 (2001,346,0000) | 1.3480E-02 (2001,056,0000) |
| 597 | -32.375 | -194.868 | 2.0488E-02 (2001,071,0000) | 1.7562E-02 (2001,007,0000) | 1.7120E-02 (2001,346,0000) | 1.3485E-02 (2001,056,0000) |
| 598 | -30.920 | -194.874 | 2.0414E-02 (2001,071,0000) | 1.7351E-02 (2001,007,0000) | 1.6876E-02 (2001,346,0000) | 1.3263E-02 (2001,056,0000) |
| 599 | -29.465 | -194.880 | 2.0328E-02 (2001,071,0000) | 1.7134E-02 (2001,007,0000) | 1.6637E-02 (2001,346,0000) | 1.1923E-02 (2001,056,0000) |
| 600 | -28.009 | -194.885 | 2.0240E-02 (2001,071,0000) | 1.6932E-02 (2001,007,0000) | 1.6398E-02 (2001,346,0000) | 1.1797E-02 (2001,056,0000) |
| 601 | -26.554 | -194.890 | 2.0154E-02 (2001,071,0000) | 1.6727E-02 (2001,007,0000) | 1.6170E-02 (2001,346,0000) | 1.2613E-02 (2001,056,0000) |
| 602 | -45.459 | -192.950 | 2.0735E-02 (2001,071,0000) | 2.0160E-02 (2001,007,0000) | 2.0138E-02 (2001,346,0000) | 1.5687E-02 (2001,056,0000) |
| 603 | -44.004 | -192.959 | 2.0703E-02 (2001,071,0000) | 1.9926E-02 (2001,007,0000) | 1.9824E-02 (2001,346,0000) | 1.5270E-02 (2001,056,0000) |
| 604 | -42.550 | -192.967 | 2.0664E-02 (2001,071,0000) | 1.9685E-02 (2001,007,0000) | 1.9514E-02 (2001,346,0000) | 1.4826E-02 (2001,056,0000) |
| 605 | -41.095 | -192.975 | 2.0623E-02 (2001,071,0000) | 1.9455E-02 (2001,007,0000) | 1.9208E-02 (2001,346,0000) | 1.4561E-02 (2001,056,0000) |
| 606 | -39.640 | -192.982 | 2.0579E-02 (2001,071,0000) | 1.9226E-02 (2001,007,0000) | 1.8915E-02 (2001,346,0000) | 1.4800E-02 (2001,056,0000) |
| 607 | -38.186 | -192.989 | 2.0525E-02 (2001,071,0000) | 1.8979E-02 (2001,007,0000) | 1.8616E-02 (2001,346,0000) | 1.3597E-02 (2001,035,0000) |
| 608 | -36.731 | -192.996 | 2.0464E-02 (2001,071,0000) | 1.8762E-02 (2001,007,0000) | 1.8340E-02 (2001,346,0000) | 1.3365E-02 (2001,035,0000) |
| 609 | -35.276 | -193.003 | 2.0404E-02 (2001,071,0000) | 1.8535E-02 (2001,007,0000) | 1.8058E-02 (2001,346,0000) | 1.3132E-02 (2001,035,0000) |
| 610 | -33.822 | -193.010 | 2.0349E-02 (2001,071,0000) | 1.8317E-02 (2001,007,0000) | 1.7785E-02 (2001,346,0000) | 1.3827E-02 (2001,056,0000) |
| 611 | -32.367 | -193.016 | 2.0283E-02 (2001,071,0000) | 1.8087E-02 (2001,007,0000) | 1.7526E-02 (2001,346,0000) | 1.3735E-02 (2001,056,0000) |
| 612 | -30.912 | -193.022 | 2.0210E-02 (2001,071,0000) | 1.7868E-02 (2001,007,0000) | 1.7260E-02 (2001,346,0000) | 1.3525E-02 (2001,056,0000) |
| 613 | -29.457 | -193.027 | 2.0133E-02 (2001,071,0000) | 1.7639E-02 (2001,007,0000) | 1.7006E-02 (2001,346,0000) | 1.3209E-02 (2001,056,0000) |
| 614 | -28.003 | -193.033 | 2.0046E-02 (2001,071,0000) | 1.7411E-02 (2001,007,0000) | 1.6754E-02 (2001,346,0000) | 1.3087E-02 (2001,056,0000) |
| 615 | -26.548 | -193.038 | 1.9946E-02 (2001,071,0000) | 1.7193E-02 (2001,007,0000) | 1.6505E-02 (2001,346,0000) | 1.1962E-02 (2001,056,0000) |
| 616 | -25.093 | -193.043 | 1.9850E-02 (2001,071,0000) | 1.6977E-02 (2001,007,0000) | 1.6263E-02 (2001,346,0000) | 1.2608E-02 (2001,056,0000) |
| 617 | -41.085 | -191.122 | 2.0386E-02 (2001,071,0000) | 2.0101E-02 (2001,007,0000) | 1.9718E-02 (2001,346,0000) | 1.5009E-02 (2001,056,0000) |
| 618 | -39.631 | -191.129 | 2.0346E-02 (2001,071,0000) | 1.9853E-02 (2001,007,0000) | 1.9392E-02 (2001,346,0000) | 1.4343E-02 (2001,035,0000) |
| 619 | -38.176 | -191.137 | 2.0298E-02 (2001,071,0000) | 1.9608E-02 (2001,007,0000) | 1.9084E-02 (2001,346,0000) | 1.4424E-02 (2001,035,0000) |
| 620 | -36.722 | -191.144 | 2.0245E-02 (2001,071,0000) | 1.9352E-02 (2001,007,0000) | 1.8778E-02 (2001,346,0000) | 1.4143E-02 (2001,035,0000) |
| 621 | -35.268 | -191.150 | 2.0187E-02 (2001,071,0000) | 1.9113E-02 (2001,007,0000) | 1.8481E-02 (2001,346,0000) | 1.4212E-02 (2001,056,0000) |
| 622 | -33.813 | -191.157 | 2.0124E-02 (2001,071,0000) | 1.8875E-02 (2001,007,0000) | 1.8189E-02 (2001,346,0000) | 1.4018E-02 (2001,056,0000) |
| 623 | -32.359 | -191.163 | 2.0057E-02 (2001,071,0000) | 1.8622E-02 (2001,007,0000) | 1.7907E-02 (2001,346,0000) | 1.3839E-02 (2001,056,0000) |
| 624 | -30.905 | -191.169 | 1.9984E-02 (2001,071,0000) | 1.8383E-02 (2001,007,0000) | 1.7627E-02 (2001,346,0000) | 1.3637E-02 (2001,056,0000) |
| 625 | -29.450 | -191.175 | 1.9906E-02 (2001,071,0000) | 1.8148E-02 (2001,007,0000) | 1.7354E-02 (2001,346,0000) | 1.3412E-02 (2001,056,0000) |
| 626 | -27.996 | -191.180 | 1.9823E-02 (2001,071,0000) | 1.7901E-02 (2001,007,0000) | 1.7088E-02 (2001,346,0000) | 1.3221E-02 (2001,056,0000) |
| 627 | -26.542 | -191.185 | 1.9731E-02 (2001,071,0000) | 1.7663E-02 (2001,007,0000) | 1.6825E-02 (2001,346,0000) | 1.2735E-02 (2001,056,0000) |
| 628 | -25.087 | -191.190 | 1.9626E-02 (2001,071,0000) | 1.7434E-02 (2001,007,0000) | 1.6568E-02 (2001,346,0000) | 1.2846E-02 (2001,056,0000) |
| 629 | -39.621 | -189.277 | 2.0456E-02 (2001,007,0000) | 2.0085E-02 (2001,071,0000) | 1.9849E-02 (2001,346,0000) | 1.4682E-02 (2001,035,0000) |
| 630 | -38.167 | -189.284 | 2.0220E-02 (2001,007,0000) | 2.0045E-02 (2001,071,0000) | 1.9519E-02 (2001,346,0000) | 1.4826E-02 (2001,035,0000) |
| 631 | -36.713 | -189.291 | 1.9996E-02 (2001,071,0000) | 1.9957E-02 (2001,007,0000) | 1.9192E-02 (2001,346,0000) | 1.4543E-02 (2001,035,0000) |
| 632 | -35.259 | -189.298 | 1.9940E-02 (2001,071,0000) | 1.9677E-02 (2001,007,0000) | 1.8871E-02 (2001,346,0000) | 1.4232E-02 (2001,035,0000) |
| 633 | -33.805 | -189.304 | 1.9877E-02 (2001,071,0000) | 1.9427E-02 (2001,007,0000) | 1.8565E-02 (2001,346,0000) | 1.3953E-02 (2001,056,0000) |
| 634 | -32.351 | -189.310 | 1.9811E-02 (2001,071,0000) | 1.9175E-02 (2001,007,0000) | 1.8265E-02 (2001,346,0000) | 1.3795E-02 (2001,056,0000) |
| 635 | -30.897 | -189.316 | 1.9740E-02 (2001,071,0000) | 1.8907E-02 (2001,007,0000) | 1.7966E-02 (2001,346,0000) | 1.3575E-02 (2001,056,0000) |
| 636 | -29.443 | -189.322 | 1.9663E-02 (2001,071,0000) | 1.8654E-02 (2001,007,0000) | 1.7679E-02 (2001,346,0000) | 1.3394E-02 (2001,056,0000) |
| 637 | -27.989 | -189.327 | 1.9578E-02 (2001,071,0000) | 1.8397E-02 (2001,007,0000) | 1.7399E-02 (2001,346,0000) | 1.2582E-02 (2001,056,0000) |
| 638 | -26.535 | -189.332 | 1.9487E-02 (2001,071,0000) | 1.8140E-02 (2001,007,0000) | 1.7120E-02 (2001,346,0000) | 1.2752E-02 (2001,056,0000) |
| 639 | -25.081 | -189.337 | 1.9378E-02 (2001,071,0000) | 1.7886E-02 (2001,007,0000) | 1.6847E-02 (2001,346,0000) | 1.1940E-02 (2001,035,0000) |
| 640 | -23.628 | -189.342 | 1.9279E-02 (2001,071,0000) | 1.7647E-02 (2001,007,0000) | 1.6584E-02 (2001,346,0000) | 1.2461E-02 (2001,056,0000) |
| 641 | -22.173 | -189.346 | 1.9156E-02 (2001,071,0000) | 1.7394E-02 (2001,007,0000) | 1.6323E-02 (2001,346,0000) | 1.2301E-02 (2001,056,0000) |
| 642 | -41.066 | -187.417 | 2.1430E-02 (2001,007,0000) | 2.0644E-02 (2001,346,0000) | 1.9853E-02 (2001,071,0000) | 1.5830E-02 (2001,035,0000) |
| 643 | -39.612 | -187.424 | 2.1106E-02 (2001,007,0000) | 2.0274E-02 (2001,346,0000) | 1.9811E-02 (2001,071,0000) | 1.5104E-02 (2001,035,0000) |
| 644 | -38.158 | -187.431 | 2.0832E-02 (2001,007,0000) | 1.9919E-02 (2001,346,0000) | 1.9772E-02 (2001,071,0000) | 1.5212E-02 (2001,035,0000) |
| 645 | -36.705 | -187.438 | 2.0551E-02 (2001,007,0000) | 1.9725E-02 (2001,071,0000) | 1.9578E-02 (2001,346,0000) | 1.4905E-02 (2001,035,0000) |
| 646 | -35.251 | -187.445 | 2.0263E-02 (2001,007,0000) | 1.9673E-02 (2001,071,0000) | 1.9240E-02 (2001,346,0000) | 1.4584E-02 (2001,035,0000) |
| 647 | -33.797 | -187.452 | 1.9980E-02 (2001,007,0000) | 1.9613E-02 (2001,071,0000) | 1.8912E-02 (2001,346,0000) | 1.4276E-02 (2001,035,0000) |
| 648 | -32.344 | -187.458 | 1.9709E-02 (2001,007,0000) | 1.9547E-02 (2001,071,0000) | 1.8596E-02 (2001,346,0000) | 1.3961E-02 (2001,035,0000) |
| 649 | -30.890 | -187.464 | 1.9477E-02 (2001,071,0000) | 1.9440E-02 (2001,007,0000) | 1.8284E-02 (2001,346,0000) | 1.3660E-02 (2001,035,0000) |
| 650 | -29.436 | -187.469 | 1.9398E-02 (2001,071,0000) | 1.9154E-02 (2001,007,0000) | 1.7982E-02 (2001,346,0000) | 1.3313E-02 (2001,035,0000) |
| 651 | -27.983 | -187.475 | 1.9316E-02 (2001,071,0000) | 1.8888E-02 (2001,007,0000) | 1.7688E-02 (2001,346,0000) | 1.3089E-02 (2001,056,0000) |
| 652 | -26.529 | -187.480 | 1.9226E-02 (2001,071,0000) | 1.8622E-02 (2001,007,0000) | 1.7394E-02 (2001,346,0000) | 1.2945E-02 (2001,056,0000) |
| 653 | -25.076 | -187.485 | 1.9128E-02 (2001,071,0000) | 1.8350E-02 (2001,007,0000) | 1.7113E-02 (2001,346,0000) | 1.2793E-02 (2001,056,0000) |
| 654 | -23.622 | -187.489 | 1.9021E-02 (2001,071,0000) | 1.8090E-02 (2001,007,0000) | 1.6835E-02 (2001,346,0000) | 1.2390E-02 (2001,056,0000) |
| 655 | -22.168 | -187.494 | 1.8900E-02 (2001,071,0000) | 1.7833E-02 (2001,007,0000) | 1.6561E-02 (2001,346,0000) | 1.2196E-02 (2001,056,0000) |
| 656 | -41.056 | -185.564 | 2.2046E-02 (2001,007,0000) | 2.1048E-02 (2001,346,0000) | 1.9543E-02 (2001,071,0000) | 1.5788E-02 (2001,035,0000) |
| 657 | -39.602 | -185.572 | 2.1763E-02 (2001,007,0000) | 2.0663E-02 (2001,346,0000) | 1.9520E-02 (2001,071,0000) | 1.5591E-02 (2001,035,0000) |
| 658 | -38.149 | -185.579 | 2.1454E-02 (2001,007,0000) | 2.0291E-02 (2001,346,0000) | 1.9483E-02 (2001,071,0000) | 1.5585E-02 (2001,035,0000) |
| 659 | -36.696 | -185.586 | 2.1144E-02 (2001,007,0000) | 1.9927E-02 (2001,346,0000) | 1.9438E-02 (2001,071,0000) | 1.5252E-02 (2001,035,0000) |
| 660 | -35.243 | -185.593 | 2.0840E-02 (2001,007,0000) | 1.9578E-02 (2001,346,0000) | 1.9384E-02 (2001,071,0000) | 1.4930E-02 (2001,035,0000) |
| 661 | -33.789 | -185.599 | 2.0539E-02 (2001,007,0000) | 1.9328E-02 (2001,071,0000) | 1.9230E-02 (2001,346,0000) | 1.4585E-02 (2001,035,0000) |
| 662 | -32.336 | -185.605 | 2.0243E-02 (2001,007,0000) | 1.9264E-02 (2001,071,0000) | 1.8904E-02 (2001,346,0000) | 1.4258E-02 (2001,035,0000) |
| 663 | -30.883 | -185.611 | 1.9951E-02 (2001,007,0000) | 1.9194E-02 (2001,071,0000) | 1.8577E-02 (2001,346,0000) | 1.3950E-02 (2001,035,0000) |
| 664 | -29.429 | -185.617 | 1.9671E-02 (2001,007,0000) | 1.9120E-02 (2001,071,0000) | 1.8256E-02 (2001,346,0000) | 1.3573E-02 (2001,035,0000) |
| 665 | -27.976 | -185.622 | 1.9372E-02 (2001,007,0000) | 1.9038E-02 (2001,071,0000) | 1.7950E-02 (2001,346,0000) | 1.3239E-02 (2001,035,0000) |
| 666 | -26.523 | -185.627 | 1.9092E-02 (2001,007,0000) | 1.8949E-02 (2001,071,0000) | 1.7644E-02 (2001,346,0000) | 1.2911E-02 (2001,035,0000) |
| 667 | -25.070 | -185.632 | 1.8853E-02 (2001,071,0000) | 1.8819E-02 (2001,007,0000) | 1.7352E-02 (2001,346,0000) | 1.2589E-02 (2001,035,0000) |
| 668 | -23.616 | -185.637 | 1.8741E-02 (2001,071,0000) | 1.8528E-02 (2001,007,0000) | 1.7059E-02 (2001,346,0000) | 1.2018E-02 (2001,035,0000) |
| 669 | -22.163 | -185.641 | 1.8629E-02 (2001,071,0000) | 1.8258E-02 (2001,007,0000) | 1.6774E-02 (2001,346,0000) | 1.1824E-02 (2001,035,0000) |
| 670 | -42.499 | -183.704 | 2.3067E-02 (2001,007,0000) | 2.1833E-02 (2001,346,0000) | 1.9257E-02 (2001,071,0000) | 1.6971E-02 (2001,035,0000) |
| 671 | -41.046 | -183.711 | 2.2698E-02 (2001,007,0000) | 2.1411E-02 (2001,346,0000) | 1.9226E-02 (2001,071,0000) | 1.6206E-02 (2001,035,0000) |
| 672 | -39.593 | -183.719 | 2.2374E-02 (2001,007,0000) | 2.1009E-02 (2001,346,0000) | 1.9208E-02 (2001,071,0000) | 1.5895E-02 (2001,035,0000) |
| 673 | -38.140 | -183.726 | 2.2040E-02 (2001,007,0000) | 2.0619E-02 (2001,346,0000) | 1.9165E-02 (2001,071,0000) | 1.5560E-02 (2001,035,0000) |
| 674 | -36.687 | -183.733 | 2.1731E-02 (2001,007,0000) | 2.0238E-02 (2001,346,0000) | 1.9133E-02 (2001,071,0000) | 1.5303E-02 (2001,035,0000) |
| 675 | -35.234 | -183.740 | 2.1414E-02 (2001,007,0000) | 1.9877E-02 (2001,346,0000) | 1.9084E-02 (2001,071,0000) | 1.5235E-02 (2001,035,0000) |
| 676 | -33.781 | -183.746 | 2.1099E-02 (2001,007,0000) | 1.9522E-02 (2001,346,0000) | 1.9027E-02 (2001,071,0000) | 1.4893E-02 (2001,035,0000) |
| 677 | -32.328 | -183.753 | 2.0780E-02 (2001,007,0000) | 1.9177E-02 (2001,346,0000) | 1.8965E-02 (2001,071,0000) | 1.4548E-02 (2001,035,0000) |
| 678 | -30.875 | -183.759 | 2.0467E-02 (2001,007,0000) | 1.8897E-02 (2001,071,0000) | 1.8836E-02 (2001,346,0000) | 1.4168E-02 (2001,035,0000) |
| 679 | -29.422 | -183.764 | 2.0166E-02 (2001,007,0000) | 1.8826E-02 (2001,071,0000) | 1.8503E-02 (2001,346,0000) | 1.3817E-02 (2001,035,0000) |
| 680 | -27.969 | -183.770 | 1.9864E-02 (2001,007,0000) | 1.8744E-02 (2001,071,0000) | 1.8186E-02 (2001,346,0000) | 1.3468E-02 (2001,035,0000) |
| 681 | -26.517 | -183.775 | 1.9558E-02 (2001,007,0000) | 1.8654E-02 (2001,071,0000) | 1.7868E-02 (2001,346,0000) | 1.3113E-02 (2001,035,0000) |
| 682 | -25.064 | -183.779 | 1.9267E-02 (2001,007,0000) | 1.8562E-02 (2001,071,0000) | 1.7561E-02 (2001,346,0000) | 1.2608E-02 (2001,035,0000) |
| 683 | -23.611 | -183.784 | 1.8983E-02 (2001,007,0000) | 1.8452E-02 (2001,071,0000) | 1.7264E-02 (2001,346,0000) | 1.2103E-02 (2001,035,0000) |
| 684 | -22.158 | -183.788 | 1.8681E-02 (2001,007,0000) | 1.8344E-02 (2001,071,0000) | 1.6968E-02 (2001,346,0000) | 1.2126E-02 (2001,035,0000) |
| 685 | -20.705 | -183.792 | 1.8398E-02 (2001,007,0000) | 1.8225E-02 (2001,071,0000) | 1.6688E-02 (2001,346,0000) | 1.1811E-02 (2001,035,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 686 | -45.394 | -181.835 | 2.4442E-02 (2001,007,0000) | 2.3072E-02 (2001,346,0000) | 1.8911E-02 (2001,071,0000) | 1.7602E-02 (2001,035,0000) |
| 687 | -43.941 | -181.843 | 2.4137E-02 (2001,007,0000) | 2.2613E-02 (2001,346,0000) | 1.8923E-02 (2001,071,0000) | 1.7379E-02 (2001,035,0000) |
| 688 | -42.489 | -181.851 | 2.3706E-02 (2001,007,0000) | 2.2167E-02 (2001,346,0000) | 1.8907E-02 (2001,071,0000) | 1.6955E-02 (2001,035,0000) |
| 689 | -41.036 | -181.859 | 2.3385E-02 (2001,007,0000) | 2.1739E-02 (2001,346,0000) | 1.8905E-02 (2001,071,0000) | 1.7017E-02 (2001,035,0000) |
| 690 | -39.584 | -181.866 | 2.3039E-02 (2001,007,0000) | 2.1323E-02 (2001,346,0000) | 1.8881E-02 (2001,071,0000) | 1.6655E-02 (2001,035,0000) |
| 691 | -38.131 | -181.874 | 2.2688E-02 (2001,007,0000) | 2.0917E-02 (2001,346,0000) | 1.8851E-02 (2001,071,0000) | 1.6277E-02 (2001,035,0000) |
| 692 | -36.678 | -181.881 | 2.2327E-02 (2001,007,0000) | 2.0520E-02 (2001,346,0000) | 1.8810E-02 (2001,071,0000) | 1.5871E-02 (2001,035,0000) |
| 693 | -35.226 | -181.887 | 2.1980E-02 (2001,007,0000) | 2.0142E-02 (2001,346,0000) | 1.8766E-02 (2001,071,0000) | 1.5529E-02 (2001,035,0000) |
| 694 | -33.773 | -181.894 | 2.1647E-02 (2001,007,0000) | 1.9773E-02 (2001,346,0000) | 1.8711E-02 (2001,071,0000) | 1.5153E-02 (2001,035,0000) |
| 695 | -32.321 | -181.900 | 2.1315E-02 (2001,007,0000) | 1.9416E-02 (2001,346,0000) | 1.8653E-02 (2001,071,0000) | 1.4823E-02 (2001,035,0000) |
| 696 | -30.868 | -181.906 | 2.0975E-02 (2001,007,0000) | 1.9069E-02 (2001,346,0000) | 1.8586E-02 (2001,071,0000) | 1.4416E-02 (2001,035,0000) |
| 697 | -29.415 | -181.912 | 2.0661E-02 (2001,007,0000) | 1.8721E-02 (2001,346,0000) | 1.8514E-02 (2001,071,0000) | 1.4038E-02 (2001,035,0000) |
| 698 | -27.963 | -181.917 | 2.0342E-02 (2001,007,0000) | 1.8435E-02 (2001,071,0000) | 1.8392E-02 (2001,346,0000) | 1.3675E-02 (2001,035,0000) |
| 699 | -26.510 | -181.922 | 2.0025E-02 (2001,007,0000) | 1.8350E-02 (2001,071,0000) | 1.8066E-02 (2001,346,0000) | 1.3307E-02 (2001,035,0000) |
| 700 | -25.058 | -181.927 | 1.9710E-02 (2001,007,0000) | 1.8253E-02 (2001,071,0000) | 1.7746E-02 (2001,346,0000) | 1.2754E-02 (2001,035,0000) |
| 701 | -23.605 | -181.931 | 1.9414E-02 (2001,007,0000) | 1.8154E-02 (2001,071,0000) | 1.7442E-02 (2001,346,0000) | 1.2456E-02 (2001,035,0000) |
| 702 | -22.152 | -181.936 | 1.9109E-02 (2001,007,0000) | 1.8045E-02 (2001,071,0000) | 1.7134E-02 (2001,346,0000) | 1.2133E-02 (2001,035,0000) |
| 703 | -20.700 | -181.940 | 1.8806E-02 (2001,007,0000) | 1.7924E-02 (2001,071,0000) | 1.6846E-02 (2001,346,0000) | 1.1784E-02 (2001,035,0000) |
| 704 | -46.835 | -179.973 | 2.5638E-02 (2001,007,0000) | 2.3875E-02 (2001,346,0000) | 1.8537E-02 (2001,071,0000) | 1.8523E-02 (2001,035,0000) |
| 705 | -45.383 | -179.982 | 2.5173E-02 (2001,007,0000) | 2.3391E-02 (2001,346,0000) | 1.8554E-02 (2001,071,0000) | 1.8094E-02 (2001,035,0000) |
| 706 | -43.931 | -179.990 | 2.4830E-02 (2001,007,0000) | 2.2915E-02 (2001,346,0000) | 1.8566E-02 (2001,071,0000) | 1.7815E-02 (2001,035,0000) |
| 707 | -42.479 | -179.999 | 2.4437E-02 (2001,007,0000) | 2.2457E-02 (2001,346,0000) | 1.8564E-02 (2001,071,0000) | 1.7466E-02 (2001,035,0000) |
| 708 | -41.026 | -180.006 | 2.4041E-02 (2001,007,0000) | 2.2011E-02 (2001,346,0000) | 1.8555E-02 (2001,071,0000) | 1.7094E-02 (2001,035,0000) |
| 709 | -39.574 | -180.014 | 2.3653E-02 (2001,007,0000) | 2.1583E-02 (2001,346,0000) | 1.8537E-02 (2001,071,0000) | 1.7000E-02 (2001,035,0000) |
| 710 | -38.122 | -180.021 | 2.3290E-02 (2001,007,0000) | 2.1171E-02 (2001,346,0000) | 1.8512E-02 (2001,071,0000) | 1.6604E-02 (2001,035,0000) |
| 711 | -36.670 | -180.028 | 2.2925E-02 (2001,007,0000) | 2.0763E-02 (2001,346,0000) | 1.8477E-02 (2001,071,0000) | 1.6212E-02 (2001,035,0000) |
| 712 | -35.217 | -180.035 | 2.2550E-02 (2001,007,0000) | 2.0372E-02 (2001,346,0000) | 1.8433E-02 (2001,071,0000) | 1.5822E-02 (2001,035,0000) |
| 713 | -33.765 | -180.041 | 2.2192E-02 (2001,007,0000) | 1.9995E-02 (2001,346,0000) | 1.8383E-02 (2001,071,0000) | 1.5431E-02 (2001,035,0000) |
| 714 | -32.313 | -180.048 | 2.1840E-02 (2001,007,0000) | 1.9621E-02 (2001,346,0000) | 1.8326E-02 (2001,071,0000) | 1.5044E-02 (2001,035,0000) |
| 715 | -30.861 | -180.053 | 2.1490E-02 (2001,007,0000) | 1.9265E-02 (2001,346,0000) | 1.8262E-02 (2001,071,0000) | 1.4633E-02 (2001,035,0000) |
| 716 | -29.408 | -180.059 | 2.1140E-02 (2001,007,0000) | 1.8908E-02 (2001,346,0000) | 1.8191E-02 (2001,071,0000) | 1.4242E-02 (2001,035,0000) |
| 717 | -27.956 | -180.064 | 2.0811E-02 (2001,007,0000) | 1.8568E-02 (2001,346,0000) | 1.8113E-02 (2001,071,0000) | 1.3860E-02 (2001,035,0000) |
| 718 | -26.504 | -180.069 | 2.0485E-02 (2001,007,0000) | 1.8238E-02 (2001,346,0000) | 1.8033E-02 (2001,071,0000) | 1.3483E-02 (2001,035,0000) |
| 719 | -25.052 | -180.074 | 2.0149E-02 (2001,007,0000) | 1.7938E-02 (2001,071,0000) | 1.7907E-02 (2001,346,0000) | 1.2964E-02 (2001,035,0000) |
| 720 | -23.599 | -180.079 | 1.9836E-02 (2001,007,0000) | 1.7839E-02 (2001,071,0000) | 1.7595E-02 (2001,346,0000) | 1.2615E-02 (2001,035,0000) |
| 721 | -22.147 | -180.083 | 1.9523E-02 (2001,007,0000) | 1.7735E-02 (2001,071,0000) | 1.7286E-02 (2001,346,0000) | 1.2406E-02 (2001,035,0000) |
| 722 | -20.695 | -180.087 | 1.9201E-02 (2001,007,0000) | 1.7618E-02 (2001,071,0000) | 1.6985E-02 (2001,346,0000) | 1.1940E-02 (2001,035,0000) |
| 723 | -46.824 | -178.121 | 2.6340E-02 (2001,007,0000) | 2.4145E-02 (2001,346,0000) | 1.8921E-02 (2001,035,0000) | 1.8150E-02 (2001,071,0000) |
| 724 | -45.372 | -178.130 | 2.5878E-02 (2001,007,0000) | 2.3644E-02 (2001,346,0000) | 1.8468E-02 (2001,035,0000) | 1.8167E-02 (2001,071,0000) |
| 725 | -43.920 | -178.138 | 2.5524E-02 (2001,007,0000) | 2.3165E-02 (2001,346,0000) | 1.8248E-02 (2001,035,0000) | 1.8190E-02 (2001,071,0000) |
| 726 | -42.469 | -178.146 | 2.5103E-02 (2001,007,0000) | 2.2692E-02 (2001,346,0000) | 1.8197E-02 (2001,071,0000) | 1.7860E-02 (2001,035,0000) |
| 727 | -41.017 | -178.154 | 2.4647E-02 (2001,007,0000) | 2.2239E-02 (2001,346,0000) | 1.8190E-02 (2001,071,0000) | 1.7379E-02 (2001,035,0000) |
| 728 | -39.565 | -178.161 | 2.4272E-02 (2001,007,0000) | 2.1805E-02 (2001,346,0000) | 1.8181E-02 (2001,071,0000) | 1.7329E-02 (2001,035,0000) |
| 729 | -38.113 | -178.169 | 2.3880E-02 (2001,007,0000) | 2.1375E-02 (2001,346,0000) | 1.8159E-02 (2001,071,0000) | 1.6912E-02 (2001,035,0000) |
| 730 | -36.661 | -178.176 | 2.3496E-02 (2001,007,0000) | 2.0959E-02 (2001,346,0000) | 1.8128E-02 (2001,071,0000) | 1.6488E-02 (2001,035,0000) |
| 731 | -35.209 | -178.182 | 2.3109E-02 (2001,007,0000) | 2.0568E-02 (2001,346,0000) | 1.8089E-02 (2001,071,0000) | 1.6093E-02 (2001,035,0000) |
| 732 | -33.757 | -178.189 | 2.2721E-02 (2001,007,0000) | 2.0178E-02 (2001,346,0000) | 1.8042E-02 (2001,071,0000) | 1.5683E-02 (2001,035,0000) |
| 733 | -32.305 | -178.195 | 2.2354E-02 (2001,007,0000) | 1.9797E-02 (2001,346,0000) | 1.7988E-02 (2001,071,0000) | 1.5264E-02 (2001,035,0000) |
| 734 | -30.853 | -178.201 | 2.1986E-02 (2001,007,0000) | 1.9432E-02 (2001,346,0000) | 1.7925E-02 (2001,071,0000) | 1.4851E-02 (2001,035,0000) |
| 735 | -29.401 | -178.206 | 2.1613E-02 (2001,007,0000) | 1.9066E-02 (2001,346,0000) | 1.7856E-02 (2001,071,0000) | 1.4436E-02 (2001,035,0000) |
| 736 | -27.949 | -178.212 | 2.1272E-02 (2001,007,0000) | 1.8718E-02 (2001,346,0000) | 1.7783E-02 (2001,071,0000) | 1.4046E-02 (2001,035,0000) |
| 737 | -26.498 | -178.217 | 2.0927E-02 (2001,007,0000) | 1.8382E-02 (2001,346,0000) | 1.7702E-02 (2001,071,0000) | 1.3643E-02 (2001,035,0000) |
| 738 | -25.046 | -178.222 | 2.0584E-02 (2001,007,0000) | 1.8041E-02 (2001,346,0000) | 1.7610E-02 (2001,071,0000) | 1.3115E-02 (2001,035,0000) |
| 739 | -23.594 | -178.226 | 2.0249E-02 (2001,007,0000) | 1.7725E-02 (2001,346,0000) | 1.7514E-02 (2001,071,0000) | 1.2894E-02 (2001,035,0000) |
| 740 | -22.142 | -178.231 | 1.9926E-02 (2001,007,0000) | 1.7413E-02 (2001,071,0000) | 1.7406E-02 (2001,346,0000) | 1.2399E-02 (2001,035,0000) |
| 741 | -20.690 | -178.235 | 1.9599E-02 (2001,007,0000) | 1.7298E-02 (2001,071,0000) | 1.7097E-02 (2001,346,0000) | 1.2023E-02 (2001,035,0000) |
| 742 | -46.813 | -176.268 | 2.7122E-02 (2001,007,0000) | 2.4353E-02 (2001,346,0000) | 1.9804E-02 (2001,035,0000) | 1.7752E-02 (2001,071,0000) |
| 743 | -45.361 | -176.277 | 2.6654E-02 (2001,007,0000) | 2.3843E-02 (2001,346,0000) | 1.9064E-02 (2001,035,0000) | 1.7782E-02 (2001,071,0000) |
| 744 | -43.910 | -176.285 | 2.6129E-02 (2001,007,0000) | 2.3354E-02 (2001,346,0000) | 1.8426E-02 (2001,035,0000) | 1.7797E-02 (2001,071,0000) |
| 745 | -42.458 | -176.293 | 2.5745E-02 (2001,007,0000) | 2.2879E-02 (2001,346,0000) | 1.8521E-02 (2001,035,0000) | 1.7817E-02 (2001,071,0000) |
| 746 | -41.007 | -176.301 | 2.5326E-02 (2001,007,0000) | 2.2420E-02 (2001,346,0000) | 1.8079E-02 (2001,035,0000) | 1.7820E-02 (2001,071,0000) |
| 747 | -39.555 | -176.309 | 2.4872E-02 (2001,007,0000) | 2.1973E-02 (2001,346,0000) | 1.7811E-02 (2001,071,0000) | 1.7632E-02 (2001,035,0000) |
| 748 | -38.104 | -176.316 | 2.4466E-02 (2001,007,0000) | 2.1546E-02 (2001,346,0000) | 1.7793E-02 (2001,071,0000) | 1.7199E-02 (2001,035,0000) |
| 749 | -36.652 | -176.323 | 2.4055E-02 (2001,007,0000) | 2.1118E-02 (2001,346,0000) | 1.7767E-02 (2001,071,0000) | 1.6753E-02 (2001,035,0000) |
| 750 | -35.201 | -176.330 | 2.3654E-02 (2001,007,0000) | 2.0717E-02 (2001,346,0000) | 1.7733E-02 (2001,071,0000) | 1.6321E-02 (2001,035,0000) |
| 751 | -33.749 | -176.336 | 2.3250E-02 (2001,007,0000) | 2.0322E-02 (2001,346,0000) | 1.7688E-02 (2001,071,0000) | 1.5890E-02 (2001,035,0000) |
| 752 | -32.297 | -176.342 | 2.2856E-02 (2001,007,0000) | 1.9927E-02 (2001,346,0000) | 1.7637E-02 (2001,071,0000) | 1.5453E-02 (2001,035,0000) |
| 753 | -30.846 | -176.348 | 2.2473E-02 (2001,007,0000) | 1.9562E-02 (2001,346,0000) | 1.7579E-02 (2001,071,0000) | 1.5045E-02 (2001,035,0000) |
| 754 | -29.394 | -176.354 | 2.2095E-02 (2001,007,0000) | 1.9194E-02 (2001,346,0000) | 1.7513E-02 (2001,071,0000) | 1.4628E-02 (2001,035,0000) |
| 755 | -27.943 | -176.359 | 2.1718E-02 (2001,007,0000) | 1.8832E-02 (2001,346,0000) | 1.7441E-02 (2001,071,0000) | 1.4196E-02 (2001,035,0000) |
| 756 | -26.491 | -176.364 | 2.1359E-02 (2001,007,0000) | 1.8494E-02 (2001,346,0000) | 1.7359E-02 (2001,071,0000) | 1.3797E-02 (2001,035,0000) |
| 757 | -25.040 | -176.369 | 2.1007E-02 (2001,007,0000) | 1.8152E-02 (2001,346,0000) | 1.7274E-02 (2001,071,0000) | 1.3398E-02 (2001,035,0000) |
| 758 | -23.588 | -176.374 | 2.0645E-02 (2001,007,0000) | 1.7824E-02 (2001,346,0000) | 1.7183E-02 (2001,071,0000) | 1.3002E-02 (2001,035,0000) |
| 759 | -22.137 | -176.378 | 2.0313E-02 (2001,007,0000) | 1.7506E-02 (2001,346,0000) | 1.7079E-02 (2001,071,0000) | 1.2631E-02 (2001,035,0000) |
| 760 | -20.685 | -176.382 | 1.9975E-02 (2001,007,0000) | 1.7185E-02 (2001,346,0000) | 1.6969E-02 (2001,071,0000) | 1.2151E-02 (2001,035,0000) |
| 761 | -62.765 | -174.303 | 3.3819E-02 (2001,007,0000) | 3.1132E-02 (2001,346,0000) | 2.3528E-02 (2001,035,0000) | 1.6226E-02 (2001,071,0000) |
| 762 | -46.802 | -174.416 | 2.7856E-02 (2001,007,0000) | 2.4507E-02 (2001,346,0000) | 2.0232E-02 (2001,035,0000) | 1.7344E-02 (2001,071,0000) |
| 763 | -45.351 | -174.425 | 2.7341E-02 (2001,007,0000) | 2.3983E-02 (2001,346,0000) | 1.9406E-02 (2001,035,0000) | 1.7382E-02 (2001,071,0000) |
| 764 | -43.899 | -174.433 | 2.6779E-02 (2001,007,0000) | 2.3489E-02 (2001,346,0000) | 1.8947E-02 (2001,035,0000) | 1.7403E-02 (2001,071,0000) |
| 765 | -42.448 | -174.441 | 2.6384E-02 (2001,007,0000) | 2.3005E-02 (2001,346,0000) | 1.8771E-02 (2001,035,0000) | 1.7426E-02 (2001,071,0000) |
| 766 | -40.997 | -174.449 | 2.5920E-02 (2001,007,0000) | 2.2549E-02 (2001,346,0000) | 1.8376E-02 (2001,035,0000) | 1.7435E-02 (2001,071,0000) |
| 767 | -39.546 | -174.456 | 2.5492E-02 (2001,007,0000) | 2.2104E-02 (2001,346,0000) | 1.7918E-02 (2001,035,0000) | 1.7430E-02 (2001,071,0000) |
| 768 | -38.095 | -174.464 | 2.5028E-02 (2001,007,0000) | 2.1664E-02 (2001,346,0000) | 1.7457E-02 (2001,035,0000) | 1.7419E-02 (2001,071,0000) |
| 769 | -36.643 | -174.471 | 2.4602E-02 (2001,007,0000) | 2.1242E-02 (2001,346,0000) | 1.7396E-02 (2001,071,0000) | 1.6994E-02 (2001,035,0000) |
| 770 | -35.192 | -174.477 | 2.4174E-02 (2001,007,0000) | 2.0823E-02 (2001,346,0000) | 1.7365E-02 (2001,071,0000) | 1.6522E-02 (2001,035,0000) |
| 771 | -33.741 | -174.484 | 2.3750E-02 (2001,007,0000) | 2.0421E-02 (2001,346,0000) | 1.7325E-02 (2001,071,0000) | 1.6065E-02 (2001,035,0000) |
| 772 | -32.290 | -174.490 | 2.3337E-02 (2001,007,0000) | 2.0032E-02 (2001,346,0000) | 1.7277E-02 (2001,071,0000) | 1.5636E-02 (2001,035,0000) |
| 773 | -30.839 | -174.496 | 2.2943E-02 (2001,007,0000) | 1.9653E-02 (2001,346,0000) | 1.7222E-02 (2001,071,0000) | 1.5196E-02 (2001,035,0000) |
| 774 | -29.387 | -174.501 | 2.2541E-02 (2001,007,0000) | 1.9285E-02 (2001,346,0000) | 1.7160E-02 (2001,071,0000) | 1.4765E-02 (2001,035,0000) |
| 775 | -27.936 | -174.507 | 2.2146E-02 (2001,007,0000) | 1.8925E-02 (2001,346,0000) | 1.7090E-02 (2001,071,0000) | 1.4339E-02 (2001,035,0000) |
| 776 | -26.485 | -174.512 | 2.1776E-02 (2001,007,0000) | 1.8574E-02 (2001,346,0000) | 1.7012E-02 (2001,071,0000) | 1.3913E-02 (2001,035,0000) |
| 777 | -25.034 | -174.517 | 2.1406E-02 (2001,007,0000) | 1.8227E-02 (2001,346,0000) | 1.6929E-02 (2001,071,0000) | 1.3500E-02 (2001,035,0000) |
| 778 | -23.582 | -174.521 | 2.1046E-02 (2001,007,0000) | 1.7895E-02 (2001,346,0000) | 1.6840E-02 (2001,071,0000) | 1.3097E-02 (2001,035,0000) |
| 779 | -22.131 | -174.526 | 2.0687E-02 (2001,007,0000) | 1.7570E-02 (2001,346,0000) | 1.6738E-02 (2001,071,0000) | 1.2603E-02 (2001,035,0000) |
| 780 | -62.750 | -172.451 | 3.4858E-02 (2001,007,0000) | 3.1215E-02 (2001,346,0000) | 2.4236E-02 (2001,035,0000) | 1.5737E-02 (2001,071,0000) |
| 781 | -61.299 | -172.462 | 3.4278E-02 (2001,007,0000) | 3.0577E-02 (2001,346,0000) | 2.4094E-02 (2001,035,0000) | 1.5906E-02 (2001,071,0000) |
| 782 | -46.791 | -172.563 | 2.8404E-02 (2001,007,0000) | 2.4567E-02 (2001,346,0000) | 2.0156E-02 (2001,035,0000) | 1.6919E-02 (2001,071,0000) |
| 783 | -45.340 | -172.572 | 2.7908E-02 (2001,007,0000) | 2.4061E-02 (2001,346,0000) | 1.9757E-02 (2001,035,0000) | 1.6963E-02 (2001,071,0000) |
| 784 | -43.889 | -172.580 | 2.7512E-02 (2001,007,0000) | 2.3581E-02 (2001,346,0000) | 1.9643E-02 (2001,035,0000) | 1.7003E-02 (2001,071,0000) |
| 785 | -42.438 | -172.588 | 2.7008E-02 (2001,007,0000) | 2.3092E-02 (2001,346,0000) | 1.9148E-02 (2001,035,0000) | 1.7027E-02 (2001,071,0000) |
| 786 | -40.987 | -172.596 | 2.6519E-02 (2001,007,0000) | 2.2629E-02 (2001,346,0000) | 1.8663E-02 (2001,035,0000) | 1.7037E-02 (2001,071,0000) |
| 787 | -39.536 | -172.604 | 2.6040E-02 (2001,007,0000) | 2.2175E-02 (2001,346,0000) | 1.8163E-02 (2001,035,0000) | 1.7040E-02 (2001,071,0000) |
| 788 | -38.086 | -172.611 | 2.5570E-02 (2001,007,0000) | 2.1737E-02 (2001,346,0000) | 1.7684E-02 (2001,035,0000) | 1.7033E-02 (2001,071,0000) |
| 789 | -36.635 | -172.618 | 2.5118E-02 (2001,007,0000) | 2.1310E-02 (2001,346,0000) | 1.7201E-02 (2001,035,0000) | 1.7017E-02 (2001,071,0000) |
| 790 | -35.184 | -172.625 | 2.4680E-02 (2001,007,0000) | 2.0887E-02 (2001,346,0000) | 1.6988E-02 (2001,071,0000) | 1.6706E-02 (2001,035,0000) |
| 791 | -33.733 | -172.631 | 2.4238E-02 (2001,007,0000) | 2.0488E-02 (2001,346,0000) | 1.6953E-02 (2001,071,0000) | 1.6243E-02 (2001,035,0000) |
| 792 | -32.282 | -172.637 | 2.3806E-02 (2001,007,0000) | 2.0093E-02 (2001,346,0000) | 1.6908E-02 (2001,071,0000) | 1.5774E-02 (2001,035,0000) |
| 793 | -30.831 | -172.643 | 2.3392E-02 (2001,007,0000) | 1.9714E-02 (2001,346,0000) | 1.6856E-02 (2001,071,0000) | 1.5329E-02 (2001,035,0000) |
| 794 | -29.380 | -172.649 | 2.2976E-02 (2001,007,0000) | 1.9337E-02 (2001,346,0000) | 1.6799E-02 (2001,071,0000) | 1.4881E-02 (2001,035,0000) |
| 795 | -27.929 | -172.654 | 2.2576E-02 (2001,007,0000) | 1.8977E-02 (2001,346,0000) | 1.6730E-02 (2001,071,0000) | 1.4444E-02 (2001,035,0000) |
| 796 | -26.479 | -172.659 | 2.2182E-02 (2001,007,0000) | 1.8625E-02 (2001,346,0000) | 1.6658E-02 (2001,071,0000) | 1.4005E-02 (2001,035,0000) |
| 797 | -25.028 | -172.664 | 2.1792E-02 (2001,007,0000) | 1.8276E-02 (2001,346,0000) | 1.6579E-02 (2001,071,0000) | 1.3591E-02 (2001,035,0000) |
| 798 | -23.577 | -172.669 | 2.1420E-02 (2001,007,0000) | 1.7939E-02 (2001,346,0000) | 1.6487E-02 (2001,071,0000) | 1.3172E-02 (2001,035,0000) |
| 799 | -61.285 | -170.610 | 3.5240E-02 (2001,007,0000) | 3.0546E-02 (2001,346,0000) | 2.4747E-02 (2001,035,0000) | 1.5778E-02 (2001,363,0000) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 800 | -46.780 | -170.711 | 2.9178E-02 (2001,007,0000) | 2.4603E-02 (2001,346,0000) | 2.0945E-02 (2001,035,0000) | 1.6504E-02 (2001,071,0000) |
| 801 | -45.329 | -170.720 | 2.8647E-02 (2001,007,0000) | 2.4100E-02 (2001,346,0000) | 2.0440E-02 (2001,035,0000) | 1.6552E-02 (2001,071,0000) |
| 802 | -43.879 | -170.728 | 2.8015E-02 (2001,007,0000) | 2.3587E-02 (2001,346,0000) | 1.9596E-02 (2001,035,0000) | 1.6583E-02 (2001,071,0000) |
| 803 | -42.428 | -170.736 | 2.7516E-02 (2001,007,0000) | 2.3105E-02 (2001,346,0000) | 1.9112E-02 (2001,035,0000) | 1.6617E-02 (2001,071,0000) |
| 804 | -40.977 | -170.744 | 2.7088E-02 (2001,007,0000) | 2.2657E-02 (2001,346,0000) | 1.8902E-02 (2001,035,0000) | 1.6634E-02 (2001,071,0000) |
| 805 | -39.527 | -170.751 | 2.6587E-02 (2001,007,0000) | 2.2204E-02 (2001,346,0000) | 1.8389E-02 (2001,035,0000) | 1.6641E-02 (2001,071,0000) |
| 806 | -38.076 | -170.759 | 2.6097E-02 (2001,007,0000) | 2.1763E-02 (2001,346,0000) | 1.7878E-02 (2001,035,0000) | 1.6637E-02 (2001,071,0000) |
| 807 | -36.626 | -170.766 | 2.5595E-02 (2001,007,0000) | 2.1327E-02 (2001,346,0000) | 1.7360E-02 (2001,035,0000) | 1.6624E-02 (2001,071,0000) |
| 808 | -35.175 | -170.772 | 2.5152E-02 (2001,007,0000) | 2.0917E-02 (2001,346,0000) | 1.6869E-02 (2001,035,0000) | 1.6603E-02 (2001,071,0000) |
| 809 | -33.725 | -170.779 | 2.4692E-02 (2001,007,0000) | 2.0505E-02 (2001,346,0000) | 1.6573E-02 (2001,071,0000) | 1.6375E-02 (2001,035,0000) |
| 810 | -32.274 | -170.785 | 2.4255E-02 (2001,007,0000) | 2.0120E-02 (2001,346,0000) | 1.6532E-02 (2001,071,0000) | 1.5900E-02 (2001,035,0000) |
| 811 | -30.824 | -170.791 | 2.3810E-02 (2001,007,0000) | 1.9731E-02 (2001,346,0000) | 1.6485E-02 (2001,071,0000) | 1.5423E-02 (2001,035,0000) |
| 812 | -29.373 | -170.796 | 2.3392E-02 (2001,007,0000) | 1.9359E-02 (2001,346,0000) | 1.6428E-02 (2001,071,0000) | 1.4979E-02 (2001,035,0000) |
| 813 | -27.923 | -170.802 | 2.2970E-02 (2001,007,0000) | 1.8997E-02 (2001,346,0000) | 1.6365E-02 (2001,071,0000) | 1.4529E-02 (2001,035,0000) |
| 814 | -26.472 | -170.807 | 2.2554E-02 (2001,007,0000) | 1.8641E-02 (2001,346,0000) | 1.6296E-02 (2001,071,0000) | 1.4077E-02 (2001,035,0000) |
| 815 | -25.022 | -170.812 | 2.2162E-02 (2001,007,0000) | 1.8291E-02 (2001,346,0000) | 1.6219E-02 (2001,071,0000) | 1.3646E-02 (2001,035,0000) |
| 816 | -59.820 | -168.769 | 3.5464E-02 (2001,007,0000) | 2.9770E-02 (2001,346,0000) | 2.5113E-02 (2001,035,0000) | 1.5850E-02 (2001,363,0000) |
| 817 | -43.868 | -168.875 | 2.8569E-02 (2001,007,0000) | 2.3552E-02 (2001,346,0000) | 1.9760E-02 (2001,035,0000) | 1.6161E-02 (2001,071,0000) |
| 818 | -42.418 | -168.884 | 2.8079E-02 (2001,007,0000) | 2.3078E-02 (2001,346,0000) | 1.9360E-02 (2001,035,0000) | 1.6202E-02 (2001,071,0000) |
| 819 | -40.968 | -168.891 | 2.7581E-02 (2001,007,0000) | 2.2618E-02 (2001,346,0000) | 1.8873E-02 (2001,035,0000) | 1.6224E-02 (2001,071,0000) |
| 820 | -39.518 | -168.899 | 2.7062E-02 (2001,007,0000) | 2.2170E-02 (2001,346,0000) | 1.8357E-02 (2001,035,0000) | 1.6234E-02 (2001,071,0000) |
| 821 | -38.067 | -168.906 | 2.6569E-02 (2001,007,0000) | 2.1727E-02 (2001,346,0000) | 1.7833E-02 (2001,035,0000) | 1.6236E-02 (2001,071,0000) |
| 822 | -36.617 | -168.913 | 2.6071E-02 (2001,007,0000) | 2.1312E-02 (2001,346,0000) | 1.7499E-02 (2001,035,0000) | 1.6230E-02 (2001,071,0000) |
| 823 | -35.167 | -168.920 | 2.5595E-02 (2001,007,0000) | 2.0898E-02 (2001,346,0000) | 1.6983E-02 (2001,035,0000) | 1.6213E-02 (2001,071,0000) |
| 824 | -33.717 | -168.926 | 2.5140E-02 (2001,007,0000) | 2.0497E-02 (2001,346,0000) | 1.6497E-02 (2001,035,0000) | 1.6186E-02 (2001,071,0000) |
| 825 | -32.267 | -168.932 | 2.4673E-02 (2001,007,0000) | 2.0102E-02 (2001,346,0000) | 1.6150E-02 (2001,071,0000) | 1.5989E-02 (2001,035,0000) |
| 826 | -30.816 | -168.938 | 2.4221E-02 (2001,007,0000) | 1.9721E-02 (2001,346,0000) | 1.6105E-02 (2001,071,0000) | 1.5514E-02 (2001,035,0000) |
| 827 | -29.366 | -168.944 | 2.3781E-02 (2001,007,0000) | 1.9347E-02 (2001,346,0000) | 1.6053E-02 (2001,071,0000) | 1.5044E-02 (2001,035,0000) |
| 828 | -27.916 | -168.949 | 2.3345E-02 (2001,007,0000) | 1.8985E-02 (2001,346,0000) | 1.5995E-02 (2001,071,0000) | 1.4590E-02 (2001,035,0000) |
| 829 | -26.466 | -168.954 | 2.2930E-02 (2001,007,0000) | 1.8630E-02 (2001,346,0000) | 1.5928E-02 (2001,071,0000) | 1.4129E-02 (2001,035,0000) |
| 830 | -25.016 | -168.959 | 2.2510E-02 (2001,007,0000) | 1.8278E-02 (2001,346,0000) | 1.5851E-02 (2001,071,0000) | 1.3689E-02 (2001,035,0000) |
| 831 | -45.307 | -167.015 | 2.9646E-02 (2001,007,0000) | 2.3942E-02 (2001,346,0000) | 2.0564E-02 (2001,035,0000) | 1.5690E-02 (2001,071,0000) |
| 832 | -43.858 | -167.023 | 2.9093E-02 (2001,007,0000) | 2.3464E-02 (2001,346,0000) | 2.0077E-02 (2001,035,0000) | 1.5740E-02 (2001,071,0000) |
| 833 | -42.408 | -167.031 | 2.8657E-02 (2001,007,0000) | 2.3013E-02 (2001,346,0000) | 1.9812E-02 (2001,035,0000) | 1.5783E-02 (2001,071,0000) |
| 834 | -25.010 | -167.107 | 2.2831E-02 (2001,007,0000) | 1.8232E-02 (2001,346,0000) | 1.5484E-02 (2001,071,0000) | 1.3695E-02 (2001,035,0000) |

**********

CALPOST Version 5.6394 Level 070622

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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 329 | -19.357 | -226.410 | 6.6605E-04 | 582 | -32.382 | -196.721 | 9.1417E-04 |
| 330 | -23.734 | -224.545 | 6.9826E-04 | 583 | -30.927 | -196.727 | 8.9848E-04 |
| 331 | -22.274 | -224.549 | 6.8837E-04 | 584 | -29.472 | -196.733 | 8.8406E-04 |
| 332 | -20.813 | -224.553 | 6.8091E-04 | 585 | -28.016 | -196.738 | 8.5877E-04 |
| 333 | -17.892 | -224.561 | 6.6406E-04 | 586 | -26.561 | -196.743 | 8.4777E-04 |
| 334 | -16.432 | -224.564 | 6.5823E-04 | 587 | -46.925 | -194.794 | 1.0911E-03 |
| 335 | -23.729 | -222.692 | 7.0530E-04 | 588 | -45.470 | -194.803 | 1.0748E-03 |
| 336 | -22.269 | -222.696 | 6.9817E-04 | 589 | -44.015 | -194.811 | 1.0579E-03 |
| 337 | -20.808 | -222.701 | 6.8844E-04 | 590 | -42.560 | -194.819 | 1.0353E-03 |
| 338 | -19.348 | -222.704 | 6.8016E-04 | 591 | -41.105 | -194.827 | 1.0218E-03 |
| 339 | -17.888 | -222.708 | 6.7202E-04 | 592 | -39.650 | -194.835 | 1.0087E-03 |
| 340 | -16.428 | -222.711 | 6.6517E-04 | 593 | -38.195 | -194.842 | 9.8208E-04 |
| 341 | -14.967 | -222.714 | 6.5466E-04 | 594 | -36.740 | -194.849 | 9.5601E-04 |
| 342 | -25.183 | -220.835 | 7.2314E-04 | 595 | -35.285 | -194.856 | 9.4774E-04 |
| 343 | -23.723 | -220.839 | 7.1537E-04 | 596 | -33.830 | -194.862 | 9.3682E-04 |
| 344 | -22.263 | -220.844 | 7.0501E-04 | 597 | -32.375 | -194.868 | 9.2479E-04 |
| 345 | -20.803 | -220.848 | 6.9753E-04 | 598 | -30.920 | -194.874 | 9.0994E-04 |
| 346 | -19.344 | -220.851 | 6.9004E-04 | 599 | -29.465 | -194.880 | 8.7996E-04 |
| 347 | -17.884 | -220.855 | 6.8193E-04 | 600 | -28.009 | -194.885 | 8.6733E-04 |
| 348 | -16.424 | -220.858 | 6.6959E-04 | 601 | -26.554 | -194.890 | 8.6664E-04 |
| 349 | -14.964 | -220.861 | 6.6112E-04 | 602 | -45.459 | -192.950 | 1.0858E-03 |
| 350 | -25.177 | -218.982 | 7.3227E-04 | 603 | -44.004 | -192.959 | 1.0643E-03 |
| 351 | -23.718 | -218.986 | 7.2406E-04 | 604 | -42.550 | -192.967 | 1.0432E-03 |
| 352 | -22.258 | -218.991 | 7.1261E-04 | 605 | -41.095 | -192.975 | 1.0256E-03 |
| 353 | -20.799 | -218.995 | 7.0585E-04 | 606 | -39.640 | -192.982 | 1.0154E-03 |
| 354 | -19.339 | -218.998 | 6.9763E-04 | 607 | -38.186 | -192.989 | 9.8278E-04 |
| 355 | -17.879 | -219.002 | 6.8537E-04 | 608 | -36.731 | -192.996 | 9.6522E-04 |
| 356 | -16.420 | -219.005 | 6.7973E-04 | 609 | -35.276 | -193.003 | 9.4944E-04 |
| 357 | -26.630 | -217.124 | 7.5105E-04 | 610 | -33.822 | -193.010 | 9.4845E-04 |
| 358 | -25.171 | -217.129 | 7.4037E-04 | 611 | -32.367 | -193.016 | 9.3709E-04 |
| 359 | -23.712 | -217.133 | 7.3008E-04 | 612 | -30.912 | -193.022 | 9.2177E-04 |
| 360 | -22.253 | -217.138 | 7.2333E-04 | 613 | -29.457 | -193.027 | 9.0328E-04 |
| 361 | -20.794 | -217.142 | 7.1495E-04 | 614 | -28.003 | -193.033 | 8.8918E-04 |
| 362 | -19.334 | -217.145 | 7.0408E-04 | 615 | -26.548 | -193.038 | 8.6403E-04 |
| 363 | -17.875 | -217.149 | 6.9378E-04 | 616 | -25.093 | -193.043 | 8.6081E-04 |
| 364 | -16.416 | -217.152 | 6.8410E-04 | 617 | -41.085 | -191.122 | 1.0461E-03 |
| 365 | -47.048 | -215.175 | 9.2825E-04 | 618 | -39.631 | -191.129 | 1.0143E-03 |
| 366 | -45.589 | -215.183 | 9.2094E-04 | 619 | -38.176 | -191.137 | 1.0030E-03 |
| 367 | -44.130 | -215.192 | 9.0802E-04 | 620 | -36.722 | -191.144 | 9.8747E-04 |
| 368 | -42.671 | -215.200 | 8.9425E-04 | 621 | -35.268 | -191.150 | 9.7854E-04 |
| 369 | -41.212 | -215.208 | 8.8077E-04 | 622 | -33.813 | -191.157 | 9.6283E-04 |
| 370 | -39.754 | -215.215 | 8.6658E-04 | 623 | -32.359 | -191.163 | 9.4901E-04 |
| 371 | -38.295 | -215.223 | 8.5267E-04 | 624 | -30.905 | -191.169 | 9.3260E-04 |
| 372 | -36.836 | -215.230 | 8.4080E-04 | 625 | -29.450 | -191.175 | 9.1296E-04 |
| 373 | -35.377 | -215.236 | 8.2808E-04 | 626 | -27.996 | -191.180 | 8.9814E-04 |
| 374 | -33.918 | -215.243 | 8.1616E-04 | 627 | -26.542 | -191.185 | 8.8063E-04 |
| 375 | -32.459 | -215.249 | 8.0366E-04 | 628 | -25.087 | -191.190 | 8.6978E-04 |
| 376 | -31.001 | -215.255 | 7.9229E-04 | 629 | -39.621 | -189.277 | 1.0191E-03 |
| 377 | -29.542 | -215.261 | 7.8170E-04 | 630 | -38.167 | -189.284 | 1.0195E-03 |
| 378 | -28.083 | -215.266 | 7.7340E-04 | 631 | -36.713 | -189.291 | 1.0024E-03 |
| 379 | -26.624 | -215.271 | 7.6043E-04 | 632 | -35.259 | -189.298 | 9.7994E-04 |
| 380 | -25.165 | -215.276 | 7.4929E-04 | 633 | -33.805 | -189.304 | 9.7524E-04 |
| 381 | -23.706 | -215.280 | 7.3917E-04 | 634 | -32.351 | -189.310 | 9.6099E-04 |
| 382 | -22.247 | -215.285 | 7.3231E-04 | 635 | -30.897 | -189.316 | 9.3871E-04 |
| 383 | -20.789 | -215.289 | 7.1959E-04 | 636 | -29.443 | -189.322 | 9.2212E-04 |
| 384 | -19.330 | -215.293 | 7.1230E-04 | 637 | -27.989 | -189.327 | 8.9919E-04 |
| 385 | -17.871 | -215.296 | 7.0278E-04 | 638 | -26.535 | -189.332 | 8.8839E-04 |
| 386 | -16.412 | -215.299 | 6.9112E-04 | 639 | -25.081 | -189.337 | 8.6445E-04 |
| 387 | -51.412 | -213.294 | 1.0031E-03 | 640 | -23.628 | -189.342 | 8.6070E-04 |
| 388 | -49.953 | -213.304 | 9.8453E-04 | 641 | -22.173 | -189.346 | 8.4675E-04 |
| 389 | -48.495 | -213.313 | 9.6515E-04 | 642 | -41.066 | -187.417 | 1.0620E-03 |
| 390 | -47.037 | -213.322 | 9.2747E-04 | 643 | -39.612 | -187.424 | 1.0284E-03 |
| 391 | -45.578 | -213.330 | 9.3448E-04 | 644 | -38.158 | -187.431 | 1.0275E-03 |

| | | | |
|---|---|---|---|
| 392 | -44.120 | -213.339 | 9.2075E-04 |
| 393 | -42.661 | -213.347 | 9.0363E-04 |
| 394 | -41.203 | -213.355 | 8.9248E-04 |
| 395 | -39.744 | -213.362 | 8.7917E-04 |
| 396 | -38.286 | -213.370 | 8.6523E-04 |
| 397 | -36.827 | -213.377 | 8.5251E-04 |
| 398 | -35.369 | -213.383 | 8.3926E-04 |
| 399 | -33.910 | -213.390 | 8.2690E-04 |
| 400 | -32.452 | -213.396 | 8.1457E-04 |
| 401 | -30.993 | -213.402 | 8.0517E-04 |
| 402 | -29.535 | -213.408 | 7.9155E-04 |
| 403 | -28.076 | -213.413 | 7.8181E-04 |
| 404 | -26.618 | -213.418 | 7.7072E-04 |
| 405 | -25.159 | -213.423 | 7.5879E-04 |
| 406 | -23.701 | -213.428 | 7.4811E-04 |
| 407 | -22.242 | -213.432 | 7.3800E-04 |
| 408 | -20.784 | -213.436 | 7.2801E-04 |
| 409 | -19.325 | -213.440 | 7.1815E-04 |
| 410 | -17.867 | -213.443 | 7.1038E-04 |
| 411 | -16.408 | -213.446 | 6.9958E-04 |
| 412 | -51.400 | -211.441 | 1.0187E-03 |
| 413 | -49.942 | -211.451 | 1.0002E-03 |
| 414 | -48.483 | -211.460 | 9.8494E-04 |
| 415 | -47.025 | -211.469 | 9.6706E-04 |
| 416 | -45.567 | -211.478 | 9.3332E-04 |
| 417 | -44.109 | -211.486 | 9.3110E-04 |
| 418 | -42.651 | -211.494 | 9.0192E-04 |
| 419 | -41.193 | -211.502 | 9.0444E-04 |
| 420 | -39.735 | -211.510 | 8.8959E-04 |
| 421 | -38.277 | -211.517 | 8.7669E-04 |
| 422 | -36.818 | -211.524 | 8.6448E-04 |
| 423 | -35.360 | -211.531 | 8.5153E-04 |
| 424 | -33.902 | -211.537 | 8.3851E-04 |
| 425 | -32.444 | -211.543 | 8.2643E-04 |
| 426 | -30.986 | -211.549 | 8.1326E-04 |
| 427 | -29.528 | -211.555 | 8.0332E-04 |
| 428 | -28.070 | -211.560 | 7.9089E-04 |
| 429 | -26.611 | -211.565 | 7.7973E-04 |
| 430 | -25.153 | -211.570 | 7.6876E-04 |
| 431 | -23.695 | -211.575 | 7.5698E-04 |
| 432 | -22.237 | -211.579 | 7.4750E-04 |
| 433 | -20.779 | -211.583 | 7.3653E-04 |
| 434 | -19.321 | -211.587 | 7.2742E-04 |
| 435 | -17.862 | -211.590 | 7.1812E-04 |
| 436 | -16.404 | -211.594 | 7.0687E-04 |
| 437 | -48.472 | -209.607 | 9.9601E-04 |
| 438 | -47.014 | -209.616 | 9.7817E-04 |
| 439 | -45.556 | -209.625 | 9.6316E-04 |
| 440 | -44.099 | -209.633 | 9.4119E-04 |
| 441 | -42.641 | -209.641 | 9.3048E-04 |
| 442 | -41.183 | -209.649 | 8.9793E-04 |
| 443 | -39.725 | -209.657 | 8.9483E-04 |
| 444 | -38.267 | -209.664 | 8.8826E-04 |
| 445 | -36.810 | -209.671 | 8.7298E-04 |
| 446 | -35.352 | -209.678 | 8.6344E-04 |
| 447 | -33.894 | -209.684 | 8.4977E-04 |
| 448 | -32.436 | -209.690 | 8.3744E-04 |
| 449 | -30.978 | -209.696 | 8.2586E-04 |
| 450 | -29.521 | -209.702 | 8.1280E-04 |
| 451 | -28.063 | -209.707 | 8.0095E-04 |
| 452 | -26.605 | -209.713 | 7.8916E-04 |
| 453 | -25.147 | -209.717 | 7.7717E-04 |
| 454 | -23.689 | -209.722 | 7.6619E-04 |
| 455 | -22.232 | -209.726 | 7.5544E-04 |
| 456 | -20.774 | -209.730 | 7.4487E-04 |
| 457 | -19.316 | -209.734 | 7.3450E-04 |
| 458 | -17.858 | -209.737 | 7.2450E-04 |
| 459 | -16.400 | -209.741 | 7.1494E-04 |
| 460 | -48.460 | -207.754 | 1.0137E-03 |
| 461 | -47.003 | -207.763 | 9.9649E-04 |
| 462 | -45.546 | -207.772 | 9.7792E-04 |
| 463 | -44.088 | -207.780 | 9.6236E-04 |
| 464 | -42.631 | -207.789 | 9.4869E-04 |
| 465 | -41.173 | -207.796 | 9.3079E-04 |
| 466 | -39.716 | -207.804 | 9.0511E-04 |
| 467 | -38.258 | -207.811 | 8.9722E-04 |
| 468 | -36.801 | -207.818 | 8.8634E-04 |
| 469 | -35.343 | -207.825 | 8.7195E-04 |
| 470 | -33.886 | -207.831 | 8.6160E-04 |
| 471 | -32.429 | -207.838 | 8.4930E-04 |
| 472 | -30.971 | -207.844 | 8.3709E-04 |
| 473 | -29.514 | -207.849 | 8.2311E-04 |
| 474 | -28.056 | -207.855 | 8.1095E-04 |
| 475 | -26.599 | -207.860 | 7.9907E-04 |
| 476 | -25.141 | -207.865 | 7.8735E-04 |
| 477 | -23.684 | -207.869 | 7.7514E-04 |
| 478 | -22.226 | -207.873 | 7.6391E-04 |
| 479 | -20.769 | -207.877 | 7.5395E-04 |
| 480 | -19.311 | -207.881 | 7.4357E-04 |
| 481 | -48.449 | -205.902 | 1.0304E-03 |
| 482 | -46.992 | -205.911 | 1.0115E-03 |
| 483 | -45.535 | -205.919 | 9.9435E-04 |
| 484 | -44.078 | -205.928 | 9.7762E-04 |
| 485 | -42.621 | -205.936 | 9.6297E-04 |
| 486 | -41.163 | -205.944 | 9.4634E-04 |
| 487 | -39.706 | -205.951 | 9.2951E-04 |
| 488 | -38.249 | -205.958 | 9.1292E-04 |
| 489 | -36.792 | -205.965 | 8.9979E-04 |
| 490 | -35.335 | -205.972 | 8.8422E-04 |
| 491 | -33.878 | -205.979 | 8.7068E-04 |
| 492 | -32.421 | -205.985 | 8.6009E-04 |
| 493 | -30.964 | -205.991 | 8.4707E-04 |
| 494 | -29.507 | -205.996 | 8.3423E-04 |
| 495 | -28.049 | -206.002 | 8.2176E-04 |
| 496 | -26.592 | -206.007 | 8.0941E-04 |
| 497 | -25.135 | -206.012 | 7.9657E-04 |
| 498 | -23.678 | -206.016 | 7.8481E-04 |
| 499 | -22.221 | -206.021 | 7.7339E-04 |
| 500 | -20.764 | -206.025 | 7.6317E-04 |
| 501 | -19.307 | -206.028 | 7.5220E-04 |
| 502 | -46.981 | -204.058 | 1.0296E-03 |
| 503 | -45.524 | -204.066 | 1.0106E-03 |
| 504 | -44.067 | -204.075 | 9.9314E-04 |
| 505 | -42.610 | -204.083 | 9.7606E-04 |
| 645 | -36.705 | -187.438 | 1.0128E-03 |
| 646 | -35.251 | -187.445 | 9.9456E-04 |
| 647 | -33.797 | -187.452 | 9.7957E-04 |
| 648 | -32.344 | -187.458 | 9.6667E-04 |
| 649 | -30.890 | -187.464 | 9.5687E-04 |
| 650 | -29.436 | -187.469 | 9.3151E-04 |
| 651 | -27.983 | -187.475 | 9.1561E-04 |
| 652 | -26.529 | -187.480 | 9.0083E-04 |
| 653 | -25.076 | -187.485 | 8.8572E-04 |
| 654 | -23.622 | -187.489 | 8.6723E-04 |
| 655 | -22.168 | -187.494 | 8.5273E-04 |
| 656 | -41.056 | -185.564 | 1.0520E-03 |
| 657 | -39.602 | -185.572 | 1.0413E-03 |
| 658 | -38.149 | -185.579 | 1.0344E-03 |
| 659 | -36.696 | -185.586 | 1.0165E-03 |
| 660 | -35.243 | -185.593 | 1.0073E-03 |
| 661 | -33.789 | -185.599 | 9.8839E-04 |
| 662 | -32.336 | -185.605 | 9.7629E-04 |
| 663 | -30.883 | -185.611 | 9.6498E-04 |
| 664 | -29.429 | -185.617 | 9.3978E-04 |
| 665 | -27.976 | -185.622 | 9.2179E-04 |
| 666 | -26.523 | -185.627 | 9.0646E-04 |
| 667 | -25.070 | -185.632 | 8.8793E-04 |
| 668 | -23.616 | -185.637 | 8.6301E-04 |
| 669 | -22.163 | -185.641 | 8.5468E-04 |
| 670 | -42.499 | -183.704 | 1.0890E-03 |
| 671 | -41.046 | -183.711 | 1.0591E-03 |
| 672 | -39.593 | -183.719 | 1.0441E-03 |
| 673 | -38.140 | -183.726 | 1.0248E-03 |
| 674 | -36.687 | -183.733 | 1.0143E-03 |
| 675 | -35.234 | -183.740 | 1.0097E-03 |
| 676 | -33.781 | -183.746 | 1.0005E-03 |
| 677 | -32.328 | -183.753 | 9.8821E-04 |
| 678 | -30.875 | -183.759 | 9.6340E-04 |
| 679 | -29.422 | -183.764 | 9.4380E-04 |
| 680 | -27.969 | -183.770 | 9.2795E-04 |
| 681 | -26.517 | -183.775 | 9.0805E-04 |
| 682 | -25.064 | -183.779 | 8.8884E-04 |
| 683 | -23.611 | -183.784 | 8.6811E-04 |
| 684 | -22.158 | -183.788 | 8.6383E-04 |
| 685 | -20.705 | -183.792 | 8.4995E-04 |
| 686 | -45.394 | -181.835 | 1.1185E-03 |
| 687 | -43.941 | -181.843 | 1.1086E-03 |
| 688 | -42.489 | -181.851 | 1.0833E-03 |
| 689 | -41.036 | -181.859 | 1.0781E-03 |
| 690 | -39.584 | -181.866 | 1.0655E-03 |
| 691 | -38.131 | -181.874 | 1.0458E-03 |
| 692 | -36.678 | -181.881 | 1.0245E-03 |
| 693 | -35.226 | -181.887 | 1.0126E-03 |
| 694 | -33.773 | -181.894 | 9.9886E-04 |
| 695 | -32.321 | -181.900 | 9.9538E-04 |
| 696 | -30.868 | -181.906 | 9.7381E-04 |
| 697 | -29.415 | -181.912 | 9.4930E-04 |
| 698 | -27.963 | -181.917 | 9.3056E-04 |
| 699 | -26.510 | -181.922 | 9.1212E-04 |
| 700 | -25.058 | -181.927 | 8.8948E-04 |
| 701 | -23.605 | -181.931 | 8.7892E-04 |
| 702 | -22.152 | -181.936 | 8.6457E-04 |
| 703 | -20.700 | -181.940 | 8.4668E-04 |
| 704 | -46.835 | -179.973 | 1.1510E-03 |
| 705 | -45.383 | -179.982 | 1.1269E-03 |
| 706 | -43.931 | -179.990 | 1.1136E-03 |
| 707 | -42.479 | -179.999 | 1.0970E-03 |
| 708 | -41.026 | -180.006 | 1.0793E-03 |
| 709 | -39.574 | -180.014 | 1.0671E-03 |
| 710 | -38.122 | -180.021 | 1.0538E-03 |
| 711 | -36.670 | -180.028 | 1.0383E-03 |
| 712 | -35.217 | -180.035 | 1.0212E-03 |
| 713 | -33.765 | -180.041 | 1.0141E-03 |
| 714 | -32.313 | -180.048 | 9.9897E-04 |
| 715 | -30.861 | -180.053 | 9.7053E-04 |
| 716 | -29.408 | -180.059 | 9.5273E-04 |
| 717 | -27.956 | -180.064 | 9.3610E-04 |
| 718 | -26.504 | -180.069 | 9.1760E-04 |
| 719 | -25.052 | -180.074 | 8.9807E-04 |
| 720 | -23.599 | -180.079 | 8.8344E-04 |
| 721 | -22.147 | -180.083 | 8.7287E-04 |
| 722 | -20.695 | -180.087 | 8.5475E-04 |
| 723 | -46.824 | -178.121 | 1.1523E-03 |
| 724 | -45.372 | -178.130 | 1.1271E-03 |
| 725 | -43.920 | -178.138 | 1.1190E-03 |
| 726 | -42.469 | -178.146 | 1.1020E-03 |
| 727 | -41.017 | -178.154 | 1.0786E-03 |
| 728 | -39.565 | -178.161 | 1.0720E-03 |
| 729 | -38.113 | -178.169 | 1.0546E-03 |
| 730 | -36.661 | -178.176 | 1.0408E-03 |
| 731 | -35.209 | -178.182 | 1.0372E-03 |
| 732 | -33.757 | -178.189 | 1.0212E-03 |
| 733 | -32.305 | -178.195 | 1.0036E-03 |
| 734 | -30.853 | -178.201 | 9.8635E-04 |
| 735 | -29.401 | -178.206 | 9.5810E-04 |
| 736 | -27.949 | -178.212 | 9.4666E-04 |
| 737 | -26.498 | -178.217 | 9.2622E-04 |
| 738 | -25.046 | -178.222 | 9.0141E-04 |
| 739 | -23.594 | -178.226 | 8.9369E-04 |
| 740 | -22.142 | -178.231 | 8.7270E-04 |
| 741 | -20.690 | -178.235 | 8.5567E-04 |
| 742 | -46.813 | -176.268 | 1.1666E-03 |
| 743 | -45.361 | -176.277 | 1.1421E-03 |
| 744 | -43.910 | -176.285 | 1.1130E-03 |
| 745 | -42.458 | -176.293 | 1.1103E-03 |
| 746 | -41.007 | -176.301 | 1.0949E-03 |
| 747 | -39.555 | -176.309 | 1.0760E-03 |
| 748 | -38.104 | -176.316 | 1.0712E-03 |
| 749 | -36.652 | -176.323 | 1.0457E-03 |
| 750 | -35.201 | -176.330 | 1.0410E-03 |
| 751 | -33.749 | -176.336 | 1.0229E-03 |
| 752 | -32.297 | -176.342 | 9.9779E-04 |
| 753 | -30.846 | -176.348 | 9.9173E-04 |
| 754 | -29.394 | -176.354 | 9.7406E-04 |
| 755 | -27.943 | -176.359 | 9.4973E-04 |
| 756 | -26.491 | -176.364 | 9.3290E-04 |
| 757 | -25.040 | -176.369 | 9.1628E-04 |
| 758 | -23.588 | -176.374 | 8.9512E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 506 | -41.154 | -204.091 | 9.6099E-04 | 759 | -22.137 | -176.378 | 8.8180E-04 |
| 507 | -39.697 | -204.098 | 9.4398E-04 | 760 | -20.685 | -176.382 | 8.6081E-04 |
| 508 | -38.240 | -204.106 | 9.1674E-04 | 761 | -62.765 | -174.303 | 1.4257E-03 |
| 509 | -36.783 | -204.113 | 8.9777E-04 | 762 | -46.802 | -174.416 | 1.1904E-03 |
| 510 | -35.327 | -204.119 | 8.9735E-04 | 763 | -45.351 | -174.425 | 1.1450E-03 |
| 511 | -33.870 | -204.126 | 8.8300E-04 | 764 | -43.899 | -174.433 | 1.1212E-03 |
| 512 | -32.413 | -204.132 | 8.7129E-04 | 765 | -42.448 | -174.441 | 1.1129E-03 |
| 513 | -30.956 | -204.138 | 8.5737E-04 | 766 | -40.997 | -174.449 | 1.0975E-03 |
| 514 | -29.500 | -204.144 | 8.4416E-04 | 767 | -39.546 | -174.456 | 1.0923E-03 |
| 515 | -28.043 | -204.149 | 8.3130E-04 | 768 | -38.095 | -174.464 | 1.0794E-03 |
| 516 | -26.586 | -204.154 | 8.1888E-04 | 769 | -36.643 | -174.471 | 1.0607E-03 |
| 517 | -25.129 | -204.159 | 8.0660E-04 | 770 | -35.192 | -174.477 | 1.0331E-03 |
| 518 | -23.673 | -204.164 | 7.9454E-04 | 771 | -33.741 | -174.484 | 1.0150E-03 |
| 519 | -22.216 | -204.168 | 7.8233E-04 | 772 | -32.290 | -174.490 | 1.0085E-03 |
| 520 | -20.759 | -204.172 | 7.7142E-04 | 773 | -30.839 | -174.496 | 9.9133E-04 |
| 521 | -19.302 | -204.176 | 7.6092E-04 | 774 | -29.387 | -174.501 | 9.7618E-04 |
| 522 | -46.969 | -202.205 | 1.0412E-03 | 775 | -27.936 | -174.507 | 9.5932E-04 |
| 523 | -45.513 | -202.214 | 1.0222E-03 | 776 | -26.485 | -174.512 | 9.3622E-04 |
| 524 | -44.057 | -202.222 | 1.0047E-03 | 777 | -25.034 | -174.517 | 9.1390E-04 |
| 525 | -42.600 | -202.230 | 9.9081E-04 | 778 | -23.582 | -174.521 | 8.9659E-04 |
| 526 | -41.144 | -202.238 | 9.7436E-04 | 779 | -22.131 | -174.526 | 8.7721E-04 |
| 527 | -39.687 | -202.246 | 9.5731E-04 | 780 | -62.750 | -172.451 | 1.4241E-03 |
| 528 | -38.231 | -202.253 | 9.4089E-04 | 781 | -61.299 | -172.462 | 1.4103E-03 |
| 529 | -36.775 | -202.260 | 9.2516E-04 | 782 | -46.791 | -172.563 | 1.1579E-03 |
| 530 | -35.318 | -202.267 | 8.9245E-04 | 783 | -45.340 | -172.572 | 1.1423E-03 |
| 531 | -33.862 | -202.273 | 8.9309E-04 | 784 | -43.889 | -172.580 | 1.1444E-03 |
| 532 | -32.405 | -202.279 | 8.8210E-04 | 785 | -42.438 | -172.588 | 1.1300E-03 |
| 533 | -30.949 | -202.285 | 8.6846E-04 | 786 | -40.987 | -172.596 | 1.1082E-03 |
| 534 | -29.493 | -202.291 | 8.5512E-04 | 787 | -39.536 | -172.604 | 1.0821E-03 |
| 535 | -28.036 | -202.296 | 8.4062E-04 | 788 | -38.086 | -172.611 | 1.0800E-03 |
| 536 | -26.580 | -202.301 | 8.2862E-04 | 789 | -36.635 | -172.618 | 1.0615E-03 |
| 537 | -25.123 | -202.306 | 8.1669E-04 | 790 | -35.184 | -172.625 | 1.0337E-03 |
| 538 | -23.667 | -202.311 | 8.0366E-04 | 791 | -33.733 | -172.631 | 1.0249E-03 |
| 539 | -22.210 | -202.315 | 7.9167E-04 | 792 | -32.282 | -172.637 | 1.0003E-03 |
| 540 | -46.958 | -200.352 | 1.0584E-03 | 793 | -30.831 | -172.643 | 9.9426E-04 |
| 541 | -45.502 | -200.361 | 1.0335E-03 | 794 | -29.380 | -172.649 | 9.7475E-04 |
| 542 | -44.046 | -200.369 | 1.0187E-03 | 795 | -27.929 | -172.654 | 9.6049E-04 |
| 543 | -42.590 | -200.377 | 1.0022E-03 | 796 | -26.479 | -172.659 | 9.4188E-04 |
| 544 | -41.134 | -200.385 | 9.8655E-04 | 797 | -25.028 | -172.664 | 9.1921E-04 |
| 545 | -39.678 | -200.393 | 9.6797E-04 | 798 | -23.577 | -172.669 | 8.9888E-04 |
| 546 | -38.222 | -200.400 | 9.5113E-04 | 799 | -61.285 | -170.610 | 1.4128E-03 |
| 547 | -36.766 | -200.407 | 9.3672E-04 | 800 | -46.780 | -170.711 | 1.1892E-03 |
| 548 | -35.310 | -200.414 | 9.0812E-04 | 801 | -45.329 | -170.720 | 1.1735E-03 |
| 549 | -33.854 | -200.420 | 9.0628E-04 | 802 | -43.879 | -170.728 | 1.1244E-03 |
| 550 | -32.398 | -200.427 | 8.8791E-04 | 803 | -42.428 | -170.736 | 1.1106E-03 |
| 551 | -30.942 | -200.432 | 8.7962E-04 | 804 | -40.977 | -170.744 | 1.1166E-03 |
| 552 | -29.486 | -200.438 | 8.6595E-04 | 805 | -39.527 | -170.751 | 1.0966E-03 |
| 553 | -28.030 | -200.444 | 8.4804E-04 | 806 | -38.076 | -170.759 | 1.0800E-03 |
| 554 | -26.573 | -200.449 | 8.3836E-04 | 807 | -36.626 | -170.766 | 1.0481E-03 |
| 555 | -25.117 | -200.453 | 8.2483E-04 | 808 | -35.175 | -170.772 | 1.0393E-03 |
| 556 | -23.661 | -200.458 | 8.1300E-04 | 809 | -33.725 | -170.779 | 1.0150E-03 |
| 557 | -46.947 | -198.500 | 1.0762E-03 | 810 | -32.274 | -170.785 | 1.0083E-03 |
| 558 | -45.491 | -198.508 | 1.0516E-03 | 811 | -30.824 | -170.791 | 9.8513E-04 |
| 559 | -44.036 | -198.517 | 1.0305E-03 | 812 | -29.373 | -170.796 | 9.7629E-04 |
| 560 | -42.580 | -198.525 | 1.0137E-03 | 813 | -27.923 | -170.802 | 9.6183E-04 |
| 561 | -41.124 | -198.533 | 9.9805E-04 | 814 | -26.472 | -170.807 | 9.3931E-04 |
| 562 | -39.669 | -198.540 | 9.8164E-04 | 815 | -25.022 | -170.812 | 9.1625E-04 |
| 563 | -38.213 | -198.547 | 9.6360E-04 | 816 | -59.820 | -168.769 | 1.3952E-03 |
| 564 | -36.757 | -198.554 | 9.3724E-04 | 817 | -43.868 | -168.875 | 1.1254E-03 |
| 565 | -35.301 | -198.561 | 9.2422E-04 | 818 | -42.418 | -168.884 | 1.1142E-03 |
| 566 | -33.846 | -198.568 | 9.1680E-04 | 819 | -40.968 | -168.891 | 1.0978E-03 |
| 567 | -32.390 | -198.574 | 9.0436E-04 | 820 | -39.518 | -168.899 | 1.0801E-03 |
| 568 | -30.934 | -198.580 | 8.7286E-04 | 821 | -38.067 | -168.906 | 1.0621E-03 |
| 569 | -29.479 | -198.585 | 8.6234E-04 | 822 | -36.617 | -168.913 | 1.0532E-03 |
| 570 | -28.023 | -198.591 | 8.5588E-04 | 823 | -35.167 | -168.920 | 1.0335E-03 |
| 571 | -26.567 | -198.596 | 8.4804E-04 | 824 | -33.717 | -168.926 | 1.0267E-03 |
| 572 | -46.936 | -196.647 | 1.0833E-03 | 825 | -32.267 | -168.932 | 1.0047E-03 |
| 573 | -45.481 | -196.656 | 1.0687E-03 | 826 | -30.816 | -168.938 | 9.9368E-04 |
| 574 | -44.025 | -196.664 | 1.0432E-03 | 827 | -29.366 | -168.944 | 9.7803E-04 |
| 575 | -42.570 | -196.672 | 1.0234E-03 | 828 | -27.916 | -168.949 | 9.6390E-04 |
| 576 | -41.115 | -196.680 | 1.0089E-03 | 829 | -26.466 | -168.954 | 9.4810E-04 |
| 577 | -39.659 | -196.687 | 9.9062E-04 | 830 | -25.016 | -168.959 | 9.2524E-04 |
| 578 | -38.204 | -196.695 | 9.7573E-04 | 831 | -45.307 | -167.015 | 1.1471E-03 |
| 579 | -36.748 | -196.702 | 9.5881E-04 | 832 | -43.858 | -167.023 | 1.1310E-03 |
| 580 | -35.293 | -196.708 | 9.2839E-04 | 833 | -42.408 | -167.031 | 1.1387E-03 |
| 581 | -33.838 | -196.715 | 9.1445E-04 | 834 | -25.010 | -167.107 | 9.2333E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 816 | -59.820 | -168.769 | DISCRETE | 3.5464E-02 (2001,007,0000) | RANK | 1 | 24 | HOUR |
| 780 | -62.750 | -172.451 | DISCRETE | 3.1215E-02 (2001,346,0000) | RANK | 2 | 24 | HOUR |
| 816 | -59.820 | -168.769 | DISCRETE | 2.5113E-02 (2001,035,0000) | RANK | 3 | 24 | HOUR |
| 704 | -46.835 | -179.973 | DISCRETE | 1.8523E-02 (2001,035,0000) | RANK | 4 | 24 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 1.4257E-03 | RANK | 1 | 8735 | HOUR |

```
*************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Capitol Reef

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  834*0, 363*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 841 | -129.441 | -256.870 | 2.5871E-02 (2001,362,0000) | 1.9561E-02 (2001,347,0000) | 1.7924E-02 (2001,008,0000) | 1.5243E-02 (2001,006,0000) |
| 842 | -127.975 | -256.894 | 2.5286E-02 (2001,362,0000) | 1.8336E-02 (2001,347,0000) | 1.8023E-02 (2001,008,0000) | 1.5245E-02 (2001,006,0000) |
| 843 | -126.508 | -256.918 | 2.4650E-02 (2001,362,0000) | 1.8107E-02 (2001,008,0000) | 1.5914E-02 (2001,347,0000) | 1.5233E-02 (2001,006,0000) |
| 844 | -125.041 | -256.941 | 2.3963E-02 (2001,362,0000) | 1.8169E-02 (2001,008,0000) | 1.5463E-02 (2001,071,0000) | 1.5210E-02 (2001,006,0000) |
| 845 | -129.411 | -255.017 | 2.6062E-02 (2001,362,0000) | 1.8773E-02 (2001,347,0000) | 1.7895E-02 (2001,008,0000) | 1.5362E-02 (2001,006,0000) |
| 846 | -127.944 | -255.041 | 2.5469E-02 (2001,362,0000) | 1.7998E-02 (2001,008,0000) | 1.6353E-02 (2001,347,0000) | 1.5363E-02 (2001,006,0000) |
| 847 | -126.478 | -255.065 | 2.4825E-02 (2001,362,0000) | 1.8090E-02 (2001,008,0000) | 1.5353E-02 (2001,006,0000) | 1.5245E-02 (2001,071,0000) |
| 848 | -129.380 | -253.164 | 2.6258E-02 (2001,362,0000) | 1.7837E-02 (2001,008,0000) | 1.7388E-02 (2001,347,0000) | 1.5445E-02 (2001,006,0000) |
| 849 | -127.914 | -253.188 | 2.5655E-02 (2001,362,0000) | 1.7952E-02 (2001,008,0000) | 1.5626E-02 (2001,347,0000) | 1.5452E-02 (2001,006,0000) |
| 850 | -126.448 | -253.212 | 2.4997E-02 (2001,362,0000) | 1.8050E-02 (2001,008,0000) | 1.5459E-02 (2001,071,0000) | 1.5447E-02 (2001,006,0000) |
| 851 | -130.815 | -251.286 | 2.6987E-02 (2001,362,0000) | 1.7922E-02 (2001,347,0000) | 1.7617E-02 (2001,008,0000) | 1.5477E-02 (2001,006,0000) |
| 852 | -129.349 | -251.311 | 2.6446E-02 (2001,362,0000) | 1.7756E-02 (2001,008,0000) | 1.5500E-02 (2001,006,0000) | 1.5244E-02 (2001,347,0000) |
| 853 | -127.884 | -251.335 | 2.5833E-02 (2001,362,0000) | 1.7874E-02 (2001,008,0000) | 1.5511E-02 (2001,006,0000) | 1.5345E-02 (2001,071,0000) |
| 854 | -126.418 | -251.359 | 2.5166E-02 (2001,362,0000) | 1.7978E-02 (2001,008,0000) | 1.5884E-02 (2001,071,0000) | 1.5511E-02 (2001,006,0000) |
| 855 | -133.715 | -249.384 | 2.8020E-02 (2001,362,0000) | 1.9984E-02 (2001,347,0000) | 1.7172E-02 (2001,008,0000) | 1.5413E-02 (2001,006,0000) |
| 856 | -132.249 | -249.409 | 2.7647E-02 (2001,362,0000) | 1.8627E-02 (2001,347,0000) | 1.7340E-02 (2001,008,0000) | 1.5463E-02 (2001,006,0000) |
| 857 | -130.784 | -249.433 | 2.7181E-02 (2001,362,0000) | 1.7498E-02 (2001,008,0000) | 1.6124E-02 (2001,347,0000) | 1.5499E-02 (2001,006,0000) |
| 858 | -129.319 | -249.458 | 2.6626E-02 (2001,362,0000) | 1.7640E-02 (2001,008,0000) | 1.5529E-02 (2001,006,0000) | 1.5214E-02 (2001,071,0000) |
| 859 | -127.854 | -249.482 | 2.6004E-02 (2001,362,0000) | 1.7772E-02 (2001,008,0000) | 1.5808E-02 (2001,071,0000) | 1.5542E-02 (2001,006,0000) |
| 860 | -133.683 | -247.531 | 2.8212E-02 (2001,362,0000) | 1.8912E-02 (2001,347,0000) | 1.7005E-02 (2001,008,0000) | 1.5404E-02 (2001,006,0000) |
| 861 | -132.218 | -247.556 | 2.7840E-02 (2001,362,0000) | 1.7183E-02 (2001,008,0000) | 1.6356E-02 (2001,347,0000) | 1.5460E-02 (2001,006,0000) |
| 862 | -130.753 | -247.580 | 2.7367E-02 (2001,362,0000) | 1.7346E-02 (2001,008,0000) | 1.5503E-02 (2001,006,0000) | 1.5054E-02 (2001,071,0000) |
| 863 | -129.288 | -247.605 | 2.6803E-02 (2001,362,0000) | 1.7495E-02 (2001,008,0000) | 1.5798E-02 (2001,071,0000) | 1.5535E-02 (2001,006,0000) |
| 864 | -127.823 | -247.629 | 2.6165E-02 (2001,362,0000) | 1.7628E-02 (2001,008,0000) | 1.6526E-02 (2001,071,0000) | 1.5555E-02 (2001,006,0000) |
| 865 | -135.116 | -245.653 | 2.8646E-02 (2001,362,0000) | 1.9397E-02 (2001,347,0000) | 1.6613E-02 (2001,008,0000) | 1.5303E-02 (2001,006,0000) |
| 866 | -133.651 | -245.678 | 2.8386E-02 (2001,362,0000) | 1.7005E-02 (2001,347,0000) | 1.6805E-02 (2001,008,0000) | 1.5374E-02 (2001,006,0000) |
| 867 | -132.187 | -245.703 | 2.8015E-02 (2001,362,0000) | 1.6987E-02 (2001,008,0000) | 1.5433E-02 (2001,006,0000) | 1.5209E-02 (2001,347,0000) |
| 868 | -130.722 | -245.727 | 2.7530E-02 (2001,362,0000) | 1.7157E-02 (2001,008,0000) | 1.5822E-02 (2001,071,0000) | 1.5482E-02 (2001,006,0000) |
| 869 | -129.258 | -245.752 | 2.6955E-02 (2001,362,0000) | 1.7312E-02 (2001,008,0000) | 1.6608E-02 (2001,071,0000) | 1.5521E-02 (2001,006,0000) |
| 870 | -136.548 | -243.775 | 2.8919E-02 (2001,362,0000) | 1.9884E-02 (2001,347,0000) | 1.6174E-02 (2001,008,0000) | 1.5156E-02 (2001,006,0000) |
| 871 | -135.084 | -243.800 | 2.8800E-02 (2001,362,0000) | 1.8016E-02 (2001,347,0000) | 1.6377E-02 (2001,008,0000) | 1.5244E-02 (2001,006,0000) |
| 872 | -133.620 | -243.825 | 2.8545E-02 (2001,362,0000) | 1.6573E-02 (2001,008,0000) | 1.5814E-02 (2001,347,0000) | 1.5321E-02 (2001,006,0000) |
| 873 | -132.155 | -243.850 | 2.8165E-02 (2001,362,0000) | 1.6758E-02 (2001,008,0000) | 1.5903E-02 (2001,071,0000) | 1.5387E-02 (2001,006,0000) |
| 874 | -130.691 | -243.874 | 2.7672E-02 (2001,362,0000) | 1.6930E-02 (2001,008,0000) | 1.6773E-02 (2001,071,0000) | 1.5442E-02 (2001,006,0000) |
| 875 | -129.227 | -243.899 | 2.7081E-02 (2001,362,0000) | 1.7533E-02 (2001,071,0000) | 1.7090E-02 (2001,008,0000) | 1.5486E-02 (2001,006,0000) |
| 876 | -137.980 | -241.896 | 2.8993E-02 (2001,362,0000) | 2.0349E-02 (2001,347,0000) | 1.5707E-02 (2001,008,0000) | 1.5591E-02 (2001,276,0000) |
| 877 | -136.516 | -241.922 | 2.9031E-02 (2001,362,0000) | 1.8746E-02 (2001,347,0000) | 1.5915E-02 (2001,008,0000) | 1.5423E-02 (2001,276,0000) |
| 878 | -135.052 | -241.947 | 2.8917E-02 (2001,362,0000) | 1.6681E-02 (2001,347,0000) | 1.6113E-02 (2001,008,0000) | 1.5166E-02 (2001,006,0000) |
| 879 | -133.588 | -241.972 | 2.8661E-02 (2001,362,0000) | 1.6308E-02 (2001,008,0000) | 1.6012E-02 (2001,071,0000) | 1.5460E-02 (2001,347,0000) |
| 880 | -132.124 | -241.997 | 2.8277E-02 (2001,362,0000) | 1.6923E-02 (2001,071,0000) | 1.6493E-02 (2001,008,0000) | 1.5322E-02 (2001,006,0000) |
| 881 | -130.660 | -242.022 | 2.7774E-02 (2001,362,0000) | 1.7783E-02 (2001,071,0000) | 1.6669E-02 (2001,008,0000) | 1.5386E-02 (2001,006,0000) |
| 882 | -129.197 | -242.046 | 2.7171E-02 (2001,362,0000) | 1.8553E-02 (2001,071,0000) | 1.6830E-02 (2001,008,0000) | 1.5435E-02 (2001,006,0000) |
| 883 | -137.947 | -240.043 | 2.9044E-02 (2001,362,0000) | 1.9145E-02 (2001,347,0000) | 1.6041E-02 (2001,276,0000) | 1.5430E-02 (2001,008,0000) |
| 884 | -136.483 | -240.069 | 2.9095E-02 (2001,362,0000) | 1.7234E-02 (2001,347,0000) | 1.5626E-02 (2001,008,0000) | 1.5312E-02 (2001,276,0000) |
| 885 | -135.020 | -240.094 | 2.8985E-02 (2001,362,0000) | 1.6083E-02 (2001,071,0000) | 1.5822E-02 (2001,008,0000) | 1.5395E-02 (2001,347,0000) |
| 886 | -133.556 | -240.119 | 2.8733E-02 (2001,362,0000) | 1.7086E-02 (2001,071,0000) | 1.6014E-02 (2001,008,0000) | 1.5156E-02 (2001,006,0000) |
| 887 | -132.093 | -240.144 | 2.8344E-02 (2001,362,0000) | 1.8025E-02 (2001,071,0000) | 1.6195E-02 (2001,008,0000) | 1.5238E-02 (2001,006,0000) |
| 888 | -130.629 | -240.169 | 2.7823E-02 (2001,362,0000) | 1.8825E-02 (2001,071,0000) | 1.6368E-02 (2001,008,0000) | 1.5310E-02 (2001,006,0000) |
| 889 | -129.166 | -240.193 | 2.7205E-02 (2001,362,0000) | 1.9573E-02 (2001,071,0000) | 1.6531E-02 (2001,008,0000) | 1.5722E-02 (2001,365,0000) |
| 890 | -137.914 | -238.190 | 2.9038E-02 (2001,362,0000) | 1.7871E-02 (2001,347,0000) | 1.6388E-02 (2001,276,0000) | 1.5128E-02 (2001,008,0000) |
| 891 | -136.451 | -238.216 | 2.9099E-02 (2001,362,0000) | 1.6163E-02 (2001,071,0000) | 1.5969E-02 (2001,347,0000) | 1.5412E-02 (2001,276,0000) |
| 892 | -134.988 | -238.241 | 2.8999E-02 (2001,362,0000) | 1.7237E-02 (2001,071,0000) | 1.5506E-02 (2001,008,0000) | 1.4951E-02 (2001,006,0000) |
| 893 | -133.525 | -238.266 | 2.8747E-02 (2001,362,0000) | 1.8220E-02 (2001,071,0000) | 1.5690E-02 (2001,008,0000) | 1.5049E-02 (2001,006,0000) |
| 894 | -132.062 | -238.291 | 2.8347E-02 (2001,362,0000) | 1.9056E-02 (2001,071,0000) | 1.5869E-02 (2001,008,0000) | 1.5137E-02 (2001,006,0000) |
| 895 | -130.599 | -238.316 | 2.7829E-02 (2001,362,0000) | 1.9834E-02 (2001,071,0000) | 1.6042E-02 (2001,008,0000) | 1.5455E-02 (2001,365,0000) |
| 896 | -137.882 | -236.337 | 2.8961E-02 (2001,362,0000) | 1.6911E-02 (2001,276,0000) | 1.6716E-02 (2001,347,0000) | 1.6245E-02 (2001,071,0000) |
| 897 | -136.419 | -236.363 | 2.9031E-02 (2001,362,0000) | 1.7377E-02 (2001,071,0000) | 1.5985E-02 (2001,276,0000) | 1.5014E-02 (2001,347,0000) |
| 898 | -134.956 | -236.388 | 2.8938E-02 (2001,362,0000) | 1.8409E-02 (2001,071,0000) | 1.5177E-02 (2001,008,0000) | 1.5116E-02 (2001,276,0000) |
| 899 | -133.493 | -236.413 | 2.8682E-02 (2001,362,0000) | 1.9273E-02 (2001,071,0000) | 1.5348E-02 (2001,008,0000) | 1.4924E-02 (2001,006,0000) |
| 900 | -132.030 | -236.438 | 2.8282E-02 (2001,362,0000) | 2.0092E-02 (2001,071,0000) | 1.5518E-02 (2001,008,0000) | 1.5062E-02 (2001,365,0000) |
| 901 | -137.849 | -234.485 | 2.8811E-02 (2001,362,0000) | 1.7415E-02 (2001,071,0000) | 1.6963E-02 (2001,276,0000) | 1.5387E-02 (2001,347,0000) |
| 902 | -136.386 | -234.510 | 2.8894E-02 (2001,362,0000) | 1.8511E-02 (2001,071,0000) | 1.6191E-02 (2001,276,0000) | 1.4918E-02 (2001,346,0000) |
| 903 | -134.924 | -234.536 | 2.8808E-02 (2001,362,0000) | 1.9434E-02 (2001,071,0000) | 1.4828E-02 (2001,008,0000) | 1.4724E-02 (2001,346,0000) |
| 904 | -133.462 | -234.561 | 2.8552E-02 (2001,362,0000) | 2.0236E-02 (2001,071,0000) | 1.4989E-02 (2001,008,0000) | 1.4785E-02 (2001,006,0000) |
| 905 | -137.816 | -232.632 | 2.8574E-02 (2001,362,0000) | 1.8528E-02 (2001,071,0000) | 1.7377E-02 (2001,276,0000) | 1.5646E-02 (2001,346,0000) |
| 906 | -136.354 | -232.657 | 2.8669E-02 (2001,362,0000) | 1.9521E-02 (2001,071,0000) | 1.6526E-02 (2001,276,0000) | 1.5529E-02 (2001,346,0000) |
| 907 | -134.892 | -232.683 | 2.8586E-02 (2001,362,0000) | 2.0297E-02 (2001,071,0000) | 1.4723E-02 (2001,346,0000) | 1.4510E-02 (2001,006,0000) |
| 908 | -139.245 | -230.753 | 2.7981E-02 (2001,362,0000) | 1.8463E-02 (2001,071,0000) | 1.8387E-02 (2001,276,0000) | 1.6494E-02 (2001,346,0000) |
| 909 | -137.784 | -230.779 | 2.8269E-02 (2001,362,0000) | 1.9497E-02 (2001,071,0000) | 1.8085E-02 (2001,276,0000) | 1.6302E-02 (2001,346,0000) |
| 910 | -136.322 | -230.805 | 2.8368E-02 (2001,362,0000) | 2.0277E-02 (2001,071,0000) | 1.5760E-02 (2001,346,0000) | 1.4642E-02 (2001,276,0000) |
| 911 | -134.860 | -230.830 | 2.8291E-02 (2001,362,0000) | 2.1026E-02 (2001,071,0000) | 1.5695E-02 (2001,346,0000) | 1.4495E-02 (2001,276,0000) |
| 912 | -139.212 | -228.900 | 2.7597E-02 (2001,362,0000) | 1.9382E-02 (2001,071,0000) | 1.8700E-02 (2001,276,0000) | 1.7108E-02 (2001,346,0000) |
| 913 | -137.751 | -228.926 | 2.7884E-02 (2001,362,0000) | 2.0254E-02 (2001,071,0000) | 1.8311E-02 (2001,276,0000) | 1.6844E-02 (2001,346,0000) |
| 914 | -136.290 | -228.952 | 2.7984E-02 (2001,362,0000) | 2.0890E-02 (2001,071,0000) | 1.6219E-02 (2001,346,0000) | 1.4687E-02 (2001,276,0000) |
| 915 | -134.828 | -228.977 | 2.7918E-02 (2001,362,0000) | 2.1601E-02 (2001,071,0000) | 1.6224E-02 (2001,346,0000) | 1.5272E-02 (2001,276,0000) |
| 916 | -140.640 | -227.021 | 2.6680E-02 (2001,362,0000) | 1.9176E-02 (2001,071,0000) | 1.9035E-02 (2001,276,0000) | 1.7836E-02 (2001,346,0000) |
| 917 | -139.179 | -227.048 | 2.7160E-02 (2001,362,0000) | 2.0074E-02 (2001,071,0000) | 1.8909E-02 (2001,276,0000) | 1.7656E-02 (2001,346,0000) |
| 918 | -137.718 | -227.073 | 2.7448E-02 (2001,362,0000) | 2.0731E-02 (2001,071,0000) | 1.6982E-02 (2001,346,0000) | 1.6410E-02 (2001,276,0000) |
| 919 | -136.257 | -227.099 | 2.7552E-02 (2001,362,0000) | 2.1371E-02 (2001,071,0000) | 1.6717E-02 (2001,346,0000) | 1.5431E-02 (2001,276,0000) |
| 920 | -140.607 | -225.169 | 2.6204E-02 (2001,362,0000) | 1.9833E-02 (2001,071,0000) | 1.9178E-02 (2001,276,0000) | 1.8358E-02 (2001,346,0000) |
| 921 | -139.146 | -225.195 | 2.6675E-02 (2001,362,0000) | 2.0538E-02 (2001,071,0000) | 1.8674E-02 (2001,276,0000) | 1.7844E-02 (2001,346,0000) |
| 922 | -137.686 | -225.221 | 2.6952E-02 (2001,362,0000) | 2.1105E-02 (2001,071,0000) | 1.7246E-02 (2001,346,0000) | 1.6057E-02 (2001,276,0000) |
| 923 | -136.225 | -225.246 | 2.7069E-02 (2001,362,0000) | 2.1734E-02 (2001,071,0000) | 1.7128E-02 (2001,346,0000) | 1.6114E-02 (2001,276,0000) |
| 924 | -140.574 | -223.316 | 2.5700E-02 (2001,362,0000) | 2.0334E-02 (2001,071,0000) | 1.9097E-02 (2001,276,0000) | 1.8669E-02 (2001,346,0000) |
| 925 | -139.113 | -223.342 | 2.6140E-02 (2001,362,0000) | 2.0865E-02 (2001,071,0000) | 1.7706E-02 (2001,346,0000) | 1.6323E-02 (2001,276,0000) |
| 926 | -137.653 | -223.368 | 2.6413E-02 (2001,362,0000) | 2.1431E-02 (2001,071,0000) | 1.7323E-02 (2001,346,0000) | 1.5206E-02 (2001,276,0000) |
| 927 | -136.193 | -223.394 | 2.6521E-02 (2001,362,0000) | 2.1998E-02 (2001,071,0000) | 1.7242E-02 (2001,346,0000) | 1.5584E-02 (2001,276,0000) |
| 928 | -143.460 | -221.410 | 2.3773E-02 (2001,362,0000) | 1.9329E-02 (2001,071,0000) | 1.9319E-02 (2001,346,0000) | 1.9278E-02 (2001,276,0000) |
| 929 | -142.000 | -221.437 | 2.4545E-02 (2001,362,0000) | 2.0054E-02 (2001,071,0000) | 1.9150E-02 (2001,346,0000) | 1.9132E-02 (2001,276,0000) |
| 930 | -140.540 | -221.463 | 2.5166E-02 (2001,362,0000) | 2.0604E-02 (2001,071,0000) | 1.8343E-02 (2001,346,0000) | 1.7778E-02 (2001,276,0000) |
| 931 | -139.080 | -221.489 | 2.5588E-02 (2001,362,0000) | 2.1094E-02 (2001,071,0000) | 1.7597E-02 (2001,346,0000) | 1.5018E-02 (2001,276,0000) |
| 932 | -137.620 | -221.515 | 2.5861E-02 (2001,362,0000) | 2.1654E-02 (2001,071,0000) | 1.7338E-02 (2001,346,0000) | 1.4632E-02 (2001,276,0000) |
| 933 | -146.346 | -219.503 | 2.1503E-02 (2001,362,0000) | 1.9975E-02 (2001,346,0000) | 1.9310E-02 (2001,276,0000) | 1.8302E-02 (2001,071,0000) |
| 934 | -144.886 | -219.531 | 2.2477E-02 (2001,362,0000) | 1.9708E-02 (2001,346,0000) | 1.9206E-02 (2001,276,0000) | 1.9077E-02 (2001,071,0000) |
| 935 | -143.426 | -219.558 | 2.3347E-02 (2001,362,0000) | 1.9757E-02 (2001,071,0000) | 1.9459E-02 (2001,346,0000) | 1.9013E-02 (2001,276,0000) |
| 936 | -141.967 | -219.584 | 2.4083E-02 (2001,362,0000) | 2.0338E-02 (2001,071,0000) | 1.9019E-02 (2001,346,0000) | 1.8709E-02 (2001,276,0000) |
| 937 | -140.507 | -219.611 | 2.4647E-02 (2001,362,0000) | 2.0734E-02 (2001,071,0000) | 1.7931E-02 (2001,346,0000) | 1.5685E-02 (2001,276,0000) |
| 938 | -139.047 | -219.637 | 2.5058E-02 (2001,362,0000) | 2.1259E-02 (2001,071,0000) | 1.7504E-02 (2001,346,0000) | 1.4491E-02 (2001,276,0000) |
| 939 | -137.588 | -219.663 | 2.5300E-02 (2001,362,0000) | 2.1800E-02 (2001,071,0000) | 1.7205E-02 (2001,346,0000) | 1.4419E-02 (2001,363,0000) |
| 940 | -146.311 | -217.651 | 2.1197E-02 (2001,362,0000) | 1.9909E-02 (2001,346,0000) | 1.8960E-02 (2001,276,0000) | 1.8841E-02 (2001,071,0000) |
| 941 | -144.851 | -217.678 | 2.2123E-02 (2001,362,0000) | 1.9589E-02 (2001,346,0000) | 1.9447E-02 (2001,071,0000) | 1.8771E-02 (2001,276,0000) |
| 942 | -143.392 | -217.705 | 2.2943E-02 (2001,362,0000) | 1.9984E-02 (2001,071,0000) | 1.9331E-02 (2001,346,0000) | 1.8526E-02 (2001,276,0000) |
| 943 | -141.933 | -217.732 | 2.3643E-02 (2001,362,0000) | 2.0409E-02 (2001,071,0000) | 1.8539E-02 (2001,346,0000) | 1.7505E-02 (2001,276,0000) |
| 944 | -140.474 | -217.758 | 2.4148E-02 (2001,362,0000) | 2.0822E-02 (2001,071,0000) | 1.7563E-02 (2001,346,0000) | 1.4780E-02 (2001,361,0000) |
| 945 | -139.014 | -217.784 | 2.4549E-02 (2001,362,0000) | 2.1419E-02 (2001,071,0000) | 1.7484E-02 (2001,346,0000) | 1.4622E-02 (2001,276,0000) |
| 946 | -137.555 | -217.810 | 2.4738E-02 (2001,362,0000) | 2.1920E-02 (2001,071,0000) | 1.7046E-02 (2001,346,0000) | 1.5174E-02 (2001,363,0000) |
| 947 | -146.276 | -215.798 | 2.0885E-02 (2001,362,0000) | 1.9539E-02 (2001,346,0000) | 1.9127E-02 (2001,071,0000) | 1.8381E-02 (2001,276,0000) |
| 948 | -144.817 | -215.825 | 2.1780E-02 (2001,362,0000) | 1.9632E-02 (2001,071,0000) | 1.9469E-02 (2001,346,0000) | 1.8156E-02 (2001,276,0000) |
| 949 | -143.358 | -215.852 | 2.2549E-02 (2001,362,0000) | 1.9927E-02 (2001,071,0000) | 1.8331E-02 (2001,346,0000) | 1.6016E-02 (2001,276,0000) |
| 950 | -141.899 | -215.879 | 2.3156E-02 (2001,362,0000) | 2.0369E-02 (2001,071,0000) | 1.7642E-02 (2001,346,0000) | 1.5388E-02 (2001,361,0000) |
| 951 | -146.241 | -213.946 | 2.0613E-02 (2001,362,0000) | 1.9711E-02 (2001,346,0000) | 1.9293E-02 (2001,071,0000) | 1.7691E-02 (2001,276,0000) |
| 952 | -144.783 | -213.973 | 2.1450E-02 (2001,362,0000) | 1.9687E-02 (2001,071,0000) | 1.9314E-02 (2001,346,0000) | 1.7355E-02 (2001,276,0000) |
| 953 | -143.324 | -214.000 | 2.2179E-02 (2001,362,0000) | 2.0027E-02 (2001,071,0000) | 1.8415E-02 (2001,346,0000) | 1.6449E-02 (2001,276,0000) |
| 954 | -146.207 | -212.093 | 2.0420E-02 (2001,362,0000) | 1.9118E-02 (2001,071,0000) | 1.8726E-02 (2001,346,0000) | 1.6266E-02 (2001,361,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 955 | -144.748 | -212.120 | 2.1193E-02 (2001,362,0000) | 1.9629E-02 (2001,071,0000) | 1.8743E-02 (2001,346,0000) | 1.6398E-02 (2001,361,0000) |
| 956 | -143.290 | -212.147 | 2.1849E-02 (2001,362,0000) | 2.0028E-02 (2001,071,0000) | 1.8127E-02 (2001,346,0000) | 1.6422E-02 (2001,361,0000) |
| 957 | -141.832 | -212.174 | 2.2361E-02 (2001,362,0000) | 2.0553E-02 (2001,071,0000) | 1.7538E-02 (2001,346,0000) | 1.6326E-02 (2001,361,0000) |
| 958 | -146.172 | -210.241 | 2.0247E-02 (2001,362,0000) | 1.9213E-02 (2001,071,0000) | 1.9109E-02 (2001,346,0000) | 1.6739E-02 (2001,361,0000) |
| 959 | -144.714 | -210.268 | 2.0949E-02 (2001,362,0000) | 1.9622E-02 (2001,071,0000) | 1.8661E-02 (2001,346,0000) | 1.6835E-02 (2001,361,0000) |
| 960 | -143.256 | -210.295 | 2.1524E-02 (2001,362,0000) | 2.0025E-02 (2001,071,0000) | 1.7804E-02 (2001,346,0000) | 1.6841E-02 (2001,361,0000) |
| 961 | -141.798 | -210.321 | 2.1976E-02 (2001,362,0000) | 2.0688E-02 (2001,071,0000) | 1.7525E-02 (2001,346,0000) | 1.6773E-02 (2001,361,0000) |
| 962 | -146.137 | -208.388 | 2.0102E-02 (2001,362,0000) | 1.9075E-02 (2001,071,0000) | 1.8609E-02 (2001,346,0000) | 1.7173E-02 (2001,361,0000) |
| 963 | -144.680 | -208.415 | 2.0727E-02 (2001,362,0000) | 1.9578E-02 (2001,071,0000) | 1.8426E-02 (2001,346,0000) | 1.7272E-02 (2001,361,0000) |
| 964 | -143.222 | -208.442 | 2.1216E-02 (2001,362,0000) | 2.0193E-02 (2001,071,0000) | 1.7940E-02 (2001,346,0000) | 1.7276E-02 (2001,361,0000) |
| 965 | -141.764 | -208.469 | 2.1573E-02 (2001,362,0000) | 2.0786E-02 (2001,071,0000) | 1.7218E-02 (2001,346,0000) | 1.7181E-02 (2001,361,0000) |
| 966 | -140.307 | -208.495 | 2.1746E-02 (2001,362,0000) | 2.1495E-02 (2001,071,0000) | 1.6972E-02 (2001,361,0000) | 1.6735E-02 (2001,346,0000) |
| 967 | -146.102 | -206.535 | 1.9958E-02 (2001,362,0000) | 1.9004E-02 (2001,071,0000) | 1.8262E-02 (2001,346,0000) | 1.7605E-02 (2001,361,0000) |
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| 970 | -141.731 | -206.616 | 2.1147E-02 (2001,362,0000) | 2.0967E-02 (2001,071,0000) | 1.7573E-02 (2001,361,0000) | 1.6925E-02 (2001,346,0000) |
| 971 | -146.068 | -204.683 | 1.9829E-02 (2001,362,0000) | 1.8923E-02 (2001,071,0000) | 1.8044E-02 (2001,361,0000) | 1.7702E-02 (2001,346,0000) |
| 972 | -144.611 | -204.710 | 2.0258E-02 (2001,362,0000) | 1.9694E-02 (2001,071,0000) | 1.8135E-02 (2001,361,0000) | 1.7653E-02 (2001,346,0000) |
| 973 | -143.154 | -204.737 | 2.0562E-02 (2001,362,0000) | 2.0505E-02 (2001,071,0000) | 1.8131E-02 (2001,361,0000) | 1.7286E-02 (2001,346,0000) |
| 974 | -141.697 | -204.764 | 2.1337E-02 (2001,071,0000) | 2.0713E-02 (2001,362,0000) | 1.8022E-02 (2001,361,0000) | 1.6927E-02 (2001,346,0000) |
| 975 | -148.946 | -202.775 | 1.8675E-02 (2001,362,0000) | 1.8582E-02 (2001,346,0000) | 1.8372E-02 (2001,071,0000) | 1.8059E-02 (2001,361,0000) |
| 976 | -147.489 | -202.803 | 1.9235E-02 (2001,362,0000) | 1.8638E-02 (2001,071,0000) | 1.8324E-02 (2001,361,0000) | 1.7948E-02 (2001,346,0000) |
| 977 | -146.033 | -202.831 | 1.9680E-02 (2001,362,0000) | 1.9285E-02 (2001,071,0000) | 1.8494E-02 (2001,361,0000) | 1.7739E-02 (2001,346,0000) |
| 978 | -144.576 | -202.858 | 2.0002E-02 (2001,362,0000) | 1.9975E-02 (2001,071,0000) | 1.8582E-02 (2001,361,0000) | 1.7187E-02 (2001,346,0000) |
| 979 | -143.120 | -202.885 | 2.0914E-02 (2001,071,0000) | 2.0190E-02 (2001,362,0000) | 1.8583E-02 (2001,361,0000) | 1.7250E-02 (2001,346,0000) |
| 980 | -141.663 | -202.911 | 2.1577E-02 (2001,071,0000) | 2.0184E-02 (2001,362,0000) | 1.8407E-02 (2001,361,0000) | 1.6653E-02 (2001,346,0000) |
| 981 | -148.910 | -200.923 | 1.8713E-02 (2001,362,0000) | 1.8511E-02 (2001,361,0000) | 1.8388E-02 (2001,071,0000) | 1.7958E-02 (2001,346,0000) |
| 982 | -147.454 | -200.951 | 1.9151E-02 (2001,362,0000) | 1.8798E-02 (2001,071,0000) | 1.8727E-02 (2001,361,0000) | 1.7157E-02 (2001,346,0000) |
| 983 | -145.998 | -200.978 | 1.9773E-02 (2001,071,0000) | 1.9510E-02 (2001,362,0000) | 1.8982E-02 (2001,361,0000) | 1.7625E-02 (2001,346,0000) |
| 984 | -144.542 | -201.005 | 2.0348E-02 (2001,071,0000) | 1.9681E-02 (2001,362,0000) | 1.8998E-02 (2001,361,0000) | 1.6799E-02 (2001,346,0000) |
| 985 | -143.086 | -201.032 | 2.1118E-02 (2001,071,0000) | 1.9732E-02 (2001,362,0000) | 1.8986E-02 (2001,361,0000) | 1.7043E-02 (2001,029,0000) |
| 986 | -141.630 | -201.059 | 2.1728E-02 (2001,071,0000) | 1.9570E-02 (2001,362,0000) | 1.8771E-02 (2001,361,0000) | 1.7196E-02 (2001,029,0000) |
| 987 | -148.875 | -199.071 | 1.8845E-02 (2001,361,0000) | 1.8657E-02 (2001,362,0000) | 1.8547E-02 (2001,071,0000) | 1.6867E-02 (2001,346,0000) |
| 988 | -147.419 | -199.098 | 1.9637E-02 (2001,071,0000) | 1.9292E-02 (2001,361,0000) | 1.9067E-02 (2001,362,0000) | 1.7767E-02 (2001,346,0000) |
| 989 | -145.963 | -199.126 | 2.0048E-02 (2001,071,0000) | 1.9362E-02 (2001,361,0000) | 1.9236E-02 (2001,362,0000) | 1.6661E-02 (2001,346,0000) |
| 990 | -144.508 | -199.153 | 2.0896E-02 (2001,071,0000) | 1.9566E-02 (2001,361,0000) | 1.9367E-02 (2001,362,0000) | 1.7870E-02 (2001,029,0000) |
| 991 | -151.751 | -197.162 | 1.8792E-02 (2001,346,0000) | 1.8613E-02 (2001,361,0000) | 1.8446E-02 (2001,071,0000) | 1.7908E-02 (2001,278,0000) |
| 992 | -150.295 | -197.190 | 1.9101E-02 (2001,361,0000) | 1.8674E-02 (2001,071,0000) | 1.8316E-02 (2001,362,0000) | 1.7468E-02 (2001,346,0000) |
| 993 | -148.840 | -197.218 | 1.9316E-02 (2001,361,0000) | 1.9185E-02 (2001,071,0000) | 1.8608E-02 (2001,362,0000) | 1.6573E-02 (2001,346,0000) |
| 994 | -147.384 | -197.246 | 1.9882E-02 (2001,071,0000) | 1.9581E-02 (2001,361,0000) | 1.8822E-02 (2001,362,0000) | 1.6418E-02 (2001,346,0000) |
| 995 | -145.929 | -197.273 | 2.0612E-02 (2001,071,0000) | 1.9888E-02 (2001,361,0000) | 1.8963E-02 (2001,362,0000) | 1.7663E-02 (2001,029,0000) |
| 996 | -144.473 | -197.300 | 2.0856E-02 (2001,071,0000) | 1.9656E-02 (2001,361,0000) | 1.8726E-02 (2001,362,0000) | 1.7485E-02 (2001,029,0000) |
| 997 | -151.714 | -195.310 | 1.9087E-02 (2001,361,0000) | 1.8843E-02 (2001,071,0000) | 1.8122E-02 (2001,278,0000) | 1.7953E-02 (2001,362,0000) |
| 998 | -150.259 | -195.338 | 1.9445E-02 (2001,361,0000) | 1.9284E-02 (2001,071,0000) | 1.8278E-02 (2001,362,0000) | 1.6716E-02 (2001,346,0000) |
| 999 | -148.804 | -195.366 | 2.0365E-02 (2001,071,0000) | 2.0046E-02 (2001,361,0000) | 1.8581E-02 (2001,362,0000) | 1.7885E-02 (2001,029,0000) |
| 1000 | -147.349 | -195.393 | 2.0915E-02 (2001,071,0000) | 2.0348E-02 (2001,361,0000) | 1.9062E-02 (2001,029,0000) | 1.8691E-02 (2001,362,0000) |
| 1001 | -145.894 | -195.421 | 2.1069E-02 (2001,071,0000) | 2.0430E-02 (2001,361,0000) | 1.9160E-02 (2001,029,0000) | 1.8647E-02 (2001,339,0000) |
| 1002 | -144.439 | -195.448 | 2.1147E-02 (2001,071,0000) | 2.0240E-02 (2001,361,0000) | 1.9170E-02 (2001,029,0000) | 1.8439E-02 (2001,339,0000) |
| 1003 | -153.133 | -193.429 | 1.8996E-02 (2001,071,0000) | 1.8956E-02 (2001,361,0000) | 1.8751E-02 (2001,278,0000) | 1.7843E-02 (2001,346,0000) |
| 1004 | -151.678 | -193.457 | 1.9286E-02 (2001,361,0000) | 1.9278E-02 (2001,071,0000) | 1.7918E-02 (2001,362,0000) | 1.6389E-02 (2001,339,0000) |
| 1005 | -150.224 | -193.485 | 2.0254E-02 (2001,071,0000) | 2.0058E-02 (2001,361,0000) | 1.8283E-02 (2001,362,0000) | 1.7963E-02 (2001,339,0000) |
| 1006 | -148.769 | -193.513 | 2.1092E-02 (2001,071,0000) | 2.0597E-02 (2001,361,0000) | 1.9430E-02 (2001,339,0000) | 1.9371E-02 (2001,029,0000) |
| 1007 | -147.314 | -193.541 | 2.1153E-02 (2001,071,0000) | 2.0745E-02 (2001,361,0000) | 1.9834E-02 (2001,339,0000) | 1.9493E-02 (2001,029,0000) |
| 1008 | -145.859 | -193.568 | 2.1209E-02 (2001,071,0000) | 2.0788E-02 (2001,361,0000) | 2.0335E-02 (2001,339,0000) | 2.0088E-02 (2001,029,0000) |
| 1009 | -144.404 | -193.596 | 2.1004E-02 (2001,071,0000) | 2.0519E-02 (2001,361,0000) | 1.9829E-02 (2001,339,0000) | 1.9793E-02 (2001,029,0000) |
| 1010 | -156.005 | -191.519 | 2.0126E-02 (2001,278,0000) | 1.9044E-02 (2001,346,0000) | 1.8725E-02 (2001,071,0000) | 1.7863E-02 (2001,361,0000) |
| 1011 | -154.551 | -191.548 | 1.9313E-02 (2001,278,0000) | 1.9232E-02 (2001,071,0000) | 1.8696E-02 (2001,361,0000) | 1.8318E-02 (2001,346,0000) |
| 1012 | -153.097 | -191.576 | 1.9603E-02 (2001,071,0000) | 1.9291E-02 (2001,361,0000) | 1.7813E-02 (2001,339,0000) | 1.7687E-02 (2001,362,0000) |
| 1013 | -151.642 | -191.605 | 2.0324E-02 (2001,071,0000) | 1.9825E-02 (2001,361,0000) | 1.8506E-02 (2001,339,0000) | 1.7917E-02 (2001,362,0000) |
| 1014 | -150.188 | -191.633 | 2.0911E-02 (2001,071,0000) | 2.0328E-02 (2001,361,0000) | 1.9439E-02 (2001,339,0000) | 1.8079E-02 (2001,029,0000) |
| 1015 | -148.733 | -191.661 | 2.1469E-02 (2001,339,0000) | 2.1464E-02 (2001,071,0000) | 2.1056E-02 (2001,361,0000) | 2.0102E-02 (2001,029,0000) |
| 1016 | -147.279 | -191.689 | 2.2201E-02 (2001,339,0000) | 2.1446E-02 (2001,071,0000) | 2.1223E-02 (2001,361,0000) | 2.0909E-02 (2001,029,0000) |
| 1017 | -145.824 | -191.716 | 2.2463E-02 (2001,339,0000) | 2.1253E-02 (2001,029,0000) | 2.1204E-02 (2001,361,0000) | 2.1178E-02 (2001,071,0000) |
| 1018 | -144.370 | -191.743 | 2.1761E-02 (2001,339,0000) | 2.0889E-02 (2001,361,0000) | 2.0699E-02 (2001,071,0000) | 2.0680E-02 (2001,029,0000) |
| 1019 | -155.968 | -189.666 | 1.9750E-02 (2001,278,0000) | 1.9397E-02 (2001,071,0000) | 1.8378E-02 (2001,361,0000) | 1.8309E-02 (2001,339,0000) |
| 1020 | -154.514 | -189.695 | 1.9786E-02 (2001,071,0000) | 1.9021E-02 (2001,361,0000) | 1.8830E-02 (2001,339,0000) | 1.7392E-02 (2001,362,0000) |
| 1021 | -153.060 | -189.724 | 2.0328E-02 (2001,071,0000) | 1.9318E-02 (2001,361,0000) | 1.8895E-02 (2001,339,0000) | 1.7529E-02 (2001,362,0000) |
| 1022 | -151.606 | -189.753 | 2.1350E-02 (2001,339,0000) | 2.1341E-02 (2001,071,0000) | 2.0473E-02 (2001,361,0000) | 1.8778E-02 (2001,029,0000) |
| 1023 | -150.152 | -189.781 | 2.1408E-02 (2001,071,0000) | 2.1313E-02 (2001,339,0000) | 2.0580E-02 (2001,361,0000) | 1.9073E-02 (2001,029,0000) |
| 1024 | -148.698 | -189.809 | 2.3053E-02 (2001,339,0000) | 2.1573E-02 (2001,071,0000) | 2.1238E-02 (2001,361,0000) | 2.0773E-02 (2001,029,0000) |
| 1025 | -147.244 | -189.836 | 2.1979E-02 (2001,339,0000) | 2.0967E-02 (2001,071,0000) | 2.0880E-02 (2001,361,0000) | 2.0125E-02 (2001,029,0000) |
| 1026 | -145.790 | -189.864 | 2.2715E-02 (2001,339,0000) | 2.1021E-02 (2001,361,0000) | 2.0652E-02 (2001,029,0000) | 2.0549E-02 (2001,071,0000) |
| 1027 | -144.336 | -189.891 | 2.3798E-02 (2001,339,0000) | 2.1157E-02 (2001,361,0000) | 2.1156E-02 (2001,029,0000) | 2.0075E-02 (2001,071,0000) |
| 1028 | -157.385 | -187.785 | 2.0081E-02 (2001,278,0000) | 1.9409E-02 (2001,071,0000) | 1.9184E-02 (2001,339,0000) | 1.8009E-02 (2001,361,0000) |
| 1029 | -155.931 | -187.814 | 2.0205E-02 (2001,339,0000) | 2.0028E-02 (2001,071,0000) | 1.8780E-02 (2001,361,0000) | 1.7373E-02 (2001,278,0000) |
| 1030 | -154.477 | -187.843 | 2.0515E-02 (2001,071,0000) | 2.0180E-02 (2001,339,0000) | 1.9045E-02 (2001,361,0000) | 1.7252E-02 (2001,362,0000) |
| 1031 | -153.024 | -187.872 | 2.3404E-02 (2001,339,0000) | 2.1776E-02 (2001,071,0000) | 2.0586E-02 (2001,361,0000) | 1.9558E-02 (2001,029,0000) |
| 1032 | -151.570 | -187.900 | 2.4265E-02 (2001,339,0000) | 2.2022E-02 (2001,071,0000) | 2.1048E-02 (2001,361,0000) | 2.0478E-02 (2001,029,0000) |
| 1033 | -150.116 | -187.928 | 2.5458E-02 (2001,339,0000) | 2.1997E-02 (2001,071,0000) | 2.1688E-02 (2001,029,0000) | 2.1534E-02 (2001,361,0000) |
| 1034 | -148.663 | -187.956 | 2.5797E-02 (2001,339,0000) | 2.2041E-02 (2001,029,0000) | 2.1615E-02 (2001,361,0000) | 2.1493E-02 (2001,071,0000) |
| 1035 | -147.209 | -187.984 | 2.7617E-02 (2001,339,0000) | 2.3368E-02 (2001,029,0000) | 2.2056E-02 (2001,361,0000) | 2.1052E-02 (2001,071,0000) |
| 1036 | -145.755 | -188.011 | 2.6391E-02 (2001,339,0000) | 2.2227E-02 (2001,029,0000) | 2.1632E-02 (2001,361,0000) | 2.0847E-02 (2001,292,0000) |
| 1037 | -144.301 | -188.039 | 2.4731E-02 (2001,339,0000) | 2.1178E-02 (2001,361,0000) | 2.0681E-02 (2001,029,0000) | 2.0580E-02 (2001,292,0000) |
| 1038 | -142.848 | -188.065 | 2.5551E-02 (2001,339,0000) | 2.2561E-02 (2001,365,0000) | 2.1320E-02 (2001,361,0000) | 2.1251E-02 (2001,292,0000) |
| 1039 | -141.394 | -188.092 | 2.4394E-02 (2001,339,0000) | 2.3097E-02 (2001,365,0000) | 2.1029E-02 (2001,361,0000) | 2.0951E-02 (2001,292,0000) |
| 1040 | -161.707 | -185.843 | 2.2554E-02 (2001,278,0000) | 2.0933E-02 (2001,086,0000) | 1.8745E-02 (2001,090,0000) | 1.8331E-02 (2001,071,0000) |
| 1041 | -160.254 | -185.873 | 2.1677E-02 (2001,278,0000) | 1.8813E-02 (2001,339,0000) | 1.8777E-02 (2001,071,0000) | 1.8061E-02 (2001,086,0000) |
| 1042 | -158.801 | -185.903 | 2.0252E-02 (2001,339,0000) | 2.0018E-02 (2001,278,0000) | 1.9370E-02 (2001,071,0000) | 1.7679E-02 (2001,361,0000) |
| 1043 | -157.347 | -185.932 | 2.1474E-02 (2001,339,0000) | 2.0109E-02 (2001,071,0000) | 1.8441E-02 (2001,361,0000) | 1.7445E-02 (2001,251,0000) |
| 1044 | -155.894 | -185.962 | 2.3815E-02 (2001,339,0000) | 2.1365E-02 (2001,071,0000) | 1.9691E-02 (2001,361,0000) | 1.8921E-02 (2001,029,0000) |
| 1045 | -154.441 | -185.991 | 2.5532E-02 (2001,339,0000) | 2.2151E-02 (2001,071,0000) | 2.0656E-02 (2001,029,0000) | 2.0550E-02 (2001,361,0000) |
| 1046 | -152.987 | -186.019 | 2.6132E-02 (2001,339,0000) | 2.2189E-02 (2001,071,0000) | 2.0996E-02 (2001,361,0000) | 2.0851E-02 (2001,029,0000) |
| 1047 | -151.534 | -186.048 | 2.5528E-02 (2001,339,0000) | 2.1813E-02 (2001,071,0000) | 2.0902E-02 (2001,361,0000) | 2.0691E-02 (2001,029,0000) |
| 1048 | -150.080 | -186.076 | 2.8974E-02 (2001,339,0000) | 2.3483E-02 (2001,029,0000) | 2.2136E-02 (2001,361,0000) | 2.1893E-02 (2001,071,0000) |
| 1049 | -148.627 | -186.104 | 2.9940E-02 (2001,339,0000) | 2.4372E-02 (2001,029,0000) | 2.2442E-02 (2001,361,0000) | 2.2368E-02 (2001,292,0000) |
| 1050 | -147.174 | -186.132 | 2.9050E-02 (2001,339,0000) | 2.3463E-02 (2001,029,0000) | 2.2446E-02 (2001,292,0000) | 2.2147E-02 (2001,361,0000) |
| 1051 | -145.720 | -186.159 | 2.6805E-02 (2001,339,0000) | 2.1759E-02 (2001,292,0000) | 2.1556E-02 (2001,029,0000) | 2.1537E-02 (2001,361,0000) |
| 1052 | -144.267 | -186.186 | 2.5531E-02 (2001,339,0000) | 2.1468E-02 (2001,292,0000) | 2.1413E-02 (2001,365,0000) | 2.1250E-02 (2001,361,0000) |
| 1053 | -142.813 | -186.213 | 2.5292E-02 (2001,339,0000) | 2.2975E-02 (2001,365,0000) | 2.1429E-02 (2001,292,0000) | 2.1212E-02 (2001,361,0000) |
| 1054 | -141.360 | -186.240 | 2.4209E-02 (2001,339,0000) | 2.3764E-02 (2001,365,0000) | 2.0980E-02 (2001,361,0000) | 2.0819E-02 (2001,292,0000) |
| 1055 | -161.669 | -183.991 | 2.2073E-02 (2001,278,0000) | 1.9858E-02 (2001,339,0000) | 1.9016E-02 (2001,086,0000) | 1.8750E-02 (2001,071,0000) |
| 1056 | -160.216 | -184.021 | 2.1686E-02 (2001,339,0000) | 2.0443E-02 (2001,278,0000) | 1.9564E-02 (2001,071,0000) | 1.8482E-02 (2001,251,0000) |
| 1057 | -158.763 | -184.051 | 2.3988E-02 (2001,339,0000) | 2.0528E-02 (2001,071,0000) | 1.8775E-02 (2001,346,0000) | 1.8759E-02 (2001,251,0000) |
| 1058 | -157.310 | -184.080 | 2.5979E-02 (2001,339,0000) | 2.1389E-02 (2001,071,0000) | 1.9900E-02 (2001,029,0000) | 1.9558E-02 (2001,361,0000) |
| 1059 | -155.857 | -184.109 | 2.7752E-02 (2001,339,0000) | 2.2078E-02 (2001,071,0000) | 2.1448E-02 (2001,029,0000) | 2.0490E-02 (2001,361,0000) |
| 1060 | -154.404 | -184.138 | 2.8911E-02 (2001,339,0000) | 2.2277E-02 (2001,071,0000) | 2.1965E-02 (2001,029,0000) | 2.1247E-02 (2001,361,0000) |
| 1061 | -152.951 | -184.167 | 3.0611E-02 (2001,339,0000) | 2.4171E-02 (2001,029,0000) | 2.2496E-02 (2001,071,0000) | 2.1913E-02 (2001,361,0000) |
| 1062 | -151.498 | -184.196 | 3.1491E-02 (2001,339,0000) | 2.4954E-02 (2001,029,0000) | 2.2748E-02 (2001,292,0000) | 2.2358E-02 (2001,361,0000) |
| 1063 | -150.045 | -184.224 | 3.1287E-02 (2001,339,0000) | 2.4382E-02 (2001,029,0000) | 2.3329E-02 (2001,292,0000) | 2.2442E-02 (2001,361,0000) |
| 1064 | -148.592 | -184.252 | 3.0596E-02 (2001,339,0000) | 2.3879E-02 (2001,029,0000) | 2.3438E-02 (2001,292,0000) | 2.2308E-02 (2001,361,0000) |
| 1065 | -147.139 | -184.279 | 2.8341E-02 (2001,339,0000) | 2.2642E-02 (2001,292,0000) | 2.2037E-02 (2001,029,0000) | 2.1706E-02 (2001,361,0000) |
| 1066 | -145.686 | -184.307 | 2.6617E-02 (2001,339,0000) | 2.2031E-02 (2001,292,0000) | 2.1370E-02 (2001,365,0000) | 2.1318E-02 (2001,361,0000) |
| 1067 | -144.233 | -184.334 | 2.6296E-02 (2001,339,0000) | 2.2865E-02 (2001,365,0000) | 2.1792E-02 (2001,292,0000) | 2.1304E-02 (2001,361,0000) |
| 1068 | -161.630 | -182.138 | 2.3475E-02 (2001,339,0000) | 2.0464E-02 (2001,278,0000) | 1.9637E-02 (2001,251,0000) | 1.9329E-02 (2001,071,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069 | -160.178 | -182.169 | 2.5739E-02 (2001,339,0000) | 2.0231E-02 (2001,071,0000) | 1.9644E-02 (2001,251,0000) | 1.9002E-02 (2001,346,0000) |
| 1070 | -158.725 | -182.198 | 2.7940E-02 (2001,339,0000) | 2.1065E-02 (2001,071,0000) | 2.0414E-02 (2001,029,0000) | 1.9481E-02 (2001,361,0000) |
| 1071 | -157.272 | -182.228 | 2.9901E-02 (2001,339,0000) | 2.2050E-02 (2001,029,0000) | 2.1645E-02 (2001,071,0000) | 2.0479E-02 (2001,361,0000) |
| 1072 | -155.820 | -182.257 | 3.1590E-02 (2001,339,0000) | 2.3604E-02 (2001,029,0000) | 2.1967E-02 (2001,071,0000) | 2.1626E-02 (2001,292,0000) |
| 1073 | -154.367 | -182.286 | 3.3010E-02 (2001,339,0000) | 2.5061E-02 (2001,029,0000) | 2.2841E-02 (2001,292,0000) | 2.2034E-02 (2001,361,0000) |
| 1074 | -152.914 | -182.315 | 3.3860E-02 (2001,339,0000) | 2.5979E-02 (2001,029,0000) | 2.3868E-02 (2001,292,0000) | 2.2528E-02 (2001,361,0000) |
| 1075 | -151.462 | -182.343 | 3.4030E-02 (2001,339,0000) | 2.6057E-02 (2001,029,0000) | 2.4636E-02 (2001,292,0000) | 2.2799E-02 (2001,361,0000) |
| 1076 | -150.009 | -182.372 | 3.1700E-02 (2001,339,0000) | 2.4050E-02 (2001,292,0000) | 2.3924E-02 (2001,029,0000) | 2.2221E-02 (2001,361,0000) |
| 1077 | -148.556 | -182.399 | 3.0683E-02 (2001,339,0000) | 2.3780E-02 (2001,292,0000) | 2.2958E-02 (2001,029,0000) | 2.2026E-02 (2001,361,0000) |
| 1078 | -147.104 | -182.427 | 2.8695E-02 (2001,339,0000) | 2.2839E-02 (2001,292,0000) | 2.2096E-02 (2001,365,0000) | 2.1563E-02 (2001,361,0000) |
| 1079 | -145.651 | -182.454 | 2.8473E-02 (2001,339,0000) | 2.3754E-02 (2001,365,0000) | 2.2468E-02 (2001,292,0000) | 2.1601E-02 (2001,361,0000) |
| 1080 | -161.592 | -180.286 | 2.7842E-02 (2001,339,0000) | 2.0447E-02 (2001,251,0000) | 1.9623E-02 (2001,071,0000) | 1.9231E-02 (2001,346,0000) |
| 1081 | -160.139 | -180.316 | 3.0179E-02 (2001,339,0000) | 2.0925E-02 (2001,029,0000) | 2.0328E-02 (2001,071,0000) | 2.0193E-02 (2001,292,0000) |
| 1082 | -158.687 | -180.346 | 3.2223E-02 (2001,339,0000) | 2.2777E-02 (2001,029,0000) | 2.1520E-02 (2001,292,0000) | 2.0776E-02 (2001,071,0000) |
| 1083 | -157.235 | -180.376 | 3.3853E-02 (2001,339,0000) | 2.4445E-02 (2001,029,0000) | 2.2795E-02 (2001,292,0000) | 2.1467E-02 (2001,361,0000) |
| 1084 | -155.783 | -180.405 | 3.5033E-02 (2001,339,0000) | 2.5866E-02 (2001,029,0000) | 2.3942E-02 (2001,292,0000) | 2.2178E-02 (2001,361,0000) |
| 1085 | -154.330 | -180.434 | 3.5760E-02 (2001,339,0000) | 2.6702E-02 (2001,029,0000) | 2.4923E-02 (2001,292,0000) | 2.2669E-02 (2001,361,0000) |
| 1086 | -152.878 | -180.463 | 3.5757E-02 (2001,339,0000) | 2.6407E-02 (2001,029,0000) | 2.5597E-02 (2001,292,0000) | 2.2953E-02 (2001,361,0000) |
| 1087 | -151.426 | -180.491 | 3.3669E-02 (2001,339,0000) | 2.4990E-02 (2001,292,0000) | 2.4645E-02 (2001,029,0000) | 2.2430E-02 (2001,361,0000) |
| 1088 | -149.973 | -180.519 | 3.3092E-02 (2001,339,0000) | 2.4771E-02 (2001,292,0000) | 2.3908E-02 (2001,029,0000) | 2.2592E-02 (2001,365,0000) |
| 1089 | -148.521 | -180.547 | 3.1177E-02 (2001,339,0000) | 2.3650E-02 (2001,292,0000) | 2.2950E-02 (2001,365,0000) | 2.1950E-02 (2001,029,0000) |
| 1090 | -147.068 | -180.575 | 2.9816E-02 (2001,339,0000) | 2.3707E-02 (2001,365,0000) | 2.2552E-02 (2001,292,0000) | 2.1589E-02 (2001,361,0000) |
| 1091 | -145.616 | -180.602 | 2.9509E-02 (2001,339,0000) | 2.5244E-02 (2001,365,0000) | 2.1692E-02 (2001,292,0000) | 2.1599E-02 (2001,361,0000) |
| 1092 | -161.553 | -178.434 | 3.2607E-02 (2001,339,0000) | 2.1511E-02 (2001,029,0000) | 2.1394E-02 (2001,292,0000) | 1.9726E-02 (2001,361,0000) |
| 1093 | -160.101 | -178.464 | 3.4594E-02 (2001,339,0000) | 2.3466E-02 (2001,029,0000) | 2.2693E-02 (2001,292,0000) | 2.0807E-02 (2001,361,0000) |
| 1094 | -158.649 | -178.494 | 3.6069E-02 (2001,339,0000) | 2.5217E-02 (2001,029,0000) | 2.3938E-02 (2001,292,0000) | 2.1730E-02 (2001,361,0000) |
| 1095 | -157.197 | -178.523 | 3.7095E-02 (2001,339,0000) | 2.6639E-02 (2001,029,0000) | 2.5037E-02 (2001,292,0000) | 2.2430E-02 (2001,361,0000) |
| 1096 | -155.745 | -178.553 | 3.7571E-02 (2001,339,0000) | 2.7466E-02 (2001,029,0000) | 2.5894E-02 (2001,292,0000) | 2.2914E-02 (2001,361,0000) |
| 1097 | -154.293 | -178.582 | 3.7596E-02 (2001,339,0000) | 2.7550E-02 (2001,029,0000) | 2.6453E-02 (2001,292,0000) | 2.3188E-02 (2001,361,0000) |
| 1098 | -152.841 | -178.610 | 3.7116E-02 (2001,339,0000) | 2.6753E-02 (2001,029,0000) | 2.6533E-02 (2001,292,0000) | 2.3287E-02 (2001,361,0000) |
| 1099 | -151.389 | -178.639 | 3.5610E-02 (2001,339,0000) | 2.5788E-02 (2001,292,0000) | 2.5148E-02 (2001,029,0000) | 2.3744E-02 (2001,365,0000) |
| 1100 | -149.937 | -178.667 | 3.2512E-02 (2001,339,0000) | 2.3863E-02 (2001,292,0000) | 2.3132E-02 (2001,365,0000) | 2.2325E-02 (2001,029,0000) |
| 1101 | -148.485 | -178.695 | 3.1843E-02 (2001,339,0000) | 2.4349E-02 (2001,365,0000) | 2.2828E-02 (2001,292,0000) | 2.1774E-02 (2001,361,0000) |
| 1102 | -147.033 | -178.723 | 3.4718E-02 (2001,339,0000) | 2.8926E-02 (2001,365,0000) | 2.2909E-02 (2001,292,0000) | 2.2688E-02 (2001,361,0000) |
| 1103 | -145.581 | -178.750 | 3.2037E-02 (2001,339,0000) | 2.8081E-02 (2001,365,0000) | 2.2011E-02 (2001,361,0000) | 2.0704E-02 (2001,292,0000) |
| 1104 | -164.418 | -176.521 | 3.2814E-02 (2001,339,0000) | 2.1942E-02 (2001,251,0000) | 2.1237E-02 (2001,292,0000) | 2.0114E-02 (2001,029,0000) |
| 1105 | -162.966 | -176.552 | 3.5078E-02 (2001,339,0000) | 2.2597E-02 (2001,292,0000) | 2.2230E-02 (2001,029,0000) | 2.0072E-02 (2001,251,0000) |
| 1106 | -161.515 | -176.582 | 3.6852E-02 (2001,339,0000) | 2.4274E-02 (2001,029,0000) | 2.3841E-02 (2001,292,0000) | 2.1184E-02 (2001,361,0000) |
| 1107 | -160.063 | -176.612 | 3.8103E-02 (2001,339,0000) | 2.6066E-02 (2001,029,0000) | 2.4992E-02 (2001,292,0000) | 2.2094E-02 (2001,361,0000) |
| 1108 | -158.611 | -176.642 | 3.8655E-02 (2001,339,0000) | 2.7208E-02 (2001,029,0000) | 2.5971E-02 (2001,292,0000) | 2.2767E-02 (2001,361,0000) |
| 1109 | -157.160 | -176.671 | 3.8349E-02 (2001,339,0000) | 2.7022E-02 (2001,029,0000) | 2.6612E-02 (2001,292,0000) | 2.3202E-02 (2001,361,0000) |
| 1110 | -155.708 | -176.701 | 3.9195E-02 (2001,339,0000) | 2.8486E-02 (2001,029,0000) | 2.7199E-02 (2001,292,0000) | 2.3522E-02 (2001,361,0000) |
| 1111 | -154.257 | -176.730 | 3.8566E-02 (2001,339,0000) | 2.7508E-02 (2001,029,0000) | 2.7117E-02 (2001,292,0000) | 2.3557E-02 (2001,361,0000) |
| 1112 | -152.805 | -176.758 | 3.7017E-02 (2001,339,0000) | 2.6186E-02 (2001,292,0000) | 2.5796E-02 (2001,029,0000) | 2.4108E-02 (2001,365,0000) |
| 1113 | -151.353 | -176.787 | 3.4770E-02 (2001,339,0000) | 2.4424E-02 (2001,292,0000) | 2.4198E-02 (2001,365,0000) | 2.3379E-02 (2001,029,0000) |
| 1114 | -149.902 | -176.815 | 3.3058E-02 (2001,339,0000) | 2.4613E-02 (2001,365,0000) | 2.2714E-02 (2001,292,0000) | 2.1796E-02 (2001,361,0000) |
| 1115 | -148.450 | -176.843 | 3.4123E-02 (2001,339,0000) | 2.7300E-02 (2001,365,0000) | 2.2218E-02 (2001,361,0000) | 2.1930E-02 (2001,292,0000) |
| 1116 | -146.998 | -176.870 | 3.3266E-02 (2001,339,0000) | 2.8229E-02 (2001,365,0000) | 2.2037E-02 (2001,361,0000) | 2.0358E-02 (2001,307,0000) |
| 1117 | -164.379 | -174.669 | 3.7458E-02 (2001,339,0000) | 2.3807E-02 (2001,292,0000) | 2.3083E-02 (2001,029,0000) | 2.0482E-02 (2001,361,0000) |
| 1118 | -162.927 | -174.699 | 3.8867E-02 (2001,339,0000) | 2.5285E-02 (2001,029,0000) | 2.4949E-02 (2001,292,0000) | 2.1646E-02 (2001,361,0000) |
| 1119 | -161.476 | -174.730 | 3.9807E-02 (2001,339,0000) | 2.7210E-02 (2001,029,0000) | 2.5961E-02 (2001,292,0000) | 2.2612E-02 (2001,361,0000) |
| 1120 | -160.025 | -174.760 | 4.0347E-02 (2001,339,0000) | 2.8674E-02 (2001,029,0000) | 2.6853E-02 (2001,292,0000) | 2.3338E-02 (2001,361,0000) |
| 1121 | -158.574 | -174.790 | 4.0612E-02 (2001,339,0000) | 2.9583E-02 (2001,029,0000) | 2.7525E-02 (2001,292,0000) | 2.3779E-02 (2001,361,0000) |
| 1122 | -157.122 | -174.819 | 4.0454E-02 (2001,339,0000) | 2.9749E-02 (2001,029,0000) | 2.7846E-02 (2001,292,0000) | 2.3973E-02 (2001,361,0000) |
| 1123 | -155.671 | -174.848 | 4.0321E-02 (2001,339,0000) | 2.9408E-02 (2001,029,0000) | 2.7727E-02 (2001,292,0000) | 2.4816E-02 (2001,365,0000) |
| 1124 | -154.220 | -174.877 | 3.9288E-02 (2001,339,0000) | 2.7478E-02 (2001,029,0000) | 2.6955E-02 (2001,292,0000) | 2.5881E-02 (2001,365,0000) |
| 1125 | -152.768 | -174.906 | 3.5826E-02 (2001,339,0000) | 2.4674E-02 (2001,365,0000) | 2.4445E-02 (2001,292,0000) | 2.3939E-02 (2001,029,0000) |
| 1126 | -151.317 | -174.934 | 3.5344E-02 (2001,339,0000) | 2.6052E-02 (2001,365,0000) | 2.3047E-02 (2001,292,0000) | 2.2302E-02 (2001,361,0000) |
| 1127 | -149.866 | -174.963 | 3.4466E-02 (2001,339,0000) | 2.7021E-02 (2001,365,0000) | 2.2071E-02 (2001,361,0000) | 2.1279E-02 (2001,292,0000) |
| 1128 | -148.415 | -174.991 | 3.5756E-02 (2001,339,0000) | 3.0055E-02 (2001,365,0000) | 2.2571E-02 (2001,361,0000) | 2.1881E-02 (2001,307,0000) |
| 1129 | -167.241 | -172.755 | 3.8179E-02 (2001,339,0000) | 2.3990E-02 (2001,292,0000) | 2.3504E-02 (2001,251,0000) | 2.1728E-02 (2001,029,0000) |
| 1130 | -165.790 | -172.786 | 3.9558E-02 (2001,339,0000) | 2.5065E-02 (2001,292,0000) | 2.4115E-02 (2001,029,0000) | 2.1026E-02 (2001,361,0000) |
| 1131 | -164.339 | -172.817 | 4.0397E-02 (2001,339,0000) | 2.6379E-02 (2001,029,0000) | 2.6032E-02 (2001,292,0000) | 2.2230E-02 (2001,361,0000) |
| 1132 | -162.888 | -172.847 | 4.0854E-02 (2001,339,0000) | 2.8431E-02 (2001,029,0000) | 2.6915E-02 (2001,292,0000) | 2.3198E-02 (2001,361,0000) |
| 1133 | -161.438 | -172.878 | 4.1092E-02 (2001,339,0000) | 2.9985E-02 (2001,029,0000) | 2.7723E-02 (2001,292,0000) | 2.3934E-02 (2001,361,0000) |
| 1134 | -159.987 | -172.908 | 4.1112E-02 (2001,339,0000) | 3.0762E-02 (2001,029,0000) | 2.8281E-02 (2001,292,0000) | 2.4350E-02 (2001,361,0000) |
| 1135 | -158.536 | -172.937 | 4.0691E-02 (2001,339,0000) | 3.0592E-02 (2001,029,0000) | 2.8477E-02 (2001,292,0000) | 2.4469E-02 (2001,361,0000) |
| 1136 | -157.085 | -172.967 | 3.9482E-02 (2001,339,0000) | 2.8843E-02 (2001,029,0000) | 2.7907E-02 (2001,292,0000) | 2.4242E-02 (2001,361,0000) |
| 1137 | -155.634 | -172.996 | 3.8011E-02 (2001,339,0000) | 2.6986E-02 (2001,029,0000) | 2.6480E-02 (2001,292,0000) | 2.4859E-02 (2001,365,0000) |
| 1138 | -154.183 | -173.025 | 3.6660E-02 (2001,339,0000) | 2.5560E-02 (2001,365,0000) | 2.4788E-02 (2001,029,0000) | 2.4609E-02 (2001,292,0000) |
| 1139 | -152.732 | -173.054 | 3.8503E-02 (2001,339,0000) | 2.9400E-02 (2001,365,0000) | 2.4305E-02 (2001,029,0000) | 2.3878E-02 (2001,292,0000) |
| 1140 | -151.281 | -173.082 | 3.7389E-02 (2001,339,0000) | 2.9895E-02 (2001,365,0000) | 2.3068E-02 (2001,361,0000) | 2.2197E-02 (2001,305,0000) |
| 1141 | -149.830 | -173.110 | 3.6572E-02 (2001,339,0000) | 3.0930E-02 (2001,365,0000) | 2.2830E-02 (2001,361,0000) | 2.2698E-02 (2001,307,0000) |
| 1142 | -148.379 | -173.138 | 3.3994E-02 (2001,339,0000) | 2.9776E-02 (2001,365,0000) | 2.3262E-02 (2001,307,0000) | 2.2032E-02 (2001,361,0000) |
| 1143 | -146.928 | -173.166 | 3.2210E-02 (2001,339,0000) | 2.9567E-02 (2001,365,0000) | 2.3648E-02 (2001,307,0000) | 2.1599E-02 (2001,361,0000) |
| 1144 | -165.751 | -170.934 | 4.1320E-02 (2001,339,0000) | 2.7797E-02 (2001,029,0000) | 2.7252E-02 (2001,292,0000) | 2.2933E-02 (2001,361,0000) |
| 1145 | -164.300 | -170.965 | 4.1166E-02 (2001,339,0000) | 2.9889E-02 (2001,029,0000) | 2.8035E-02 (2001,292,0000) | 2.3908E-02 (2001,361,0000) |
| 1146 | -162.850 | -170.995 | 4.0933E-02 (2001,339,0000) | 3.1284E-02 (2001,029,0000) | 2.8711E-02 (2001,292,0000) | 2.4624E-02 (2001,361,0000) |
| 1147 | -161.399 | -171.025 | 4.0630E-02 (2001,339,0000) | 3.1943E-02 (2001,029,0000) | 2.9181E-02 (2001,292,0000) | 2.4972E-02 (2001,361,0000) |
| 1148 | -159.948 | -171.056 | 3.9999E-02 (2001,339,0000) | 3.1517E-02 (2001,029,0000) | 2.9242E-02 (2001,292,0000) | 2.5040E-02 (2001,361,0000) |
| 1149 | -158.498 | -171.085 | 3.8365E-02 (2001,339,0000) | 2.9348E-02 (2001,029,0000) | 2.8176E-02 (2001,292,0000) | 2.4506E-02 (2001,361,0000) |
| 1150 | -157.047 | -171.115 | 3.8331E-02 (2001,339,0000) | 2.8349E-02 (2001,029,0000) | 2.7079E-02 (2001,292,0000) | 2.6326E-02 (2001,365,0000) |
| 1151 | -155.597 | -171.144 | 3.9248E-02 (2001,339,0000) | 2.9781E-02 (2001,365,0000) | 2.7894E-02 (2001,029,0000) | 2.5810E-02 (2001,292,0000) |
| 1152 | -154.146 | -171.173 | 3.7947E-02 (2001,339,0000) | 2.9879E-02 (2001,365,0000) | 2.4644E-02 (2001,029,0000) | 2.4002E-02 (2001,305,0000) |
| 1153 | -152.696 | -171.202 | 3.7163E-02 (2001,339,0000) | 3.0797E-02 (2001,365,0000) | 2.3366E-02 (2001,361,0000) | 2.2974E-02 (2001,305,0000) |
| 1154 | -151.245 | -171.230 | 3.5166E-02 (2001,339,0000) | 2.9993E-02 (2001,365,0000) | 2.3050E-02 (2001,307,0000) | 2.2544E-02 (2001,361,0000) |
| 1155 | -149.794 | -171.258 | 3.5715E-02 (2001,339,0000) | 3.2866E-02 (2001,365,0000) | 2.4657E-02 (2001,307,0000) | 2.2818E-02 (2001,361,0000) |
| 1156 | -148.344 | -171.286 | 3.0331E-02 (2001,339,0000) | 2.8159E-02 (2001,365,0000) | 2.3098E-02 (2001,307,0000) | 2.0967E-02 (2001,361,0000) |
| 1157 | -146.893 | -171.314 | 2.8771E-02 (2001,339,0000) | 2.8157E-02 (2001,365,0000) | 2.3184E-02 (2001,307,0000) | 2.0607E-02 (2001,361,0000) |
| 1158 | -162.811 | -169.143 | 3.9537E-02 (2001,339,0000) | 3.3605E-02 (2001,029,0000) | 3.0412E-02 (2001,292,0000) | 2.6248E-02 (2001,305,0000) |
| 1159 | -161.360 | -169.173 | 3.8558E-02 (2001,339,0000) | 3.2742E-02 (2001,029,0000) | 3.0204E-02 (2001,292,0000) | 2.6799E-02 (2001,305,0000) |
| 1160 | -159.910 | -169.203 | 3.8278E-02 (2001,339,0000) | 3.1918E-02 (2001,029,0000) | 2.9330E-02 (2001,292,0000) | 2.6908E-02 (2001,305,0000) |
| 1161 | -158.460 | -169.233 | 3.8236E-02 (2001,339,0000) | 3.0731E-02 (2001,029,0000) | 2.9109E-02 (2001,365,0000) | 2.7783E-02 (2001,292,0000) |
| 1162 | -157.010 | -169.263 | 3.7861E-02 (2001,339,0000) | 3.0645E-02 (2001,365,0000) | 2.8552E-02 (2001,029,0000) | 2.6136E-02 (2001,305,0000) |
| 1163 | -155.560 | -169.292 | 3.6424E-02 (2001,339,0000) | 3.0189E-02 (2001,365,0000) | 2.4795E-02 (2001,029,0000) | 2.4475E-02 (2001,305,0000) |
| 1164 | -154.109 | -169.321 | 3.5798E-02 (2001,339,0000) | 3.1149E-02 (2001,365,0000) | 2.3539E-02 (2001,361,0000) | 2.3176E-02 (2001,305,0000) |
| 1165 | -152.659 | -169.350 | 3.4957E-02 (2001,339,0000) | 3.1761E-02 (2001,365,0000) | 2.4013E-02 (2001,307,0000) | 2.3123E-02 (2001,361,0000) |
| 1166 | -151.209 | -169.378 | 3.2752E-02 (2001,339,0000) | 3.0270E-02 (2001,365,0000) | 2.4976E-02 (2001,307,0000) | 2.2156E-02 (2001,361,0000) |
| 1167 | -149.759 | -169.406 | 3.2360E-02 (2001,339,0000) | 3.1213E-02 (2001,365,0000) | 2.6500E-02 (2001,307,0000) | 2.2139E-02 (2001,361,0000) |
| 1168 | -148.308 | -169.434 | 3.1346E-02 (2001,365,0000) | 3.1295E-02 (2001,339,0000) | 2.7675E-02 (2001,307,0000) | 2.1851E-02 (2001,361,0000) |
| 1169 | -164.222 | -167.260 | 3.7767E-02 (2001,339,0000) | 3.5514E-02 (2001,029,0000) | 3.1923E-02 (2001,292,0000) | 2.8676E-02 (2001,305,0000) |
| 1170 | -162.772 | -167.291 | 3.7130E-02 (2001,339,0000) | 3.4992E-02 (2001,029,0000) | 3.1281E-02 (2001,292,0000) | 2.9053E-02 (2001,305,0000) |
| 1171 | -161.322 | -167.321 | 3.6753E-02 (2001,339,0000) | 3.3981E-02 (2001,029,0000) | 2.9947E-02 (2001,292,0000) | 2.8853E-02 (2001,305,0000) |
| 1172 | -159.872 | -167.351 | 3.6443E-02 (2001,339,0000) | 3.2191E-02 (2001,029,0000) | 3.0498E-02 (2001,365,0000) | 2.8143E-02 (2001,305,0000) |
| 1173 | -158.422 | -167.381 | 3.5723E-02 (2001,339,0000) | 3.1501E-02 (2001,365,0000) | 2.9198E-02 (2001,029,0000) | 2.6944E-02 (2001,305,0000) |
| 1174 | -156.972 | -167.411 | 3.5093E-02 (2001,339,0000) | 3.2454E-02 (2001,365,0000) | 2.6067E-02 (2001,029,0000) | 2.5374E-02 (2001,305,0000) |
| 1175 | -155.522 | -167.440 | 3.4336E-02 (2001,339,0000) | 3.2940E-02 (2001,365,0000) | 2.3889E-02 (2001,361,0000) | 2.3604E-02 (2001,305,0000) |
| 1176 | -154.072 | -167.469 | 3.3452E-02 (2001,339,0000) | 3.3111E-02 (2001,365,0000) | 2.4681E-02 (2001,307,0000) | 2.3355E-02 (2001,361,0000) |
| 1177 | -152.623 | -167.497 | 3.3560E-02 (2001,365,0000) | 3.2682E-02 (2001,339,0000) | 2.6219E-02 (2001,307,0000) | 2.3031E-02 (2001,361,0000) |
| 1178 | -164.182 | -165.408 | 3.6920E-02 (2001,029,0000) | 3.4881E-02 (2001,339,0000) | 3.2370E-02 (2001,292,0000) | 3.1138E-02 (2001,305,0000) |
| 1179 | -162.733 | -165.439 | 3.5115E-02 (2001,029,0000) | 3.4125E-02 (2001,339,0000) | 3.0411E-02 (2001,305,0000) | 3.0371E-02 (2001,292,0000) |
| 1180 | -161.283 | -165.469 | 3.3109E-02 (2001,339,0000) | 3.2020E-02 (2001,029,0000) | 3.0765E-02 (2001,365,0000) | 2.8894E-02 (2001,305,0000) |
| 1181 | -159.834 | -165.499 | 3.2934E-02 (2001,339,0000) | 3.2249E-02 (2001,365,0000) | 2.9524E-02 (2001,029,0000) | 2.7331E-02 (2001,305,0000) |
| 1182 | -158.384 | -165.529 | 3.2965E-02 (2001,365,0000) | 3.2373E-02 (2001,339,0000) | 2.6187E-02 (2001,029,0000) | 2.5364E-02 (2001,305,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1183 | -156.935 | -165.558 | 2.9937E-02 (2001,339,0000) | 2.9909E-02 (2001,365,0000) | 2.3162E-02 (2001,361,0000) | 2.2926E-02 (2001,307,0000) |
| 1184 | -155.485 | -165.588 | 3.0501E-02 (2001,365,0000) | 2.9507E-02 (2001,339,0000) | 2.4807E-02 (2001,307,0000) | 2.2723E-02 (2001,361,0000) |
| 1185 | -154.036 | -165.617 | 2.8699E-02 (2001,365,0000) | 2.7432E-02 (2001,339,0000) | 2.5205E-02 (2001,307,0000) | 2.1317E-02 (2001,361,0000) |
| 1186 | -152.586 | -165.645 | 2.8867E-02 (2001,365,0000) | 2.6716E-02 (2001,339,0000) | 2.6695E-02 (2001,307,0000) | 2.0960E-02 (2001,361,0000) |
| 1187 | -164.143 | -163.556 | 3.6792E-02 (2001,029,0000) | 3.2678E-02 (2001,365,0000) | 3.1874E-02 (2001,339,0000) | 3.1670E-02 (2001,305,0000) |
| 1188 | -162.694 | -163.587 | 3.3909E-02 (2001,029,0000) | 3.3498E-02 (2001,365,0000) | 3.1113E-02 (2001,339,0000) | 2.9750E-02 (2001,305,0000) |
| 1189 | -161.245 | -163.617 | 3.3160E-02 (2001,365,0000) | 3.0045E-02 (2001,339,0000) | 2.9755E-02 (2001,029,0000) | 2.7354E-02 (2001,305,0000) |
| 1190 | -159.796 | -163.647 | 3.1912E-02 (2001,365,0000) | 2.8893E-02 (2001,339,0000) | 2.5118E-02 (2001,361,0000) | 2.5053E-02 (2001,029,0000) |
| 1191 | -158.346 | -163.677 | 3.2156E-02 (2001,365,0000) | 2.8348E-02 (2001,339,0000) | 2.4291E-02 (2001,361,0000) | 2.3624E-02 (2001,307,0000) |
| 1192 | -156.897 | -163.706 | 3.0919E-02 (2001,365,0000) | 2.7144E-02 (2001,339,0000) | 2.5373E-02 (2001,307,0000) | 2.3030E-02 (2001,361,0000) |
| 1193 | -155.448 | -163.736 | 3.1880E-02 (2001,365,0000) | 2.7461E-02 (2001,307,0000) | 2.6902E-02 (2001,339,0000) | 2.2862E-02 (2001,361,0000) |
| 1194 | -153.999 | -163.765 | 2.9891E-02 (2001,365,0000) | 2.8640E-02 (2001,307,0000) | 2.5201E-02 (2001,339,0000) | 2.1449E-02 (2001,361,0000) |
| 1195 | -152.550 | -163.793 | 2.9102E-02 (2001,307,0000) | 2.8964E-02 (2001,365,0000) | 2.3833E-02 (2001,339,0000) | 2.0519E-02 (2001,361,0000) |
| 1196 | -159.757 | -161.795 | 3.4055E-02 (2001,365,0000) | 2.6091E-02 (2001,339,0000) | 2.4826E-02 (2001,361,0000) | 2.3630E-02 (2001,307,0000) |
| 1197 | -158.309 | -161.825 | 3.3613E-02 (2001,365,0000) | 2.5734E-02 (2001,307,0000) | 2.5405E-02 (2001,339,0000) | 2.3952E-02 (2001,361,0000) |

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CALPOST Version 5.6394 Level 070622

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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 835 | -122.223 | -264.400 | 1.2807E-03 | 1016 | -147.279 | -191.689 | 2.1023E-03 |
| 836 | -120.755 | -264.423 | 1.2234E-03 | 1017 | -145.824 | -191.716 | 2.0476E-03 |
| 837 | -123.662 | -262.524 | 1.3304E-03 | 1018 | -144.370 | -191.743 | 1.9354E-03 |
| 838 | -122.195 | -262.547 | 1.2656E-03 | 1019 | -155.968 | -189.666 | 2.2823E-03 |
| 839 | -123.633 | -260.671 | 1.2744E-03 | 1020 | -154.514 | -189.695 | 2.1315E-03 |
| 840 | -125.071 | -258.794 | 1.3299E-03 | 1021 | -153.060 | -189.724 | 1.9617E-03 |
| 841 | -129.441 | -256.870 | 1.4735E-03 | 1022 | -151.606 | -189.753 | 2.1194E-03 |
| 842 | -127.975 | -256.894 | 1.4664E-03 | 1023 | -150.152 | -189.781 | 1.9850E-03 |
| 843 | -126.508 | -256.918 | 1.4127E-03 | 1024 | -148.698 | -189.809 | 2.0683E-03 |
| 844 | -125.041 | -256.941 | 1.3318E-03 | 1025 | -147.244 | -189.836 | 1.9008E-03 |
| 845 | -129.411 | -255.017 | 1.4877E-03 | 1026 | -145.790 | -189.864 | 1.9125E-03 |
| 846 | -127.944 | -255.041 | 1.4381E-03 | 1027 | -144.336 | -189.891 | 1.9599E-03 |
| 847 | -126.478 | -255.065 | 1.3937E-03 | 1028 | -157.385 | -187.785 | 2.2805E-03 |
| 848 | -129.380 | -253.164 | 1.4886E-03 | 1029 | -155.931 | -187.814 | 2.1859E-03 |
| 849 | -127.914 | -253.188 | 1.4562E-03 | 1030 | -154.477 | -187.843 | 1.9882E-03 |
| 850 | -126.448 | -253.212 | 1.3739E-03 | 1031 | -153.024 | -187.872 | 2.2128E-03 |
| 851 | -130.815 | -251.286 | 1.5148E-03 | 1032 | -151.570 | -187.900 | 2.1609E-03 |
| 852 | -129.349 | -251.311 | 1.4434E-03 | 1033 | -150.116 | -187.928 | 2.1674E-03 |
| 853 | -127.884 | -251.335 | 1.4391E-03 | 1034 | -148.663 | -187.956 | 2.1031E-03 |
| 854 | -126.418 | -251.359 | 1.3903E-03 | 1035 | -147.209 | -187.984 | 2.1912E-03 |
| 855 | -133.715 | -249.384 | 1.5436E-03 | 1036 | -145.755 | -188.011 | 2.0514E-03 |
| 856 | -132.249 | -249.409 | 1.5410E-03 | 1037 | -144.301 | -188.039 | 1.9331E-03 |
| 857 | -130.784 | -249.433 | 1.4923E-03 | 1038 | -142.848 | -188.065 | 2.0054E-03 |
| 858 | -129.319 | -249.458 | 1.4740E-03 | 1039 | -141.394 | -188.092 | 1.9593E-03 |
| 859 | -127.854 | -249.482 | 1.4030E-03 | 1040 | -161.707 | -185.843 | 2.3707E-03 |
| 860 | -133.683 | -247.531 | 1.5604E-03 | 1041 | -160.254 | -185.873 | 2.3429E-03 |
| 861 | -132.218 | -247.556 | 1.5086E-03 | 1042 | -158.801 | -185.903 | 2.2902E-03 |
| 862 | -130.753 | -247.580 | 1.4449E-03 | 1043 | -157.347 | -185.932 | 2.2044E-03 |
| 863 | -129.288 | -247.605 | 1.4431E-03 | 1044 | -155.894 | -185.962 | 2.2945E-03 |
| 864 | -127.823 | -247.629 | 1.4495E-03 | 1045 | -154.441 | -185.991 | 2.3009E-03 |
| 865 | -135.116 | -245.653 | 1.5832E-03 | 1046 | -152.987 | -186.019 | 2.1923E-03 |
| 866 | -133.651 | -245.678 | 1.5466E-03 | 1047 | -151.534 | -186.048 | 2.0307E-03 |
| 867 | -132.187 | -245.703 | 1.5139E-03 | 1048 | -150.080 | -186.076 | 2.2461E-03 |
| 868 | -130.722 | -245.727 | 1.4724E-03 | 1049 | -148.627 | -186.104 | 2.2715E-03 |
| 869 | -129.258 | -245.752 | 1.4632E-03 | 1050 | -147.174 | -186.132 | 2.1666E-03 |
| 870 | -136.548 | -243.775 | 1.6037E-03 | 1051 | -145.720 | -186.159 | 2.0047E-03 |
| 871 | -135.084 | -243.800 | 1.5943E-03 | 1052 | -144.267 | -186.186 | 1.9443E-03 |
| 872 | -133.620 | -243.825 | 1.5491E-03 | 1053 | -142.813 | -186.213 | 1.9633E-03 |
| 873 | -132.155 | -243.850 | 1.5420E-03 | 1054 | -141.360 | -186.240 | 1.9305E-03 |
| 874 | -130.691 | -243.874 | 1.5501E-03 | 1055 | -161.669 | -183.991 | 2.3959E-03 |
| 875 | -129.227 | -243.899 | 1.4841E-03 | 1056 | -160.216 | -184.021 | 2.3655E-03 |
| 876 | -137.980 | -241.896 | 1.6249E-03 | 1057 | -158.763 | -184.051 | 2.3967E-03 |
| 877 | -136.516 | -241.922 | 1.6237E-03 | 1058 | -157.310 | -184.080 | 2.3793E-03 |
| 878 | -135.052 | -241.947 | 1.6008E-03 | 1059 | -155.857 | -184.109 | 2.3634E-03 |
| 879 | -133.588 | -241.972 | 1.6082E-03 | 1060 | -154.404 | -184.138 | 2.2961E-03 |
| 880 | -132.124 | -241.997 | 1.5809E-03 | 1061 | -152.951 | -184.167 | 2.3532E-03 |
| 881 | -130.660 | -242.022 | 1.5549E-03 | 1062 | -151.498 | -184.196 | 2.3396E-03 |
| 882 | -129.197 | -242.046 | 1.5241E-03 | 1063 | -150.045 | -184.224 | 2.2588E-03 |
| 883 | -137.947 | -240.043 | 1.6447E-03 | 1064 | -148.592 | -184.252 | 2.1917E-03 |
| 884 | -136.483 | -240.069 | 1.6326E-03 | 1065 | -147.139 | -184.279 | 2.0409E-03 |
| 885 | -135.020 | -240.094 | 1.6025E-03 | 1066 | -145.686 | -184.307 | 1.9560E-03 |
| 886 | -133.556 | -240.119 | 1.5867E-03 | 1067 | -144.233 | -184.334 | 1.9685E-03 |
| 887 | -132.093 | -240.144 | 1.5981E-03 | 1068 | -161.630 | -182.138 | 2.4575E-03 |
| 888 | -130.629 | -240.169 | 1.5390E-03 | 1069 | -160.178 | -182.169 | 2.4401E-03 |
| 889 | -129.166 | -240.193 | 1.5670E-03 | 1070 | -158.725 | -182.198 | 2.4282E-03 |
| 890 | -137.914 | -238.190 | 1.6618E-03 | 1071 | -157.272 | -182.228 | 2.4106E-03 |
| 891 | -136.451 | -238.216 | 1.6439E-03 | 1072 | -155.820 | -182.257 | 2.4027E-03 |
| 892 | -134.988 | -238.241 | 1.6269E-03 | 1073 | -154.367 | -182.286 | 2.4127E-03 |
| 893 | -133.525 | -238.266 | 1.6205E-03 | 1074 | -152.914 | -182.315 | 2.4028E-03 |
| 894 | -132.062 | -238.291 | 1.5505E-03 | 1075 | -151.462 | -182.343 | 2.3659E-03 |
| 895 | -130.599 | -238.316 | 1.5629E-03 | 1076 | -150.009 | -182.372 | 2.1770E-03 |
| 896 | -137.882 | -236.337 | 1.6877E-03 | 1077 | -148.556 | -182.399 | 2.1195E-03 |
| 897 | -136.419 | -236.363 | 1.6763E-03 | 1078 | -147.104 | -182.427 | 2.0201E-03 |
| 898 | -134.956 | -236.388 | 1.6534E-03 | 1079 | -145.651 | -182.454 | 2.0404E-03 |
| 899 | -133.493 | -236.413 | 1.5674E-03 | 1080 | -161.592 | -180.286 | 2.4908E-03 |
| 900 | -132.030 | -236.438 | 1.6003E-03 | 1081 | -160.139 | -180.316 | 2.4773E-03 |
| 901 | -137.849 | -234.485 | 1.7067E-03 | 1082 | -158.687 | -180.346 | 2.4704E-03 |
| 902 | -136.386 | -234.510 | 1.6966E-03 | 1083 | -157.235 | -180.376 | 2.4632E-03 |
| 903 | -134.924 | -234.536 | 1.6456E-03 | 1084 | -155.783 | -180.405 | 2.4601E-03 |
| 904 | -133.462 | -234.561 | 1.6147E-03 | 1085 | -154.330 | -180.434 | 2.4391E-03 |
| 905 | -137.816 | -232.632 | 1.7342E-03 | 1086 | -152.878 | -180.463 | 2.3858E-03 |
| 906 | -136.354 | -232.657 | 1.7245E-03 | 1087 | -151.426 | -180.491 | 2.2288E-03 |
| 907 | -134.892 | -232.683 | 1.6265E-03 | 1088 | -149.973 | -180.519 | 2.1988E-03 |
| 908 | -139.245 | -230.753 | 1.7656E-03 | 1089 | -148.521 | -180.547 | 2.1021E-03 |
| 909 | -137.784 | -230.779 | 1.7685E-03 | 1090 | -147.068 | -180.575 | 2.0530E-03 |
| 910 | -136.322 | -230.805 | 1.6673E-03 | 1091 | -145.616 | -180.602 | 2.0741E-03 |
| 911 | -134.860 | -230.830 | 1.6788E-03 | 1092 | -161.553 | -178.434 | 2.5375E-03 |
| 912 | -139.212 | -228.900 | 1.7947E-03 | 1093 | -160.101 | -178.464 | 2.5260E-03 |
| 913 | -137.751 | -228.926 | 1.7966E-03 | 1094 | -158.649 | -178.494 | 2.5139E-03 |
| 914 | -136.290 | -228.952 | 1.6927E-03 | 1095 | -157.197 | -178.523 | 2.5022E-03 |
| 915 | -134.828 | -228.977 | 1.7342E-03 | 1096 | -155.745 | -178.553 | 2.4750E-03 |
| 916 | -140.640 | -227.021 | 1.8091E-03 | 1097 | -154.293 | -178.582 | 2.4429E-03 |
| 917 | -139.179 | -227.048 | 1.8244E-03 | 1098 | -152.841 | -178.610 | 2.3947E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 918 | -137.718 | -227.073 | 1.7657E-03 | 1099 | -151.389 | -178.639 | 2.3037E-03 |
| 919 | -136.257 | -227.099 | 1.7477E-03 | 1100 | -149.937 | -178.667 | 2.1313E-03 |
| 920 | -140.607 | -225.169 | 1.8401E-03 | 1101 | -148.485 | -178.695 | 2.1155E-03 |
| 921 | -139.146 | -225.195 | 1.8383E-03 | 1102 | -147.033 | -178.723 | 2.3285E-03 |
| 922 | -137.686 | -225.221 | 1.7803E-03 | 1103 | -145.581 | -178.750 | 2.2112E-03 |
| 923 | -136.225 | -225.246 | 1.8015E-03 | 1104 | -164.418 | -176.521 | 2.6277E-03 |
| 924 | -140.574 | -223.316 | 1.8656E-03 | 1105 | -162.966 | -176.552 | 2.6077E-03 |
| 925 | -139.113 | -223.342 | 1.7995E-03 | 1106 | -161.515 | -176.582 | 2.5906E-03 |
| 926 | -137.653 | -223.368 | 1.7789E-03 | 1107 | -160.063 | -176.612 | 2.5699E-03 |
| 927 | -136.193 | -223.394 | 1.8113E-03 | 1108 | -158.611 | -176.642 | 2.5293E-03 |
| 928 | -143.460 | -221.410 | 1.8553E-03 | 1109 | -157.160 | -176.671 | 2.4591E-03 |
| 929 | -142.000 | -221.437 | 1.8780E-03 | 1110 | -155.708 | -176.701 | 2.4910E-03 |
| 930 | -140.540 | -221.463 | 1.8578E-03 | 1111 | -154.257 | -176.730 | 2.4360E-03 |
| 931 | -139.080 | -221.489 | 1.7850E-03 | 1112 | -152.805 | -176.758 | 2.3450E-03 |
| 932 | -137.620 | -221.515 | 1.7893E-03 | 1113 | -151.353 | -176.787 | 2.2243E-03 |
| 933 | -146.346 | -219.503 | 1.8502E-03 | 1114 | -149.902 | -176.815 | 2.1504E-03 |
| 934 | -144.886 | -219.531 | 1.8705E-03 | 1115 | -148.450 | -176.843 | 2.2487E-03 |
| 935 | -143.426 | -219.558 | 1.8888E-03 | 1116 | -146.998 | -176.870 | 2.2412E-03 |
| 936 | -141.967 | -219.584 | 1.8967E-03 | 1117 | -164.379 | -174.669 | 2.6863E-03 |
| 937 | -140.507 | -219.611 | 1.8236E-03 | 1118 | -162.927 | -174.699 | 2.6670E-03 |
| 938 | -139.047 | -219.637 | 1.7997E-03 | 1119 | -161.476 | -174.730 | 2.6468E-03 |
| 939 | -137.588 | -219.663 | 1.7872E-03 | 1120 | -160.025 | -174.760 | 2.6241E-03 |
| 940 | -146.311 | -217.651 | 1.8778E-03 | 1121 | -158.574 | -174.790 | 2.5961E-03 |
| 941 | -144.851 | -217.678 | 1.8944E-03 | 1122 | -157.122 | -174.819 | 2.5555E-03 |
| 942 | -143.392 | -217.705 | 1.9126E-03 | 1123 | -155.671 | -174.848 | 2.5318E-03 |
| 943 | -141.933 | -217.732 | 1.8973E-03 | 1124 | -154.220 | -174.877 | 2.4672E-03 |
| 944 | -140.474 | -217.758 | 1.8113E-03 | 1125 | -152.768 | -174.906 | 2.2680E-03 |
| 945 | -139.014 | -217.784 | 1.8414E-03 | 1126 | -151.317 | -174.934 | 2.2645E-03 |
| 946 | -137.555 | -217.810 | 1.7946E-03 | 1127 | -149.866 | -174.963 | 2.2480E-03 |
| 947 | -146.276 | -215.798 | 1.8940E-03 | 1128 | -148.415 | -174.991 | 2.3773E-03 |
| 948 | -144.817 | -215.825 | 1.9215E-03 | 1129 | -167.241 | -172.755 | 2.7969E-03 |
| 949 | -143.358 | -215.852 | 1.8739E-03 | 1130 | -165.790 | -172.786 | 2.7685E-03 |
| 950 | -141.899 | -215.879 | 1.8282E-03 | 1131 | -164.339 | -172.817 | 2.7395E-03 |
| 951 | -146.241 | -213.946 | 1.9360E-03 | 1132 | -162.888 | -172.847 | 2.7181E-03 |
| 952 | -144.783 | -213.973 | 1.9476E-03 | 1133 | -161.438 | -172.878 | 2.6977E-03 |
| 953 | -143.324 | -214.000 | 1.9276E-03 | 1134 | -159.987 | -172.908 | 2.6591E-03 |
| 954 | -146.207 | -212.093 | 1.9164E-03 | 1135 | -158.536 | -172.937 | 2.6051E-03 |
| 955 | -144.748 | -212.120 | 1.9543E-03 | 1136 | -157.085 | -172.967 | 2.5146E-03 |
| 956 | -143.290 | -212.147 | 1.9396E-03 | 1137 | -155.634 | -172.996 | 2.4202E-03 |
| 957 | -141.832 | -212.174 | 1.9093E-03 | 1138 | -154.183 | -173.025 | 2.3419E-03 |
| 958 | -146.172 | -210.241 | 1.9822E-03 | 1139 | -152.732 | -173.054 | 2.4785E-03 |
| 959 | -144.714 | -210.268 | 1.9829E-03 | 1140 | -151.281 | -173.082 | 2.4423E-03 |
| 960 | -143.256 | -210.295 | 1.9465E-03 | 1141 | -149.830 | -173.110 | 2.4436E-03 |
| 961 | -141.798 | -210.321 | 1.9464E-03 | 1142 | -148.379 | -173.138 | 2.3356E-03 |
| 962 | -146.137 | -208.388 | 1.9925E-03 | 1143 | -146.928 | -173.166 | 2.2827E-03 |
| 963 | -144.680 | -208.415 | 1.9994E-03 | 1144 | -165.751 | -170.934 | 2.8265E-03 |
| 964 | -143.222 | -208.442 | 1.9883E-03 | 1145 | -164.300 | -170.965 | 2.7973E-03 |
| 965 | -141.764 | -208.469 | 1.9444E-03 | 1146 | -162.850 | -170.995 | 2.7591E-03 |
| 966 | -140.307 | -208.495 | 1.8821E-03 | 1147 | -161.399 | -171.025 | 2.7113E-03 |
| 967 | -146.102 | -206.535 | 2.0057E-03 | 1148 | -159.948 | -171.056 | 2.6548E-03 |
| 968 | -144.645 | -206.563 | 2.0053E-03 | 1149 | -158.498 | -171.085 | 2.5396E-03 |
| 969 | -143.188 | -206.590 | 1.9993E-03 | 1150 | -157.047 | -171.115 | 2.5263E-03 |
| 970 | -141.731 | -206.616 | 1.9328E-03 | 1151 | -155.597 | -171.144 | 2.5838E-03 |
| 971 | -146.068 | -204.683 | 1.9980E-03 | 1152 | -154.146 | -171.173 | 2.5197E-03 |
| 972 | -144.611 | -204.710 | 2.0103E-03 | 1153 | -152.696 | -171.202 | 2.5013E-03 |
| 973 | -143.154 | -204.737 | 1.9947E-03 | 1154 | -151.245 | -171.230 | 2.4152E-03 |
| 974 | -141.697 | -204.764 | 1.9609E-03 | 1155 | -149.794 | -171.258 | 2.5126E-03 |
| 975 | -148.946 | -202.775 | 2.0611E-03 | 1156 | -148.344 | -171.286 | 2.1985E-03 |
| 976 | -147.489 | -202.803 | 2.0369E-03 | 1157 | -146.893 | -171.314 | 2.1538E-03 |
| 977 | -146.033 | -202.831 | 2.0335E-03 | 1158 | -162.811 | -169.143 | 2.7942E-03 |
| 978 | -144.576 | -202.858 | 1.9992E-03 | 1159 | -161.360 | -169.173 | 2.7168E-03 |
| 979 | -143.120 | -202.885 | 2.0132E-03 | 1160 | -159.910 | -169.203 | 2.6847E-03 |
| 980 | -141.663 | -202.911 | 1.9234E-03 | 1161 | -158.460 | -169.233 | 2.6676E-03 |
| 981 | -148.910 | -200.923 | 2.0591E-03 | 1162 | -157.010 | -169.263 | 2.6400E-03 |
| 982 | -147.454 | -200.951 | 1.9927E-03 | 1163 | -155.560 | -169.292 | 2.5561E-03 |
| 983 | -145.998 | -200.978 | 2.0534E-03 | 1164 | -154.109 | -169.321 | 2.5409E-03 |
| 984 | -144.542 | -201.005 | 1.9742E-03 | 1165 | -152.659 | -169.350 | 2.5261E-03 |
| 985 | -143.086 | -201.032 | 1.9570E-03 | 1166 | -151.209 | -169.378 | 2.4197E-03 |
| 986 | -141.630 | -201.059 | 1.8743E-03 | 1167 | -149.759 | -169.406 | 2.4595E-03 |
| 987 | -148.875 | -199.071 | 1.9718E-03 | 1168 | -148.308 | -169.434 | 2.4556E-03 |
| 988 | -147.419 | -199.098 | 2.0855E-03 | 1169 | -164.222 | -167.260 | 2.8883E-03 |
| 989 | -145.963 | -199.126 | 1.9701E-03 | 1170 | -162.772 | -167.291 | 2.8293E-03 |
| 990 | -144.508 | -199.153 | 2.0331E-03 | 1171 | -161.322 | -167.321 | 2.7900E-03 |
| 991 | -151.751 | -197.162 | 2.1598E-03 | 1172 | -159.872 | -167.351 | 2.7546E-03 |
| 992 | -150.295 | -197.190 | 2.0849E-03 | 1173 | -158.422 | -167.381 | 2.6981E-03 |
| 993 | -148.840 | -197.218 | 1.9726E-03 | 1174 | -156.972 | -167.411 | 2.6607E-03 |
| 994 | -147.384 | -197.246 | 1.9475E-03 | 1175 | -155.522 | -167.440 | 2.6287E-03 |
| 995 | -145.929 | -197.273 | 1.9986E-03 | 1176 | -154.072 | -167.469 | 2.6026E-03 |
| 996 | -144.473 | -197.300 | 1.8467E-03 | 1177 | -152.623 | -167.497 | 2.6005E-03 |
| 997 | -151.714 | -195.310 | 2.1459E-03 | 1178 | -164.182 | -165.408 | 2.9355E-03 |
| 998 | -150.259 | -195.338 | 2.0300E-03 | 1179 | -162.733 | -165.439 | 2.8593E-03 |
| 999 | -148.804 | -195.366 | 2.1474E-03 | 1180 | -161.283 | -165.469 | 2.7766E-03 |
| 1000 | -147.349 | -195.393 | 2.1305E-03 | 1181 | -159.834 | -165.499 | 2.7488E-03 |
| 1001 | -145.894 | -195.421 | 2.0410E-03 | 1182 | -158.384 | -165.529 | 2.7092E-03 |
| 1002 | -144.439 | -195.448 | 1.9313E-03 | 1183 | -156.935 | -165.558 | 2.5200E-03 |
| 1003 | -153.133 | -193.429 | 2.1865E-03 | 1184 | -155.485 | -165.588 | 2.5208E-03 |
| 1004 | -151.678 | -193.457 | 2.0028E-03 | 1185 | -154.036 | -165.617 | 2.3673E-03 |
| 1005 | -150.224 | -193.485 | 2.0936E-03 | 1186 | -152.586 | -165.645 | 2.3638E-03 |
| 1006 | -148.769 | -193.513 | 2.1674E-03 | 1187 | -164.143 | -163.556 | 2.9740E-03 |
| 1007 | -147.314 | -193.541 | 2.0686E-03 | 1188 | -162.694 | -163.587 | 2.9027E-03 |
| 1008 | -145.859 | -193.568 | 2.0194E-03 | 1189 | -161.245 | -163.617 | 2.8067E-03 |
| 1009 | -144.404 | -193.596 | 1.9039E-03 | 1190 | -159.796 | -163.647 | 2.7027E-03 |
| 1010 | -156.005 | -191.519 | 2.2828E-03 | 1191 | -158.346 | -163.677 | 2.6698E-03 |
| 1011 | -154.551 | -191.548 | 2.2511E-03 | 1192 | -156.897 | -163.706 | 2.5869E-03 |
| 1012 | -153.097 | -191.576 | 2.1102E-03 | 1193 | -155.448 | -163.736 | 2.6284E-03 |
| 1013 | -151.642 | -191.605 | 2.0449E-03 | 1194 | -153.999 | -163.765 | 2.5044E-03 |
| 1014 | -150.188 | -191.633 | 2.0227E-03 | 1195 | -152.550 | -163.793 | 2.4146E-03 |
| 1015 | -148.733 | -191.661 | 2.1326E-03 | 1196 | -159.757 | -161.795 | 2.7757E-03 |
| | | | | 1197 | -158.309 | -161.825 | 2.7448E-03 |

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CALPOST Version 5.6394 Level 070622

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SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1144 | -165.751 | -170.934 | DISCRETE | 4.1320E-02 (2001,339,0000) | RANK 1 | 24 | HOUR |
| 1169 | -164.222 | -167.260 | DISCRETE | 3.5514E-02 (2001,029,0000) | RANK 2 | 24 | HOUR |
| 1178 | -164.182 | -165.408 | DISCRETE | 3.2370E-02 (2001,292,0000) | RANK 3 | 24 | HOUR |
| 1187 | -164.143 | -163.556 | DISCRETE | 3.1670E-02 (2001,305,0000) | RANK 4 | 24 | HOUR |
| 1187 | -164.143 | -163.556 | DISCRETE | 2.9740E-03 | RANK 1 | 8735 | HOUR |

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*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Grand Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1197*0, 791*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
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*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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```

```
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2001\2001_GRAND_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_GC.DAT

*********************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*********************************************************************************************************************************


                                                         PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
   1198     -355.887  -464.319   8.4207E-03 (2001,017,0000)  3.1917E-03 (2001,019,0000)  3.0990E-03 (2001,020,0000)  2.5392E-03 (2001,361,0000)
   1199     -353.629  -464.418   8.0142E-03 (2001,017,0000)  3.2813E-03 (2001,020,0000)  3.0332E-03 (2001,019,0000)  2.5616E-03 (2001,361,0000)
   1200     -351.371  -464.517   7.5940E-03 (2001,017,0000)  3.4398E-03 (2001,020,0000)  2.8229E-03 (2001,019,0000)  2.5832E-03 (2001,361,0000)
   1201     -362.536  -461.234   9.8729E-03 (2001,017,0000)  3.9936E-03 (2001,019,0000)  2.8096E-03 (2001,020,0000)  2.6282E-03 (2001,359,0000)
   1202     -360.279  -461.336   9.5235E-03 (2001,017,0000)  3.7890E-03 (2001,019,0000)  2.9199E-03 (2001,020,0000)  2.5704E-03 (2001,361,0000)
   1203     -358.021  -461.436   9.1468E-03 (2001,017,0000)  3.6621E-03 (2001,019,0000)  3.0859E-03 (2001,020,0000)  2.5937E-03 (2001,361,0000)
   1204     -355.764  -461.536   8.7464E-03 (2001,017,0000)  3.7273E-03 (2001,019,0000)  3.3799E-03 (2001,020,0000)  2.6172E-03 (2001,361,0000)
   1205     -353.507  -461.636   8.3265E-03 (2001,017,0000)  3.5820E-03 (2001,019,0000)  3.5779E-03 (2001,020,0000)  2.6401E-03 (2001,361,0000)
   1206     -351.249  -461.735   7.8908E-03 (2001,017,0000)  3.5427E-03 (2001,020,0000)  3.0498E-03 (2001,019,0000)  2.6616E-03 (2001,361,0000)
   1207     -348.992  -461.833   7.4451E-03 (2001,017,0000)  3.6326E-03 (2001,020,0000)  2.8041E-03 (2001,019,0000)  2.6829E-03 (2001,361,0000)
   1208     -366.923  -458.247   1.0841E-02 (2001,017,0000)  4.2566E-03 (2001,019,0000)  3.1196E-03 (2001,359,0000)  2.5708E-03 (2001,361,0000)
   1209     -364.667  -458.350   1.0555E-02 (2001,017,0000)  4.4728E-03 (2001,019,0000)  2.9549E-03 (2001,359,0000)  2.8650E-03 (2001,020,0000)
   1210     -362.410  -458.452   1.0230E-02 (2001,017,0000)  4.0834E-03 (2001,019,0000)  2.8114E-03 (2001,020,0000)  2.7876E-03 (2001,359,0000)
   1211     -360.154  -458.553   9.8737E-03 (2001,017,0000)  4.2060E-03 (2001,019,0000)  3.1507E-03 (2001,020,0000)  2.6475E-03 (2001,361,0000)
   1212     -357.897  -458.654   9.4868E-03 (2001,017,0000)  4.0198E-03 (2001,019,0000)  3.2669E-03 (2001,020,0000)  2.6720E-03 (2001,361,0000)
   1213     -355.641  -458.754   9.0751E-03 (2001,017,0000)  3.9072E-03 (2001,019,0000)  3.4863E-03 (2001,020,0000)  2.6952E-03 (2001,361,0000)
   1214     -353.384  -458.853   8.6418E-03 (2001,017,0000)  3.6565E-03 (2001,019,0000)  3.5625E-03 (2001,020,0000)  2.7180E-03 (2001,361,0000)
   1215     -351.128  -458.952   8.1922E-03 (2001,017,0000)  3.7640E-03 (2001,020,0000)  3.5081E-03 (2001,019,0000)  2.7518E-03 (2001,040,0000)
   1216     -348.871  -459.050   7.7306E-03 (2001,017,0000)  3.8919E-03 (2001,020,0000)  3.2944E-03 (2001,019,0000)  2.8116E-03 (2001,040,0000)
   1217     -346.614  -459.148   7.2613E-03 (2001,017,0000)  3.7671E-03 (2001,020,0000)  2.8555E-03 (2001,040,0000)  2.7821E-03 (2001,361,0000)
   1218     -373.563  -455.154   1.1815E-02 (2001,017,0000)  4.7463E-03 (2001,019,0000)  3.8940E-03 (2001,359,0000)  2.5657E-03 (2001,361,0000)
   1219     -366.796  -455.465   1.1206E-02 (2001,017,0000)  4.3594E-03 (2001,019,0000)  3.3138E-03 (2001,359,0000)  2.6488E-03 (2001,361,0000)
   1220     -364.541  -455.568   1.0917E-02 (2001,017,0000)  4.5469E-03 (2001,019,0000)  3.1321E-03 (2001,359,0000)  2.8852E-03 (2001,020,0000)
   1221     -362.285  -455.670   1.0589E-02 (2001,017,0000)  4.4353E-03 (2001,019,0000)  3.0377E-03 (2001,020,0000)  2.9565E-03 (2001,359,0000)
   1222     -360.029  -455.771   1.0225E-02 (2001,017,0000)  4.3049E-03 (2001,019,0000)  3.1922E-03 (2001,020,0000)  2.7880E-03 (2001,359,0000)
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| | | | | | | |
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| 1327 | -365.908 | -435.992 | 1.3725E-02 (2001,017,0000) | 4.9135E-03 (2001,359,0000) | 4.7104E-03 (2001,019,0000) | 3.2437E-03 (2001,361,0000) |
| 1328 | -361.408 | -436.196 | 1.3137E-02 (2001,017,0000) | 4.5994E-03 (2001,019,0000) | 4.4323E-03 (2001,359,0000) | 3.3728E-03 (2001,040,0000) |
| 1329 | -359.157 | -436.297 | 1.2759E-02 (2001,017,0000) | 4.5245E-03 (2001,019,0000) | 4.2012E-03 (2001,359,0000) | 3.4621E-03 (2001,040,0000) |
| 1330 | -352.407 | -436.597 | 1.1345E-02 (2001,017,0000) | 4.1961E-03 (2001,019,0000) | 3.6872E-03 (2001,040,0000) | 3.6775E-03 (2001,020,0000) |
| 1331 | -350.156 | -436.695 | 1.0799E-02 (2001,017,0000) | 3.9829E-03 (2001,019,0000) | 3.7440E-03 (2001,040,0000) | 3.4508E-03 (2001,020,0000) |
| 1332 | -347.906 | -436.793 | 1.0228E-02 (2001,017,0000) | 3.8884E-03 (2001,019,0000) | 3.8256E-03 (2001,020,0000) | 3.7941E-03 (2001,040,0000) |
| 1333 | -235.355 | -440.884 | 8.4771E-03 (2001,360,0000) | 5.1410E-03 (2001,020,0000) | 3.2133E-03 (2001,362,0000) | 2.6638E-03 (2001,313,0000) |
| 1334 | -233.103 | -440.950 | 8.5695E-03 (2001,360,0000) | 5.0476E-03 (2001,020,0000) | 3.3355E-03 (2001,362,0000) | 2.7204E-03 (2001,313,0000) |
| 1335 | -230.852 | -441.015 | 8.6487E-03 (2001,360,0000) | 4.9364E-03 (2001,020,0000) | 3.4567E-03 (2001,362,0000) | 2.7773E-03 (2001,313,0000) |
| 1336 | -228.600 | -441.079 | 8.7122E-03 (2001,360,0000) | 4.7886E-03 (2001,020,0000) | 3.5778E-03 (2001,362,0000) | 2.8322E-03 (2001,313,0000) |
| 1337 | -226.349 | -441.143 | 8.7579E-03 (2001,360,0000) | 4.6414E-03 (2001,020,0000) | 3.6998E-03 (2001,362,0000) | 2.8863E-03 (2001,313,0000) |
| 1338 | -224.097 | -441.206 | 8.7241E-03 (2001,360,0000) | 4.4131E-03 (2001,020,0000) | 3.8186E-03 (2001,362,0000) | 2.9380E-03 (2001,313,0000) |
| 1339 | -221.845 | -441.269 | 8.4152E-03 (2001,360,0000) | 4.0911E-03 (2001,020,0000) | 3.9357E-03 (2001,362,0000) | 2.9844E-03 (2001,313,0000) |
| 1340 | -219.594 | -441.331 | 8.5221E-03 (2001,360,0000) | 4.0522E-03 (2001,362,0000) | 3.9609E-03 (2001,020,0000) | 3.0336E-03 (2001,313,0000) |
| 1341 | -217.342 | -441.392 | 8.6838E-03 (2001,360,0000) | 4.1658E-03 (2001,362,0000) | 3.8817E-03 (2001,020,0000) | 3.0793E-03 (2001,313,0000) |
| 1342 | -215.090 | -441.453 | 8.6052E-03 (2001,360,0000) | 4.2765E-03 (2001,362,0000) | 3.6639E-03 (2001,020,0000) | 3.1198E-03 (2001,313,0000) |
| 1343 | -212.838 | -441.513 | 8.5025E-03 (2001,360,0000) | 4.3842E-03 (2001,362,0000) | 3.4430E-03 (2001,020,0000) | 3.1554E-03 (2001,313,0000) |
| 1344 | -401.768 | -431.488 | 1.0493E-02 (2001,017,0000) | 8.9643E-03 (2001,359,0000) | 4.9830E-03 (2001,018,0000) | 3.4204E-03 (2001,019,0000) |
| 1345 | -399.519 | -431.601 | 1.0991E-02 (2001,017,0000) | 8.8055E-03 (2001,359,0000) | 4.8240E-03 (2001,018,0000) | 3.5636E-03 (2001,019,0000) |
| 1346 | -397.270 | -431.713 | 1.1476E-02 (2001,017,0000) | 8.6281E-03 (2001,359,0000) | 4.6570E-03 (2001,018,0000) | 3.7037E-03 (2001,019,0000) |
| 1347 | -386.025 | -432.262 | 1.3518E-02 (2001,017,0000) | 7.5233E-03 (2001,359,0000) | 4.2420E-03 (2001,019,0000) | 3.7982E-03 (2001,018,0000) |
| 1348 | -383.776 | -432.370 | 1.3815E-02 (2001,017,0000) | 7.2780E-03 (2001,359,0000) | 4.4238E-03 (2001,019,0000) | 3.6457E-03 (2001,018,0000) |
| 1349 | -381.526 | -432.477 | 1.4058E-02 (2001,017,0000) | 7.0215E-03 (2001,359,0000) | 4.5112E-03 (2001,019,0000) | 3.4908E-03 (2001,018,0000) |
| 1350 | -379.277 | -432.584 | 1.4247E-02 (2001,017,0000) | 6.7615E-03 (2001,359,0000) | 4.5863E-03 (2001,019,0000) | 3.3414E-03 (2001,018,0000) |
| 1351 | -377.028 | -432.690 | 1.4377E-02 (2001,017,0000) | 6.4976E-03 (2001,359,0000) | 4.6443E-03 (2001,019,0000) | 3.1996E-03 (2001,018,0000) |
| 1352 | -374.779 | -432.795 | 1.4446E-02 (2001,017,0000) | 6.2320E-03 (2001,359,0000) | 4.6900E-03 (2001,019,0000) | 3.1991E-03 (2001,361,0000) |
| 1353 | -372.529 | -432.900 | 1.4452E-02 (2001,017,0000) | 5.9678E-03 (2001,359,0000) | 4.7184E-03 (2001,019,0000) | 3.2354E-03 (2001,361,0000) |
| 1354 | -368.031 | -433.108 | 1.4264E-02 (2001,017,0000) | 5.4455E-03 (2001,359,0000) | 4.7139E-03 (2001,019,0000) | 3.3027E-03 (2001,361,0000) |
| 1355 | -365.781 | -433.211 | 1.4074E-02 (2001,017,0000) | 5.1893E-03 (2001,359,0000) | 4.6760E-03 (2001,019,0000) | 3.3352E-03 (2001,361,0000) |
| 1356 | -363.532 | -433.313 | 1.3820E-02 (2001,017,0000) | 4.9379E-03 (2001,359,0000) | 4.6958E-03 (2001,019,0000) | 3.6230E-03 (2001,020,0000) |
| 1357 | -361.282 | -433.415 | 1.3504E-02 (2001,017,0000) | 4.6913E-03 (2001,359,0000) | 4.5790E-03 (2001,019,0000) | 3.4869E-03 (2001,040,0000) |
| 1358 | -359.033 | -433.516 | 1.3131E-02 (2001,017,0000) | 4.5530E-03 (2001,019,0000) | 4.4511E-03 (2001,359,0000) | 3.6159E-03 (2001,020,0000) |
| 1359 | -354.534 | -433.716 | 1.2231E-02 (2001,017,0000) | 4.3854E-03 (2001,019,0000) | 3.9920E-03 (2001,359,0000) | 3.9267E-03 (2001,020,0000) |
| 1360 | -352.284 | -433.815 | 1.1712E-02 (2001,017,0000) | 4.1545E-03 (2001,019,0000) | 3.7981E-03 (2001,040,0000) | 3.7740E-03 (2001,359,0000) |
| 1361 | -350.035 | -433.914 | 1.1159E-02 (2001,017,0000) | 4.0403E-03 (2001,019,0000) | 3.8554E-03 (2001,040,0000) | 3.6852E-03 (2001,020,0000) |
| 1362 | -347.785 | -434.012 | 1.0577E-02 (2001,017,0000) | 3.8941E-03 (2001,040,0000) | 3.8411E-03 (2001,019,0000) | 3.5465E-03 (2001,361,0000) |
| 1363 | -246.527 | -437.763 | 7.8347E-03 (2001,360,0000) | 5.4803E-03 (2001,020,0000) | 2.7292E-03 (2001,362,0000) | 2.6607E-03 (2001,332,0000) |
| 1364 | -244.276 | -437.832 | 8.0268E-03 (2001,360,0000) | 5.4789E-03 (2001,020,0000) | 2.8484E-03 (2001,362,0000) | 2.6190E-03 (2001,332,0000) |
| 1365 | -242.026 | -437.900 | 8.2038E-03 (2001,360,0000) | 5.4463E-03 (2001,020,0000) | 2.9702E-03 (2001,362,0000) | 2.5940E-03 (2001,008,0000) |
| 1366 | -239.775 | -437.967 | 8.3640E-03 (2001,360,0000) | 5.4016E-03 (2001,020,0000) | 3.0926E-03 (2001,362,0000) | 2.6294E-03 (2001,008,0000) |
| 1367 | -237.524 | -438.034 | 8.5063E-03 (2001,360,0000) | 5.3566E-03 (2001,020,0000) | 3.2198E-03 (2001,362,0000) | 2.6640E-03 (2001,008,0000) |
| 1368 | -235.273 | -438.101 | 8.6268E-03 (2001,360,0000) | 5.2905E-03 (2001,020,0000) | 3.3476E-03 (2001,362,0000) | 2.7215E-03 (2001,313,0000) |
| 1369 | -233.022 | -438.166 | 8.7347E-03 (2001,360,0000) | 5.1968E-03 (2001,020,0000) | 3.4765E-03 (2001,362,0000) | 2.7819E-03 (2001,313,0000) |
| 1370 | -230.772 | -438.231 | 8.8273E-03 (2001,360,0000) | 5.0835E-03 (2001,020,0000) | 3.6051E-03 (2001,362,0000) | 2.8415E-03 (2001,313,0000) |
| 1371 | -228.521 | -438.296 | 8.6574E-03 (2001,360,0000) | 4.6561E-03 (2001,020,0000) | 3.7336E-03 (2001,362,0000) | 2.8973E-03 (2001,313,0000) |
| 1372 | -226.270 | -438.360 | 8.6196E-03 (2001,360,0000) | 4.5199E-03 (2001,020,0000) | 3.8610E-03 (2001,362,0000) | 2.9544E-03 (2001,313,0000) |
| 1373 | -224.019 | -438.423 | 8.4806E-03 (2001,360,0000) | 4.3102E-03 (2001,020,0000) | 3.9883E-03 (2001,362,0000) | 3.0042E-03 (2001,313,0000) |
| 1374 | -221.768 | -438.485 | 8.0742E-03 (2001,360,0000) | 4.1196E-03 (2001,020,0000) | 4.1140E-03 (2001,362,0000) | 3.0367E-03 (2001,313,0000) |
| 1375 | -219.517 | -438.547 | 8.0150E-03 (2001,360,0000) | 4.2355E-03 (2001,362,0000) | 3.9512E-03 (2001,020,0000) | 3.0851E-03 (2001,313,0000) |
| 1376 | -217.267 | -438.609 | 8.4747E-03 (2001,360,0000) | 4.3549E-03 (2001,362,0000) | 3.8474E-03 (2001,020,0000) | 3.1604E-03 (2001,313,0000) |
| 1377 | -215.016 | -438.669 | 8.5524E-03 (2001,360,0000) | 4.4745E-03 (2001,362,0000) | 3.6723E-03 (2001,020,0000) | 3.2084E-03 (2001,313,0000) |
| 1378 | -212.765 | -438.729 | 8.4366E-03 (2001,360,0000) | 4.5881E-03 (2001,362,0000) | 3.4601E-03 (2001,020,0000) | 3.2480E-03 (2001,313,0000) |
| 1379 | -210.514 | -438.789 | 8.6129E-03 (2001,360,0000) | 4.6962E-03 (2001,362,0000) | 3.3411E-03 (2001,020,0000) | 3.2873E-03 (2001,313,0000) |
| 1380 | -208.263 | -438.847 | 8.4411E-03 (2001,360,0000) | 4.8005E-03 (2001,362,0000) | 3.3167E-03 (2001,313,0000) | 3.1024E-03 (2001,020,0000) |
| 1381 | -206.012 | -438.905 | 8.2438E-03 (2001,360,0000) | 4.8999E-03 (2001,362,0000) | 3.3405E-03 (2001,313,0000) | 3.0976E-03 (2001,008,0000) |
| 1382 | -203.761 | -438.963 | 7.9069E-03 (2001,360,0000) | 4.9940E-03 (2001,362,0000) | 3.3572E-03 (2001,313,0000) | 3.1237E-03 (2001,008,0000) |
| 1383 | -401.629 | -428.708 | 1.0465E-02 (2001,017,0000) | 9.2541E-03 (2001,359,0000) | 5.1475E-03 (2001,018,0000) | 3.3249E-03 (2001,019,0000) |
| 1384 | -399.380 | -428.820 | 1.0979E-02 (2001,017,0000) | 9.1056E-03 (2001,359,0000) | 4.9921E-03 (2001,018,0000) | 3.4661E-03 (2001,019,0000) |
| 1385 | -397.132 | -428.932 | 1.1484E-02 (2001,017,0000) | 8.9360E-03 (2001,359,0000) | 4.8284E-03 (2001,018,0000) | 3.6038E-03 (2001,019,0000) |
| 1386 | -392.636 | -429.153 | 1.2437E-02 (2001,017,0000) | 8.5294E-03 (2001,359,0000) | 4.4768E-03 (2001,018,0000) | 3.8131E-03 (2001,019,0000) |
| 1387 | -390.387 | -429.263 | 1.2875E-02 (2001,017,0000) | 8.3213E-03 (2001,359,0000) | 4.3054E-03 (2001,018,0000) | 3.9441E-03 (2001,019,0000) |
| 1388 | -388.139 | -429.372 | 1.3282E-02 (2001,017,0000) | 8.0906E-03 (2001,359,0000) | 4.1374E-03 (2001,018,0000) | 4.0729E-03 (2001,019,0000) |
| 1389 | -385.891 | -429.481 | 1.3649E-02 (2001,017,0000) | 7.8555E-03 (2001,359,0000) | 4.2203E-03 (2001,019,0000) | 3.9757E-03 (2001,018,0000) |
| 1390 | -383.642 | -429.589 | 1.3969E-02 (2001,017,0000) | 7.6049E-03 (2001,359,0000) | 4.3207E-03 (2001,019,0000) | 3.8127E-03 (2001,018,0000) |
| 1391 | -381.394 | -429.696 | 1.4241E-02 (2001,017,0000) | 7.3481E-03 (2001,359,0000) | 4.4081E-03 (2001,019,0000) | 3.6571E-03 (2001,018,0000) |
| 1392 | -379.146 | -429.803 | 1.4457E-02 (2001,017,0000) | 7.0858E-03 (2001,359,0000) | 4.4820E-03 (2001,019,0000) | 3.5069E-03 (2001,018,0000) |
| 1393 | -376.897 | -429.909 | 1.4614E-02 (2001,017,0000) | 6.8186E-03 (2001,359,0000) | 4.5559E-03 (2001,019,0000) | 3.3643E-03 (2001,018,0000) |
| 1394 | -374.649 | -430.014 | 1.4707E-02 (2001,017,0000) | 6.5491E-03 (2001,359,0000) | 4.5891E-03 (2001,019,0000) | 3.2891E-03 (2001,361,0000) |
| 1395 | -367.903 | -430.327 | 1.4591E-02 (2001,017,0000) | 5.7423E-03 (2001,359,0000) | 4.6490E-03 (2001,019,0000) | 3.3955E-03 (2001,361,0000) |
| 1396 | -365.654 | -430.430 | 1.4417E-02 (2001,017,0000) | 5.4784E-03 (2001,359,0000) | 4.6339E-03 (2001,019,0000) | 3.4287E-03 (2001,361,0000) |
| 1397 | -358.908 | -430.734 | 1.3505E-02 (2001,017,0000) | 4.7130E-03 (2001,359,0000) | 4.4757E-03 (2001,019,0000) | 3.6857E-03 (2001,040,0000) |
| 1398 | -352.162 | -431.034 | 1.2089E-02 (2001,017,0000) | 4.2903E-03 (2001,019,0000) | 4.0789E-03 (2001,020,0000) | 4.0051E-03 (2001,359,0000) |
| 1399 | -349.913 | -431.132 | 1.1531E-02 (2001,017,0000) | 4.2479E-03 (2001,020,0000) | 4.2223E-03 (2001,019,0000) | 3.9663E-03 (2001,040,0000) |
| 1400 | -347.664 | -431.230 | 1.0937E-02 (2001,017,0000) | 4.0078E-03 (2001,040,0000) | 3.8735E-03 (2001,019,0000) | 3.6430E-03 (2001,361,0000) |
| 1401 | -248.691 | -434.910 | 7.7341E-03 (2001,360,0000) | 5.5518E-03 (2001,020,0000) | 2.7568E-03 (2001,332,0000) | 2.7070E-03 (2001,362,0000) |
| 1402 | -246.441 | -434.980 | 7.9330E-03 (2001,360,0000) | 5.5401E-03 (2001,020,0000) | 2.8308E-03 (2001,362,0000) | 2.6939E-03 (2001,332,0000) |
| 1403 | -244.191 | -435.049 | 8.1304E-03 (2001,360,0000) | 5.5368E-03 (2001,020,0000) | 2.9566E-03 (2001,362,0000) | 2.6769E-03 (2001,008,0000) |
| 1404 | -241.942 | -435.117 | 8.3326E-03 (2001,360,0000) | 5.5692E-03 (2001,020,0000) | 3.0848E-03 (2001,362,0000) | 2.7142E-03 (2001,008,0000) |
| 1405 | -239.692 | -435.184 | 8.4939E-03 (2001,360,0000) | 5.5273E-03 (2001,020,0000) | 3.2168E-03 (2001,362,0000) | 2.7510E-03 (2001,008,0000) |
| 1406 | -237.442 | -435.251 | 8.6399E-03 (2001,360,0000) | 5.4682E-03 (2001,020,0000) | 3.3497E-03 (2001,362,0000) | 2.7879E-03 (2001,008,0000) |
| 1407 | -235.192 | -435.318 | 8.7766E-03 (2001,360,0000) | 5.4194E-03 (2001,020,0000) | 3.4839E-03 (2001,362,0000) | 2.8243E-03 (2001,008,0000) |
| 1408 | -232.942 | -435.383 | 8.8216E-03 (2001,360,0000) | 5.1835E-03 (2001,020,0000) | 3.6201E-03 (2001,362,0000) | 2.8600E-03 (2001,008,0000) |
| 1409 | -230.692 | -435.448 | 8.7856E-03 (2001,360,0000) | 4.8881E-03 (2001,020,0000) | 3.7568E-03 (2001,362,0000) | 2.8987E-03 (2001,313,0000) |
| 1410 | -228.442 | -435.513 | 8.6158E-03 (2001,360,0000) | 4.6644E-03 (2001,020,0000) | 3.8926E-03 (2001,362,0000) | 2.9536E-03 (2001,313,0000) |
| 1411 | -226.192 | -435.577 | 8.7431E-03 (2001,360,0000) | 4.6004E-03 (2001,020,0000) | 4.0286E-03 (2001,362,0000) | 3.0166E-03 (2001,313,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1412 | -223.941 | -435.640 | 8.5492E-03 (2001,360,0000) | 4.3907E-03 (2001,020,0000) | 4.1635E-03 (2001,362,0000) | 3.0584E-03 (2001,313,0000) |
| 1413 | -221.691 | -435.702 | 8.8100E-03 (2001,360,0000) | 4.3270E-03 (2001,020,0000) | 4.2951E-03 (2001,362,0000) | 3.1382E-03 (2001,313,0000) |
| 1414 | -219.441 | -435.764 | 8.6201E-03 (2001,360,0000) | 4.4256E-03 (2001,362,0000) | 4.0924E-03 (2001,020,0000) | 3.1835E-03 (2001,313,0000) |
| 1415 | -217.191 | -435.825 | 8.8076E-03 (2001,360,0000) | 4.5529E-03 (2001,362,0000) | 3.9690E-03 (2001,020,0000) | 3.2456E-03 (2001,313,0000) |
| 1416 | -214.941 | -435.886 | 7.9891E-03 (2001,360,0000) | 4.6760E-03 (2001,362,0000) | 3.6714E-03 (2001,020,0000) | 3.2311E-03 (2001,313,0000) |
| 1417 | -212.691 | -435.946 | 8.5085E-03 (2001,360,0000) | 4.7955E-03 (2001,362,0000) | 3.5456E-03 (2001,020,0000) | 3.3364E-03 (2001,313,0000) |
| 1418 | -210.441 | -436.005 | 8.5901E-03 (2001,360,0000) | 4.9109E-03 (2001,362,0000) | 3.3802E-03 (2001,313,0000) | 3.3677E-03 (2001,020,0000) |
| 1419 | -208.190 | -436.064 | 8.6760E-03 (2001,360,0000) | 5.0220E-03 (2001,362,0000) | 3.4162E-03 (2001,313,0000) | 3.2146E-03 (2001,008,0000) |
| 1420 | -205.940 | -436.122 | 8.4133E-03 (2001,360,0000) | 5.1256E-03 (2001,362,0000) | 3.4442E-03 (2001,313,0000) | 3.2418E-03 (2001,008,0000) |
| 1421 | -203.690 | -436.179 | 8.1929E-03 (2001,360,0000) | 5.2232E-03 (2001,362,0000) | 3.4655E-03 (2001,313,0000) | 3.2681E-03 (2001,008,0000) |
| 1422 | -401.489 | -425.927 | 1.0410E-02 (2001,017,0000) | 9.5316E-03 (2001,359,0000) | 5.3107E-03 (2001,018,0000) | 3.2274E-03 (2001,019,0000) |
| 1423 | -399.242 | -426.039 | 1.0942E-02 (2001,017,0000) | 9.4025E-03 (2001,359,0000) | 5.1620E-03 (2001,018,0000) | 3.3693E-03 (2001,019,0000) |
| 1424 | -396.994 | -426.151 | 1.1465E-02 (2001,017,0000) | 9.2372E-03 (2001,359,0000) | 4.9998E-03 (2001,018,0000) | 3.4987E-03 (2001,019,0000) |
| 1425 | -394.747 | -426.262 | 1.1972E-02 (2001,017,0000) | 9.0543E-03 (2001,359,0000) | 4.8253E-03 (2001,018,0000) | 3.6021E-03 (2001,019,0000) |
| 1426 | -392.499 | -426.372 | 1.2464E-02 (2001,017,0000) | 8.8672E-03 (2001,359,0000) | 4.6627E-03 (2001,018,0000) | 3.7643E-03 (2001,019,0000) |
| 1427 | -390.252 | -426.482 | 1.2927E-02 (2001,017,0000) | 8.6552E-03 (2001,359,0000) | 4.4901E-03 (2001,018,0000) | 3.8842E-03 (2001,019,0000) |
| 1428 | -388.004 | -426.591 | 1.3358E-02 (2001,017,0000) | 8.4300E-03 (2001,359,0000) | 4.3189E-03 (2001,018,0000) | 4.0032E-03 (2001,019,0000) |
| 1429 | -385.757 | -426.700 | 1.3751E-02 (2001,017,0000) | 8.1910E-03 (2001,359,0000) | 4.1505E-03 (2001,018,0000) | 4.1106E-03 (2001,019,0000) |
| 1430 | -383.509 | -426.808 | 1.4101E-02 (2001,017,0000) | 7.9413E-03 (2001,359,0000) | 4.2099E-03 (2001,019,0000) | 3.9879E-03 (2001,018,0000) |
| 1431 | -381.262 | -426.915 | 1.4400E-02 (2001,017,0000) | 7.6831E-03 (2001,359,0000) | 4.3004E-03 (2001,019,0000) | 3.8305E-03 (2001,018,0000) |
| 1432 | -379.014 | -427.022 | 1.4645E-02 (2001,017,0000) | 7.4187E-03 (2001,359,0000) | 4.3792E-03 (2001,019,0000) | 3.6801E-03 (2001,018,0000) |
| 1433 | -376.766 | -427.128 | 1.4831E-02 (2001,017,0000) | 7.1477E-03 (2001,359,0000) | 4.4589E-03 (2001,019,0000) | 3.5364E-03 (2001,018,0000) |
| 1434 | -374.519 | -427.233 | 1.4952E-02 (2001,017,0000) | 6.8746E-03 (2001,359,0000) | 4.4967E-03 (2001,019,0000) | 3.4000E-03 (2001,018,0000) |
| 1435 | -365.527 | -427.648 | 1.4754E-02 (2001,017,0000) | 5.7781E-03 (2001,359,0000) | 4.5757E-03 (2001,019,0000) | 3.5651E-03 (2001,020,0000) |
| 1436 | -349.792 | -428.351 | 1.1909E-02 (2001,017,0000) | 4.1632E-03 (2001,019,0000) | 4.0679E-03 (2001,040,0000) | 4.0192E-03 (2001,359,0000) |
| 1437 | -347.544 | -428.448 | 1.1310E-02 (2001,017,0000) | 4.1109E-03 (2001,040,0000) | 4.0083E-03 (2001,019,0000) | 3.9273E-03 (2001,020,0000) |
| 1438 | -345.296 | -428.546 | 1.0682E-02 (2001,017,0000) | 4.1412E-03 (2001,040,0000) | 3.8130E-03 (2001,020,0000) | 3.7673E-03 (2001,019,0000) |
| 1439 | -250.854 | -432.057 | 7.6031E-03 (2001,360,0000) | 5.5722E-03 (2001,020,0000) | 2.8510E-03 (2001,332,0000) | 2.6823E-03 (2001,008,0000) |
| 1440 | -248.605 | -432.128 | 7.8093E-03 (2001,360,0000) | 5.5440E-03 (2001,020,0000) | 2.8044E-03 (2001,362,0000) | 2.7633E-03 (2001,332,0000) |
| 1441 | -246.356 | -432.197 | 8.0005E-03 (2001,360,0000) | 5.4930E-03 (2001,020,0000) | 2.9344E-03 (2001,362,0000) | 2.7612E-03 (2001,008,0000) |
| 1442 | -244.107 | -432.266 | 7.7379E-03 (2001,360,0000) | 4.9601E-03 (2001,020,0000) | 3.0677E-03 (2001,362,0000) | 2.8011E-03 (2001,008,0000) |
| 1443 | -241.858 | -432.334 | 7.8781E-03 (2001,360,0000) | 4.9591E-03 (2001,020,0000) | 3.2035E-03 (2001,362,0000) | 2.8408E-03 (2001,008,0000) |
| 1444 | -239.608 | -432.401 | 8.3287E-03 (2001,360,0000) | 5.1080E-03 (2001,020,0000) | 3.3410E-03 (2001,362,0000) | 2.8798E-03 (2001,008,0000) |
| 1445 | -237.359 | -432.468 | 8.6316E-03 (2001,360,0000) | 5.2609E-03 (2001,020,0000) | 3.4813E-03 (2001,362,0000) | 2.9181E-03 (2001,008,0000) |
| 1446 | -235.110 | -432.535 | 8.5101E-03 (2001,360,0000) | 4.9598E-03 (2001,020,0000) | 3.6246E-03 (2001,362,0000) | 2.9566E-03 (2001,008,0000) |
| 1447 | -232.861 | -432.600 | 8.8455E-03 (2001,360,0000) | 5.0530E-03 (2001,020,0000) | 3.7679E-03 (2001,362,0000) | 2.9943E-03 (2001,008,0000) |
| 1448 | -230.612 | -432.665 | 8.7372E-03 (2001,360,0000) | 4.8381E-03 (2001,020,0000) | 3.9136E-03 (2001,362,0000) | 3.0321E-03 (2001,008,0000) |
| 1449 | -228.362 | -432.730 | 8.4123E-03 (2001,360,0000) | 4.6806E-03 (2001,020,0000) | 4.0585E-03 (2001,362,0000) | 3.0694E-03 (2001,008,0000) |
| 1450 | -226.113 | -432.793 | 8.8523E-03 (2001,360,0000) | 4.6364E-03 (2001,020,0000) | 4.2009E-03 (2001,362,0000) | 3.1056E-03 (2001,008,0000) |
| 1451 | -223.864 | -432.857 | 9.0892E-03 (2001,360,0000) | 4.5947E-03 (2001,020,0000) | 4.3431E-03 (2001,362,0000) | 3.1465E-03 (2001,313,0000) |
| 1452 | -221.614 | -432.919 | 9.0917E-03 (2001,360,0000) | 4.4836E-03 (2001,362,0000) | 4.4361E-03 (2001,020,0000) | 3.2081E-03 (2001,313,0000) |
| 1453 | -219.365 | -432.981 | 9.3023E-03 (2001,360,0000) | 4.6214E-03 (2001,362,0000) | 4.4194E-03 (2001,020,0000) | 3.2730E-03 (2001,313,0000) |
| 1454 | -217.116 | -433.042 | 9.0478E-03 (2001,360,0000) | 4.7549E-03 (2001,362,0000) | 4.0867E-03 (2001,020,0000) | 3.3246E-03 (2001,313,0000) |
| 1455 | -214.866 | -433.103 | 8.1293E-03 (2001,360,0000) | 4.8858E-03 (2001,362,0000) | 3.7557E-03 (2001,020,0000) | 3.2919E-03 (2001,313,0000) |
| 1456 | -212.617 | -433.163 | 7.9393E-03 (2001,360,0000) | 5.0118E-03 (2001,362,0000) | 3.4542E-03 (2001,020,0000) | 3.3060E-03 (2001,008,0000) |
| 1457 | -210.368 | -433.222 | 7.9407E-03 (2001,360,0000) | 5.1314E-03 (2001,362,0000) | 3.3888E-03 (2001,313,0000) | 3.3400E-03 (2001,020,0000) |
| 1458 | -208.118 | -433.281 | 8.5525E-03 (2001,360,0000) | 5.2478E-03 (2001,362,0000) | 3.5032E-03 (2001,313,0000) | 3.3658E-03 (2001,008,0000) |
| 1459 | -205.869 | -433.339 | 8.7125E-03 (2001,360,0000) | 5.3584E-03 (2001,362,0000) | 3.5433E-03 (2001,313,0000) | 3.3945E-03 (2001,008,0000) |
| 1460 | -203.619 | -433.396 | 8.4127E-03 (2001,360,0000) | 5.4606E-03 (2001,362,0000) | 3.5678E-03 (2001,313,0000) | 3.4210E-03 (2001,008,0000) |
| 1461 | -401.350 | -423.146 | 1.0329E-02 (2001,017,0000) | 9.7975E-03 (2001,359,0000) | 5.4672E-03 (2001,018,0000) | 3.1207E-03 (2001,019,0000) |
| 1462 | -399.103 | -423.258 | 1.0877E-02 (2001,017,0000) | 9.6847E-03 (2001,359,0000) | 5.3294E-03 (2001,018,0000) | 3.2679E-03 (2001,019,0000) |
| 1463 | -396.857 | -423.370 | 1.1418E-02 (2001,017,0000) | 9.5337E-03 (2001,359,0000) | 5.1712E-03 (2001,018,0000) | 3.3967E-03 (2001,019,0000) |
| 1464 | -394.610 | -423.481 | 1.1948E-02 (2001,017,0000) | 9.3777E-03 (2001,359,0000) | 5.0122E-03 (2001,018,0000) | 3.5358E-03 (2001,019,0000) |
| 1465 | -392.363 | -423.592 | 1.2460E-02 (2001,017,0000) | 9.1900E-03 (2001,359,0000) | 4.8433E-03 (2001,018,0000) | 3.6606E-03 (2001,019,0000) |
| 1466 | -390.117 | -423.701 | 1.2949E-02 (2001,017,0000) | 8.9844E-03 (2001,359,0000) | 4.6717E-03 (2001,018,0000) | 3.7802E-03 (2001,019,0000) |
| 1467 | -387.870 | -423.810 | 1.3407E-02 (2001,017,0000) | 8.7633E-03 (2001,359,0000) | 4.5009E-03 (2001,018,0000) | 3.8930E-03 (2001,019,0000) |
| 1468 | -385.623 | -423.919 | 1.3827E-02 (2001,017,0000) | 8.5282E-03 (2001,359,0000) | 4.3335E-03 (2001,018,0000) | 4.0019E-03 (2001,019,0000) |
| 1469 | -383.376 | -424.027 | 1.4206E-02 (2001,017,0000) | 8.2813E-03 (2001,359,0000) | 4.1698E-03 (2001,018,0000) | 4.1005E-03 (2001,019,0000) |
| 1470 | -381.129 | -424.134 | 1.4537E-02 (2001,017,0000) | 8.0252E-03 (2001,359,0000) | 4.1941E-03 (2001,019,0000) | 4.0119E-03 (2001,018,0000) |
| 1471 | -378.882 | -424.241 | 1.4812E-02 (2001,017,0000) | 7.7596E-03 (2001,359,0000) | 4.2783E-03 (2001,019,0000) | 3.8612E-03 (2001,018,0000) |
| 1472 | -376.636 | -424.347 | 1.5027E-02 (2001,017,0000) | 7.4878E-03 (2001,359,0000) | 4.3454E-03 (2001,019,0000) | 3.7168E-03 (2001,018,0000) |
| 1473 | -347.423 | -425.667 | 1.1691E-02 (2001,017,0000) | 4.1895E-03 (2001,040,0000) | 4.0314E-03 (2001,359,0000) | 3.8431E-03 (2001,361,0000) |
| 1474 | -345.176 | -425.764 | 1.1053E-02 (2001,017,0000) | 4.2186E-03 (2001,040,0000) | 3.8623E-03 (2001,361,0000) | 3.8044E-03 (2001,359,0000) |
| 1475 | -342.929 | -425.860 | 1.0392E-02 (2001,017,0000) | 4.1877E-03 (2001,040,0000) | 3.8789E-03 (2001,361,0000) | 3.5892E-03 (2001,359,0000) |
| 1476 | -340.681 | -425.956 | 9.7156E-03 (2001,017,0000) | 4.1781E-03 (2001,040,0000) | 3.8930E-03 (2001,361,0000) | 3.3819E-03 (2001,359,0000) |
| 1477 | -336.186 | -426.146 | 8.3536E-03 (2001,017,0000) | 4.2022E-03 (2001,040,0000) | 3.9158E-03 (2001,361,0000) | 3.5318E-03 (2001,020,0000) |
| 1478 | -255.264 | -429.133 | 7.2133E-03 (2001,360,0000) | 5.5248E-03 (2001,020,0000) | 3.0159E-03 (2001,332,0000) | 2.7216E-03 (2001,008,0000) |
| 1479 | -253.015 | -429.204 | 7.4426E-03 (2001,360,0000) | 5.5524E-03 (2001,020,0000) | 2.9453E-03 (2001,332,0000) | 2.7635E-03 (2001,008,0000) |
| 1480 | -250.767 | -429.275 | 7.6586E-03 (2001,360,0000) | 5.5076E-03 (2001,020,0000) | 2.8359E-03 (2001,332,0000) | 2.8058E-03 (2001,008,0000) |
| 1481 | -248.519 | -429.345 | 7.6214E-03 (2001,360,0000) | 4.9015E-03 (2001,020,0000) | 2.9019E-03 (2001,362,0000) | 2.8483E-03 (2001,008,0000) |
| 1482 | -246.270 | -429.414 | 7.6538E-03 (2001,360,0000) | 4.8913E-03 (2001,020,0000) | 3.0396E-03 (2001,362,0000) | 2.8897E-03 (2001,008,0000) |
| 1483 | -244.022 | -429.483 | 7.7413E-03 (2001,360,0000) | 4.7501E-03 (2001,020,0000) | 3.1800E-03 (2001,362,0000) | 2.9319E-03 (2001,008,0000) |
| 1484 | -241.774 | -429.551 | 7.9884E-03 (2001,360,0000) | 4.9550E-03 (2001,020,0000) | 3.3231E-03 (2001,362,0000) | 2.9741E-03 (2001,008,0000) |
| 1485 | -239.525 | -429.619 | 7.9830E-03 (2001,360,0000) | 4.7435E-03 (2001,020,0000) | 3.4686E-03 (2001,362,0000) | 3.0150E-03 (2001,008,0000) |
| 1486 | -237.277 | -429.685 | 8.1592E-03 (2001,360,0000) | 4.9021E-03 (2001,020,0000) | 3.6183E-03 (2001,362,0000) | 3.0560E-03 (2001,008,0000) |
| 1487 | -235.028 | -429.752 | 8.3466E-03 (2001,360,0000) | 4.9110E-03 (2001,020,0000) | 3.7678E-03 (2001,362,0000) | 3.0963E-03 (2001,008,0000) |
| 1488 | -232.780 | -429.817 | 8.4338E-03 (2001,360,0000) | 4.8692E-03 (2001,020,0000) | 3.9207E-03 (2001,362,0000) | 3.1364E-03 (2001,008,0000) |
| 1489 | -230.532 | -429.882 | 8.8937E-03 (2001,360,0000) | 4.8981E-03 (2001,020,0000) | 4.0745E-03 (2001,362,0000) | 3.1762E-03 (2001,008,0000) |
| 1490 | -228.283 | -429.947 | 9.0329E-03 (2001,360,0000) | 4.8941E-03 (2001,020,0000) | 4.2268E-03 (2001,362,0000) | 3.2157E-03 (2001,008,0000) |
| 1491 | -226.035 | -430.010 | 9.0882E-03 (2001,360,0000) | 4.7703E-03 (2001,020,0000) | 4.3786E-03 (2001,362,0000) | 3.2539E-03 (2001,008,0000) |
| 1492 | -223.786 | -430.073 | 9.1202E-03 (2001,360,0000) | 4.6418E-03 (2001,020,0000) | 4.5296E-03 (2001,362,0000) | 3.2915E-03 (2001,008,0000) |
| 1493 | -221.538 | -430.136 | 9.3205E-03 (2001,360,0000) | 4.6760E-03 (2001,362,0000) | 4.5561E-03 (2001,020,0000) | 3.3282E-03 (2001,008,0000) |
| 1494 | -219.289 | -430.198 | 9.6233E-03 (2001,360,0000) | 4.8204E-03 (2001,362,0000) | 4.6197E-03 (2001,020,0000) | 3.3638E-03 (2001,008,0000) |
| 1495 | -217.040 | -430.259 | 9.0490E-03 (2001,360,0000) | 4.9640E-03 (2001,362,0000) | 4.1338E-03 (2001,020,0000) | 3.3978E-03 (2001,008,0000) |
| 1496 | -214.792 | -430.320 | 9.1750E-03 (2001,360,0000) | 5.1008E-03 (2001,362,0000) | 3.9670E-03 (2001,020,0000) | 3.4524E-03 (2001,313,0000) |
| 1497 | -212.543 | -430.379 | 9.0577E-03 (2001,360,0000) | 5.2333E-03 (2001,362,0000) | 3.7365E-03 (2001,020,0000) | 3.5033E-03 (2001,313,0000) |
| 1498 | -210.295 | -430.439 | 8.6176E-03 (2001,360,0000) | 5.3600E-03 (2001,362,0000) | 3.5035E-03 (2001,313,0000) | 3.4953E-03 (2001,008,0000) |
| 1499 | -208.046 | -430.497 | 7.9703E-03 (2001,360,0000) | 5.4813E-03 (2001,362,0000) | 3.5257E-03 (2001,008,0000) | 3.4905E-03 (2001,313,0000) |
| 1500 | -205.797 | -430.556 | 8.9045E-03 (2001,360,0000) | 5.5962E-03 (2001,362,0000) | 3.6378E-03 (2001,313,0000) | 3.5550E-03 (2001,008,0000) |
| 1501 | -203.549 | -430.613 | 8.5807E-03 (2001,360,0000) | 5.7038E-03 (2001,362,0000) | 3.6638E-03 (2001,313,0000) | 3.5826E-03 (2001,008,0000) |
| 1502 | -396.719 | -420.589 | 1.1344E-02 (2001,017,0000) | 9.8280E-03 (2001,359,0000) | 5.3454E-03 (2001,018,0000) | 3.3005E-03 (2001,019,0000) |
| 1503 | -394.473 | -420.700 | 1.1894E-02 (2001,017,0000) | 9.6877E-03 (2001,359,0000) | 5.1934E-03 (2001,018,0000) | 3.4357E-03 (2001,019,0000) |
| 1504 | -392.227 | -420.811 | 1.2428E-02 (2001,017,0000) | 9.5103E-03 (2001,359,0000) | 5.0281E-03 (2001,018,0000) | 3.5571E-03 (2001,019,0000) |
| 1505 | -389.981 | -420.921 | 1.2941E-02 (2001,017,0000) | 9.3132E-03 (2001,359,0000) | 4.8592E-03 (2001,018,0000) | 3.6743E-03 (2001,019,0000) |
| 1506 | -387.735 | -421.030 | 1.3425E-02 (2001,017,0000) | 9.0998E-03 (2001,359,0000) | 4.6895E-03 (2001,018,0000) | 3.7850E-03 (2001,019,0000) |
| 1507 | -385.489 | -421.138 | 1.3876E-02 (2001,017,0000) | 8.8701E-03 (2001,359,0000) | 4.5222E-03 (2001,018,0000) | 3.8923E-03 (2001,019,0000) |
| 1508 | -383.243 | -421.246 | 1.4286E-02 (2001,017,0000) | 8.6270E-03 (2001,359,0000) | 4.3581E-03 (2001,018,0000) | 3.9972E-03 (2001,019,0000) |
| 1509 | -380.997 | -421.353 | 1.4646E-02 (2001,017,0000) | 8.3716E-03 (2001,359,0000) | 4.2002E-03 (2001,018,0000) | 4.0841E-03 (2001,019,0000) |
| 1510 | -345.056 | -422.982 | 1.1441E-02 (2001,017,0000) | 4.3175E-03 (2001,040,0000) | 4.0412E-03 (2001,359,0000) | 3.9631E-03 (2001,361,0000) |
| 1511 | -333.823 | -423.459 | 7.9802E-03 (2001,017,0000) | 4.1991E-03 (2001,040,0000) | 4.0219E-03 (2001,361,0000) | 3.3803E-03 (2001,020,0000) |
| 1512 | -259.670 | -426.206 | 6.7800E-03 (2001,360,0000) | 5.4138E-03 (2001,020,0000) | 3.1693E-03 (2001,332,0000) | 2.9265E-03 (2001,068,0000) |
| 1513 | -257.422 | -426.278 | 7.0197E-03 (2001,360,0000) | 5.4567E-03 (2001,020,0000) | 3.1083E-03 (2001,332,0000) | 2.8221E-03 (2001,068,0000) |
| 1514 | -255.175 | -426.350 | 7.0721E-03 (2001,360,0000) | 4.7529E-03 (2001,020,0000) | 2.8457E-03 (2001,008,0000) | 2.6846E-03 (2001,068,0000) |
| 1515 | -252.927 | -426.421 | 7.4172E-03 (2001,360,0000) | 5.0070E-03 (2001,020,0000) | 2.8909E-03 (2001,008,0000) | 2.7223E-03 (2001,362,0000) |
| 1516 | -250.680 | -426.492 | 7.3773E-03 (2001,360,0000) | 4.7511E-03 (2001,020,0000) | 2.9359E-03 (2001,008,0000) | 2.8581E-03 (2001,362,0000) |
| 1517 | -248.432 | -426.562 | 7.5515E-03 (2001,360,0000) | 4.7810E-03 (2001,020,0000) | 2.9999E-03 (2001,362,0000) | 2.9804E-03 (2001,008,0000) |
| 1518 | -246.185 | -426.631 | 7.6480E-03 (2001,360,0000) | 4.6401E-03 (2001,020,0000) | 3.1454E-03 (2001,362,0000) | 3.0252E-03 (2001,008,0000) |
| 1519 | -243.937 | -426.700 | 8.2705E-03 (2001,360,0000) | 5.1798E-03 (2001,020,0000) | 3.2923E-03 (2001,362,0000) | 3.0695E-03 (2001,008,0000) |
| 1520 | -241.690 | -426.768 | 8.4767E-03 (2001,360,0000) | 5.2272E-03 (2001,020,0000) | 3.4455E-03 (2001,362,0000) | 3.1138E-03 (2001,008,0000) |
| 1521 | -239.442 | -426.836 | 8.3562E-03 (2001,360,0000) | 4.9736E-03 (2001,020,0000) | 3.5993E-03 (2001,362,0000) | 3.1575E-03 (2001,008,0000) |
| 1522 | -237.195 | -426.903 | 8.8471E-03 (2001,360,0000) | 5.2577E-03 (2001,020,0000) | 3.7553E-03 (2001,362,0000) | 3.2006E-03 (2001,008,0000) |
| 1523 | -234.947 | -426.969 | 8.7640E-03 (2001,360,0000) | 4.9972E-03 (2001,020,0000) | 3.9170E-03 (2001,362,0000) | 3.2437E-03 (2001,008,0000) |
| 1524 | -232.699 | -427.034 | 9.1101E-03 (2001,360,0000) | 5.1213E-03 (2001,020,0000) | 4.0765E-03 (2001,362,0000) | 3.2865E-03 (2001,008,0000) |
| 1525 | -230.452 | -427.099 | 9.2317E-03 (2001,360,0000) | 5.0658E-03 (2001,020,0000) | 4.2374E-03 (2001,362,0000) | 3.3285E-03 (2001,008,0000) |

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|---|---|---|---|---|---|---|
| 1526 | -228.204 | -427.164 | 9.6060E-03 (2001,360,0000) | 5.4610E-03 (2001,020,0000) | 4.4006E-03 (2001,362,0000) | 3.3704E-03 (2001,008,0000) |
| 1527 | -225.956 | -427.227 | 9.2546E-03 (2001,360,0000) | 4.8331E-03 (2001,020,0000) | 4.5599E-03 (2001,362,0000) | 3.4104E-03 (2001,008,0000) |
| 1528 | -223.708 | -427.290 | 9.4543E-03 (2001,360,0000) | 4.7522E-03 (2001,020,0000) | 4.7182E-03 (2001,362,0000) | 3.4500E-03 (2001,008,0000) |
| 1529 | -221.461 | -427.353 | 9.8155E-03 (2001,360,0000) | 4.9700E-03 (2001,020,0000) | 4.8759E-03 (2001,362,0000) | 3.4880E-03 (2001,008,0000) |
| 1530 | -219.213 | -427.415 | 9.8317E-03 (2001,360,0000) | 5.0286E-03 (2001,362,0000) | 4.7633E-03 (2001,020,0000) | 3.5248E-03 (2001,008,0000) |
| 1531 | -216.965 | -427.476 | 9.7179E-03 (2001,360,0000) | 5.1776E-03 (2001,362,0000) | 4.4393E-03 (2001,020,0000) | 3.5605E-03 (2001,008,0000) |
| 1532 | -214.717 | -427.536 | 9.6411E-03 (2001,360,0000) | 5.3237E-03 (2001,362,0000) | 4.1992E-03 (2001,020,0000) | 3.5962E-03 (2001,008,0000) |
| 1533 | -212.469 | -427.596 | 9.2917E-03 (2001,360,0000) | 5.4640E-03 (2001,362,0000) | 3.8195E-03 (2001,020,0000) | 3.6302E-03 (2001,008,0000) |
| 1534 | -210.222 | -427.656 | 8.3692E-03 (2001,360,0000) | 5.5952E-03 (2001,362,0000) | 3.6628E-03 (2001,008,0000) | 3.5554E-03 (2001,313,0000) |
| 1535 | -207.974 | -427.714 | 8.1229E-03 (2001,360,0000) | 5.7224E-03 (2001,362,0000) | 3.6949E-03 (2001,008,0000) | 3.5426E-03 (2001,313,0000) |
| 1536 | -205.726 | -427.772 | 9.0795E-03 (2001,360,0000) | 5.8431E-03 (2001,362,0000) | 3.7246E-03 (2001,313,0000) | 3.7242E-03 (2001,008,0000) |
| 1537 | -203.478 | -427.830 | 8.7998E-03 (2001,360,0000) | 5.9553E-03 (2001,362,0000) | 3.7551E-03 (2001,313,0000) | 3.7530E-03 (2001,008,0000) |
| 1538 | -385.355 | -418.357 | 1.3895E-02 (2001,017,0000) | 9.2117E-03 (2001,359,0000) | 4.7160E-03 (2001,018,0000) | 3.7887E-03 (2001,019,0000) |
| 1539 | -347.182 | -420.104 | 1.2496E-02 (2001,017,0000) | 4.5414E-03 (2001,359,0000) | 4.3632E-03 (2001,040,0000) | 4.0471E-03 (2001,361,0000) |
| 1540 | -266.320 | -423.202 | 6.0783E-03 (2001,360,0000) | 5.1279E-03 (2001,020,0000) | 3.2688E-03 (2001,332,0000) | 3.2550E-03 (2001,068,0000) |
| 1541 | -264.073 | -423.276 | 6.2940E-03 (2001,360,0000) | 4.8586E-03 (2001,020,0000) | 3.1400E-03 (2001,068,0000) | 2.9579E-03 (2001,332,0000) |
| 1542 | -261.826 | -423.350 | 6.5639E-03 (2001,360,0000) | 5.3304E-03 (2001,020,0000) | 3.2611E-03 (2001,332,0000) | 3.0470E-03 (2001,068,0000) |
| 1543 | -259.580 | -423.423 | 6.8092E-03 (2001,360,0000) | 5.3791E-03 (2001,020,0000) | 3.2025E-03 (2001,332,0000) | 2.9387E-03 (2001,068,0000) |
| 1544 | -257.333 | -423.496 | 7.0611E-03 (2001,360,0000) | 5.4806E-03 (2001,020,0000) | 3.1578E-03 (2001,332,0000) | 2.9292E-03 (2001,008,0000) |
| 1545 | -255.086 | -423.568 | 7.2735E-03 (2001,360,0000) | 5.2096E-03 (2001,020,0000) | 2.9764E-03 (2001,008,0000) | 2.9058E-03 (2001,332,0000) |
| 1546 | -252.840 | -423.639 | 7.2333E-03 (2001,360,0000) | 4.5865E-03 (2001,020,0000) | 3.0242E-03 (2001,008,0000) | 2.8056E-03 (2001,362,0000) |
| 1547 | -250.593 | -423.709 | 7.4284E-03 (2001,360,0000) | 4.6343E-03 (2001,020,0000) | 3.0718E-03 (2001,008,0000) | 2.9502E-03 (2001,362,0000) |
| 1548 | -248.346 | -423.779 | 7.5955E-03 (2001,360,0000) | 4.6821E-03 (2001,020,0000) | 3.1197E-03 (2001,008,0000) | 3.0982E-03 (2001,362,0000) |
| 1549 | -246.099 | -423.849 | 8.1400E-03 (2001,360,0000) | 5.0855E-03 (2001,020,0000) | 3.2512E-03 (2001,362,0000) | 3.1669E-03 (2001,008,0000) |
| 1550 | -243.853 | -423.917 | 8.1934E-03 (2001,360,0000) | 4.9218E-03 (2001,020,0000) | 3.4081E-03 (2001,362,0000) | 3.2145E-03 (2001,008,0000) |
| 1551 | -241.606 | -423.986 | 8.6062E-03 (2001,360,0000) | 5.3225E-03 (2001,020,0000) | 3.5677E-03 (2001,362,0000) | 3.2612E-03 (2001,008,0000) |
| 1552 | -239.359 | -424.053 | 8.8619E-03 (2001,360,0000) | 5.5358E-03 (2001,020,0000) | 3.7316E-03 (2001,362,0000) | 3.3073E-03 (2001,008,0000) |
| 1553 | -237.112 | -424.120 | 8.9457E-03 (2001,360,0000) | 5.2037E-03 (2001,020,0000) | 3.8985E-03 (2001,362,0000) | 3.3541E-03 (2001,008,0000) |
| 1554 | -234.865 | -424.186 | 9.1014E-03 (2001,360,0000) | 5.1745E-03 (2001,020,0000) | 4.0659E-03 (2001,362,0000) | 3.3991E-03 (2001,008,0000) |
| 1555 | -232.618 | -424.252 | 9.2812E-03 (2001,360,0000) | 5.2153E-03 (2001,020,0000) | 4.2360E-03 (2001,362,0000) | 3.4445E-03 (2001,008,0000) |
| 1556 | -230.371 | -424.317 | 9.3230E-03 (2001,360,0000) | 5.0899E-03 (2001,020,0000) | 4.4072E-03 (2001,362,0000) | 3.4890E-03 (2001,008,0000) |
| 1557 | -228.125 | -424.381 | 9.6329E-03 (2001,360,0000) | 5.2654E-03 (2001,020,0000) | 4.5766E-03 (2001,362,0000) | 3.5334E-03 (2001,008,0000) |
| 1558 | -225.878 | -424.445 | 9.8743E-03 (2001,360,0000) | 5.3782E-03 (2001,020,0000) | 4.7459E-03 (2001,362,0000) | 3.5755E-03 (2001,008,0000) |
| 1559 | -223.631 | -424.508 | 9.9556E-03 (2001,360,0000) | 5.2629E-03 (2001,020,0000) | 4.9150E-03 (2001,362,0000) | 3.6172E-03 (2001,008,0000) |
| 1560 | -221.384 | -424.570 | 1.0002E-02 (2001,360,0000) | 5.0791E-03 (2001,362,0000) | 5.0023E-03 (2001,020,0000) | 3.6574E-03 (2001,008,0000) |
| 1561 | -219.137 | -424.632 | 1.0031E-02 (2001,360,0000) | 5.2417E-03 (2001,362,0000) | 4.8676E-03 (2001,020,0000) | 3.6962E-03 (2001,008,0000) |
| 1562 | -216.890 | -424.693 | 9.7669E-03 (2001,360,0000) | 5.3994E-03 (2001,362,0000) | 4.4094E-03 (2001,020,0000) | 3.7332E-03 (2001,008,0000) |
| 1563 | -214.643 | -424.754 | 9.5762E-03 (2001,360,0000) | 5.5512E-03 (2001,362,0000) | 4.0994E-03 (2001,020,0000) | 3.7709E-03 (2001,008,0000) |
| 1564 | -212.396 | -424.813 | 9.1429E-03 (2001,360,0000) | 5.6978E-03 (2001,362,0000) | 3.8060E-03 (2001,008,0000) | 3.7944E-03 (2001,020,0000) |
| 1565 | -210.149 | -424.873 | 8.5668E-03 (2001,360,0000) | 5.8383E-03 (2001,362,0000) | 3.8398E-03 (2001,008,0000) | 3.6165E-03 (2001,313,0000) |
| 1566 | -207.902 | -424.931 | 8.2396E-03 (2001,360,0000) | 5.9721E-03 (2001,362,0000) | 3.8720E-03 (2001,008,0000) | 3.5568E-03 (2001,313,0000) |
| 1567 | -205.654 | -424.989 | 9.2932E-03 (2001,360,0000) | 6.0972E-03 (2001,362,0000) | 3.9032E-03 (2001,008,0000) | 3.8066E-03 (2001,313,0000) |
| 1568 | -203.407 | -425.047 | 9.0626E-03 (2001,360,0000) | 6.2151E-03 (2001,362,0000) | 3.9326E-03 (2001,008,0000) | 3.8425E-03 (2001,313,0000) |
| 1569 | -349.306 | -417.225 | 1.3532E-02 (2001,017,0000) | 5.0809E-03 (2001,359,0000) | 4.4025E-03 (2001,040,0000) | 4.1313E-03 (2001,361,0000) |
| 1570 | -329.101 | -418.081 | 7.1967E-03 (2001,017,0000) | 4.2267E-03 (2001,361,0000) | 4.2052E-03 (2001,040,0000) | 3.6910E-03 (2001,020,0000) |
| 1571 | -326.856 | -418.173 | 6.5095E-03 (2001,017,0000) | 4.2242E-03 (2001,361,0000) | 4.0866E-03 (2001,040,0000) | 3.4924E-03 (2001,068,0000) |
| 1572 | -302.157 | -419.144 | 5.0746E-03 (2001,020,0000) | 4.2841E-03 (2001,068,0000) | 4.0032E-03 (2001,361,0000) | 3.1128E-03 (2001,019,0000) |
| 1573 | -266.227 | -420.420 | 6.0545E-03 (2001,360,0000) | 4.4888E-03 (2001,020,0000) | 3.2588E-03 (2001,068,0000) | 3.0459E-03 (2001,361,0000) |
| 1574 | -263.981 | -420.494 | 6.2912E-03 (2001,360,0000) | 4.4959E-03 (2001,020,0000) | 3.1480E-03 (2001,068,0000) | 2.9696E-03 (2001,361,0000) |
| 1575 | -261.735 | -420.568 | 6.5492E-03 (2001,360,0000) | 4.7567E-03 (2001,020,0000) | 3.0370E-03 (2001,068,0000) | 2.9628E-03 (2001,008,0000) |
| 1576 | -259.489 | -420.641 | 6.8394E-03 (2001,360,0000) | 5.3777E-03 (2001,020,0000) | 3.2399E-03 (2001,332,0000) | 3.0123E-03 (2001,008,0000) |
| 1577 | -257.244 | -420.713 | 7.0930E-03 (2001,360,0000) | 5.4365E-03 (2001,020,0000) | 3.1682E-03 (2001,332,0000) | 3.0627E-03 (2001,008,0000) |
| 1578 | -254.998 | -420.785 | 7.1456E-03 (2001,360,0000) | 4.4260E-03 (2001,020,0000) | 3.1132E-03 (2001,008,0000) | 2.7431E-03 (2001,362,0000) |
| 1579 | -252.752 | -420.856 | 7.2304E-03 (2001,360,0000) | 4.2860E-03 (2001,020,0000) | 3.1639E-03 (2001,008,0000) | 2.8894E-03 (2001,362,0000) |
| 1580 | -250.506 | -420.927 | 7.6076E-03 (2001,360,0000) | 4.6180E-03 (2001,020,0000) | 3.2147E-03 (2001,008,0000) | 3.0412E-03 (2001,362,0000) |
| 1581 | -248.260 | -420.997 | 7.9817E-03 (2001,360,0000) | 4.9401E-03 (2001,020,0000) | 3.2655E-03 (2001,008,0000) | 3.1974E-03 (2001,362,0000) |
| 1582 | -246.014 | -421.066 | 8.2434E-03 (2001,360,0000) | 5.1610E-03 (2001,020,0000) | 3.3582E-03 (2001,362,0000) | 3.3165E-03 (2001,008,0000) |
| 1583 | -243.768 | -421.135 | 8.4504E-03 (2001,360,0000) | 5.1254E-03 (2001,020,0000) | 3.5242E-03 (2001,362,0000) | 3.3662E-03 (2001,008,0000) |
| 1584 | -241.522 | -421.203 | 8.6152E-03 (2001,360,0000) | 5.0970E-03 (2001,020,0000) | 3.6942E-03 (2001,362,0000) | 3.4162E-03 (2001,008,0000) |
| 1585 | -239.276 | -421.270 | 8.9807E-03 (2001,360,0000) | 5.5945E-03 (2001,020,0000) | 3.8667E-03 (2001,362,0000) | 3.4656E-03 (2001,008,0000) |
| 1586 | -237.030 | -421.337 | 9.2347E-03 (2001,360,0000) | 5.7414E-03 (2001,020,0000) | 4.0415E-03 (2001,362,0000) | 3.5141E-03 (2001,008,0000) |
| 1587 | -234.784 | -421.403 | 9.4017E-03 (2001,360,0000) | 5.6541E-03 (2001,020,0000) | 4.2205E-03 (2001,362,0000) | 3.5632E-03 (2001,008,0000) |
| 1588 | -232.538 | -421.469 | 9.5914E-03 (2001,360,0000) | 5.6509E-03 (2001,020,0000) | 4.3990E-03 (2001,362,0000) | 3.6110E-03 (2001,008,0000) |
| 1589 | -230.291 | -421.534 | 9.7891E-03 (2001,360,0000) | 5.6725E-03 (2001,020,0000) | 4.5783E-03 (2001,362,0000) | 3.6576E-03 (2001,008,0000) |
| 1590 | -228.045 | -421.598 | 9.6452E-03 (2001,360,0000) | 5.0567E-03 (2001,020,0000) | 4.7598E-03 (2001,362,0000) | 3.7041E-03 (2001,008,0000) |
| 1591 | -225.799 | -421.662 | 1.0043E-02 (2001,360,0000) | 5.5134E-03 (2001,020,0000) | 4.9378E-03 (2001,362,0000) | 3.7492E-03 (2001,008,0000) |
| 1592 | -223.553 | -421.725 | 1.0137E-02 (2001,360,0000) | 5.3549E-03 (2001,020,0000) | 5.1149E-03 (2001,362,0000) | 3.7929E-03 (2001,008,0000) |
| 1593 | -221.307 | -421.787 | 1.0199E-02 (2001,360,0000) | 5.2896E-03 (2001,362,0000) | 5.1702E-03 (2001,020,0000) | 3.8355E-03 (2001,008,0000) |
| 1594 | -219.061 | -421.849 | 1.0226E-02 (2001,360,0000) | 5.4610E-03 (2001,362,0000) | 4.9600E-03 (2001,020,0000) | 3.8762E-03 (2001,008,0000) |
| 1595 | -216.814 | -421.910 | 9.9891E-03 (2001,360,0000) | 5.6249E-03 (2001,362,0000) | 4.4934E-03 (2001,020,0000) | 3.9165E-03 (2001,008,0000) |
| 1596 | -214.568 | -421.971 | 9.8184E-03 (2001,360,0000) | 5.7858E-03 (2001,362,0000) | 4.1756E-03 (2001,020,0000) | 3.9550E-03 (2001,008,0000) |
| 1597 | -212.322 | -422.030 | 9.7168E-03 (2001,360,0000) | 5.9408E-03 (2001,362,0000) | 3.9916E-03 (2001,008,0000) | 3.9337E-03 (2001,020,0000) |
| 1598 | -210.076 | -422.090 | 9.6347E-03 (2001,360,0000) | 6.0875E-03 (2001,362,0000) | 4.0272E-03 (2001,008,0000) | 3.7687E-03 (2001,313,0000) |
| 1599 | -207.829 | -422.148 | 8.4475E-03 (2001,360,0000) | 6.2277E-03 (2001,362,0000) | 4.0602E-03 (2001,008,0000) | 3.6183E-03 (2001,313,0000) |
| 1600 | -205.583 | -422.206 | 8.3136E-03 (2001,360,0000) | 6.3608E-03 (2001,362,0000) | 4.0921E-03 (2001,008,0000) | 3.6869E-03 (2001,313,0000) |
| 1601 | -203.337 | -422.264 | 9.2986E-03 (2001,360,0000) | 6.4834E-03 (2001,362,0000) | 4.1224E-03 (2001,008,0000) | 3.9235E-03 (2001,313,0000) |
| 1602 | -326.742 | -415.392 | 6.7954E-03 (2001,017,0000) | 4.3249E-03 (2001,361,0000) | 4.1416E-03 (2001,040,0000) | 3.8337E-03 (2001,020,0000) |
| 1603 | -324.498 | -415.483 | 6.1123E-03 (2001,017,0000) | 4.3185E-03 (2001,361,0000) | 4.0257E-03 (2001,040,0000) | 3.6439E-03 (2001,020,0000) |
| 1604 | -322.253 | -415.574 | 5.4659E-03 (2001,017,0000) | 4.3089E-03 (2001,361,0000) | 3.8824E-03 (2001,040,0000) | 3.6785E-03 (2001,068,0000) |
| 1605 | -302.052 | -416.362 | 4.2848E-03 (2001,068,0000) | 4.1291E-03 (2001,020,0000) | 4.0872E-03 (2001,361,0000) | 2.8898E-03 (2001,360,0000) |
| 1606 | -268.380 | -417.562 | 5.8466E-03 (2001,360,0000) | 4.9832E-03 (2001,020,0000) | 3.3932E-03 (2001,332,0000) | 3.3907E-03 (2001,068,0000) |
| 1607 | -266.134 | -417.637 | 6.0286E-03 (2001,360,0000) | 4.2460E-03 (2001,020,0000) | 3.2582E-03 (2001,068,0000) | 3.0963E-03 (2001,361,0000) |
| 1608 | -263.889 | -417.712 | 6.1489E-03 (2001,360,0000) | 3.7804E-03 (2001,020,0000) | 3.1268E-03 (2001,068,0000) | 3.0434E-03 (2001,008,0000) |
| 1609 | -261.644 | -417.785 | 6.5513E-03 (2001,360,0000) | 4.4211E-03 (2001,020,0000) | 3.0960E-03 (2001,008,0000) | 3.0415E-03 (2001,068,0000) |
| 1610 | -259.399 | -417.858 | 6.8227E-03 (2001,360,0000) | 4.7521E-03 (2001,020,0000) | 3.1493E-03 (2001,008,0000) | 2.9327E-03 (2001,068,0000) |
| 1611 | -257.154 | -417.931 | 7.0590E-03 (2001,360,0000) | 4.5953E-03 (2001,020,0000) | 3.2029E-03 (2001,008,0000) | 2.8254E-03 (2001,068,0000) |
| 1612 | -254.909 | -418.003 | 7.0604E-03 (2001,360,0000) | 4.0557E-03 (2001,020,0000) | 3.2561E-03 (2001,008,0000) | 2.8206E-03 (2001,362,0000) |
| 1613 | -252.664 | -418.074 | 7.4575E-03 (2001,360,0000) | 4.4697E-03 (2001,020,0000) | 3.3103E-03 (2001,008,0000) | 2.9732E-03 (2001,362,0000) |
| 1614 | -250.419 | -418.144 | 7.7531E-03 (2001,360,0000) | 4.7289E-03 (2001,020,0000) | 3.3643E-03 (2001,008,0000) | 3.1317E-03 (2001,362,0000) |
| 1615 | -248.174 | -418.214 | 8.1481E-03 (2001,360,0000) | 5.4729E-03 (2001,020,0000) | 3.4177E-03 (2001,008,0000) | 3.2968E-03 (2001,362,0000) |
| 1616 | -245.928 | -418.284 | 8.3067E-03 (2001,360,0000) | 5.0491E-03 (2001,020,0000) | 3.4720E-03 (2001,008,0000) | 3.4672E-03 (2001,362,0000) |
| 1617 | -243.683 | -418.352 | 8.6285E-03 (2001,360,0000) | 5.5473E-03 (2001,020,0000) | 3.6425E-03 (2001,362,0000) | 3.5259E-03 (2001,008,0000) |
| 1618 | -241.438 | -418.420 | 8.8166E-03 (2001,360,0000) | 5.3789E-03 (2001,020,0000) | 3.8211E-03 (2001,362,0000) | 3.5779E-03 (2001,008,0000) |
| 1619 | -239.193 | -418.488 | 8.9791E-03 (2001,360,0000) | 5.1715E-03 (2001,020,0000) | 4.0022E-03 (2001,362,0000) | 3.6312E-03 (2001,008,0000) |
| 1620 | -236.947 | -418.555 | 9.3647E-03 (2001,360,0000) | 5.9472E-03 (2001,020,0000) | 4.1873E-03 (2001,362,0000) | 3.6835E-03 (2001,008,0000) |
| 1621 | -234.702 | -418.621 | 9.5683E-03 (2001,360,0000) | 5.9285E-03 (2001,020,0000) | 4.3756E-03 (2001,362,0000) | 3.7347E-03 (2001,008,0000) |
| 1622 | -232.457 | -418.686 | 9.7614E-03 (2001,360,0000) | 5.8850E-03 (2001,020,0000) | 4.5645E-03 (2001,362,0000) | 3.7854E-03 (2001,008,0000) |
| 1623 | -230.211 | -418.751 | 9.9318E-03 (2001,360,0000) | 5.8146E-03 (2001,020,0000) | 4.7549E-03 (2001,362,0000) | 3.8357E-03 (2001,008,0000) |
| 1624 | -227.966 | -418.815 | 1.0082E-02 (2001,360,0000) | 5.6805E-03 (2001,020,0000) | 4.9464E-03 (2001,362,0000) | 3.8840E-03 (2001,008,0000) |
| 1625 | -225.721 | -418.879 | 1.0210E-02 (2001,360,0000) | 5.5867E-03 (2001,020,0000) | 5.1341E-03 (2001,362,0000) | 3.9312E-03 (2001,008,0000) |
| 1626 | -223.475 | -418.942 | 1.0313E-02 (2001,360,0000) | 5.4311E-03 (2001,020,0000) | 5.3219E-03 (2001,362,0000) | 3.9779E-03 (2001,008,0000) |
| 1627 | -221.230 | -419.004 | 1.0378E-02 (2001,360,0000) | 5.5041E-03 (2001,362,0000) | 5.2487E-03 (2001,020,0000) | 4.0222E-03 (2001,008,0000) |
| 1628 | -218.984 | -419.066 | 1.0415E-02 (2001,360,0000) | 5.6844E-03 (2001,362,0000) | 5.0197E-03 (2001,020,0000) | 4.0657E-03 (2001,008,0000) |
| 1629 | -216.739 | -419.127 | 1.0213E-02 (2001,360,0000) | 5.8592E-03 (2001,362,0000) | 4.5686E-03 (2001,020,0000) | 4.1076E-03 (2001,008,0000) |
| 1630 | -214.494 | -419.188 | 1.0206E-02 (2001,360,0000) | 6.0279E-03 (2001,362,0000) | 4.3669E-03 (2001,020,0000) | 4.1489E-03 (2001,008,0000) |
| 1631 | -212.248 | -419.248 | 1.0058E-02 (2001,360,0000) | 6.1897E-03 (2001,362,0000) | 4.1873E-03 (2001,008,0000) | 4.0609E-03 (2001,020,0000) |
| 1632 | -210.003 | -419.307 | 9.8449E-03 (2001,360,0000) | 6.3455E-03 (2001,362,0000) | 4.2237E-03 (2001,008,0000) | 3.8258E-03 (2001,313,0000) |
| 1633 | -207.757 | -419.365 | 8.6243E-03 (2001,360,0000) | 6.4910E-03 (2001,362,0000) | 4.2592E-03 (2001,008,0000) | 3.6419E-03 (2001,313,0000) |
| 1634 | -205.512 | -419.423 | 9.5621E-03 (2001,360,0000) | 6.6300E-03 (2001,362,0000) | 4.2921E-03 (2001,008,0000) | 3.9410E-03 (2001,313,0000) |
| 1635 | -203.266 | -419.481 | 9.5326E-03 (2001,360,0000) | 6.7607E-03 (2001,362,0000) | 4.3228E-03 (2001,008,0000) | 3.9967E-03 (2001,313,0000) |
| 1636 | -328.872 | -412.519 | 7.8413E-03 (2001,017,0000) | 4.4839E-03 (2001,020,0000) | 4.4336E-03 (2001,361,0000) | 4.2761E-03 (2001,040,0000) |
| 1637 | -326.629 | -412.611 | 7.1008E-03 (2001,017,0000) | 4.4288E-03 (2001,361,0000) | 4.1668E-03 (2001,040,0000) | 4.0585E-03 (2001,020,0000) |
| 1638 | -324.385 | -412.702 | 6.3905E-03 (2001,017,0000) | 4.4206E-03 (2001,361,0000) | 4.0461E-03 (2001,040,0000) | 3.8056E-03 (2001,020,0000) |
| 1639 | -322.141 | -412.793 | 5.7160E-03 (2001,017,0000) | 4.4102E-03 (2001,361,0000) | 3.9169E-03 (2001,040,0000) | 3.7946E-03 (2001,020,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1640 | -319.898 | -412.883 | 5.0816E-03 (2001,017,0000) | 4.3975E-03 (2001,361,0000) | 3.8863E-03 (2001,020,0000) | 3.7800E-03 (2001,040,0000) |
| 1641 | -317.654 | -412.972 | 4.4857E-03 (2001,017,0000) | 4.3830E-03 (2001,361,0000) | 3.8493E-03 (2001,068,0000) | 3.4196E-03 (2001,040,0000) |
| 1642 | -301.947 | -413.580 | 4.2603E-03 (2001,068,0000) | 4.1738E-03 (2001,361,0000) | 3.5018E-03 (2001,020,0000) | 2.8490E-03 (2001,360,0000) |
| 1643 | -272.775 | -414.628 | 5.3226E-03 (2001,360,0000) | 3.9428E-03 (2001,020,0000) | 3.5876E-03 (2001,068,0000) | 3.3829E-03 (2001,361,0000) |
| 1644 | -270.530 | -414.705 | 5.5770E-03 (2001,360,0000) | 4.0853E-03 (2001,020,0000) | 3.4853E-03 (2001,068,0000) | 3.3062E-03 (2001,361,0000) |
| 1645 | -268.286 | -414.780 | 5.8074E-03 (2001,360,0000) | 4.0669E-03 (2001,020,0000) | 3.3732E-03 (2001,068,0000) | 3.2274E-03 (2001,361,0000) |
| 1646 | -266.042 | -414.855 | 5.9510E-03 (2001,360,0000) | 3.6810E-03 (2001,020,0000) | 3.2351E-03 (2001,068,0000) | 3.1485E-03 (2001,361,0000) |
| 1647 | -263.798 | -414.929 | 6.3195E-03 (2001,360,0000) | 4.3649E-03 (2001,020,0000) | 3.1790E-03 (2001,008,0000) | 3.1527E-03 (2001,068,0000) |
| 1648 | -261.553 | -415.003 | 6.4584E-03 (2001,360,0000) | 3.8759E-03 (2001,020,0000) | 3.2351E-03 (2001,008,0000) | 3.0118E-03 (2001,068,0000) |
| 1649 | -259.309 | -415.076 | 6.8255E-03 (2001,360,0000) | 4.3579E-03 (2001,020,0000) | 3.2915E-03 (2001,008,0000) | 2.9313E-03 (2001,068,0000) |
| 1650 | -257.065 | -415.149 | 7.0000E-03 (2001,360,0000) | 4.1405E-03 (2001,020,0000) | 3.3482E-03 (2001,008,0000) | 2.8158E-03 (2001,361,0000) |
| 1651 | -254.820 | -415.220 | 7.0828E-03 (2001,360,0000) | 3.8486E-03 (2001,020,0000) | 3.4053E-03 (2001,008,0000) | 2.8948E-03 (2001,362,0000) |
| 1652 | -252.576 | -415.292 | 7.5015E-03 (2001,360,0000) | 4.3199E-03 (2001,020,0000) | 3.4623E-03 (2001,008,0000) | 3.0549E-03 (2001,362,0000) |
| 1653 | -250.332 | -415.362 | 7.9381E-03 (2001,360,0000) | 5.3095E-03 (2001,020,0000) | 3.5198E-03 (2001,008,0000) | 3.2214E-03 (2001,362,0000) |
| 1654 | -248.087 | -415.432 | 8.1757E-03 (2001,360,0000) | 5.2464E-03 (2001,020,0000) | 3.5771E-03 (2001,008,0000) | 3.3962E-03 (2001,362,0000) |
| 1655 | -245.843 | -415.501 | 8.4880E-03 (2001,360,0000) | 5.8145E-03 (2001,020,0000) | 3.6344E-03 (2001,008,0000) | 3.5756E-03 (2001,362,0000) |
| 1656 | -243.598 | -415.570 | 8.7445E-03 (2001,360,0000) | 5.8729E-03 (2001,020,0000) | 3.7610E-03 (2001,362,0000) | 3.6910E-03 (2001,008,0000) |
| 1657 | -241.354 | -415.638 | 8.9958E-03 (2001,360,0000) | 5.8013E-03 (2001,020,0000) | 3.9491E-03 (2001,362,0000) | 3.7477E-03 (2001,008,0000) |
| 1658 | -239.109 | -415.705 | 9.1196E-03 (2001,360,0000) | 5.3001E-03 (2001,020,0000) | 4.1438E-03 (2001,362,0000) | 3.8039E-03 (2001,008,0000) |
| 1659 | -236.865 | -415.772 | 9.4706E-03 (2001,360,0000) | 5.9650E-03 (2001,020,0000) | 4.3376E-03 (2001,362,0000) | 3.8589E-03 (2001,008,0000) |
| 1660 | -234.620 | -415.838 | 9.6865E-03 (2001,360,0000) | 5.9570E-03 (2001,020,0000) | 4.5351E-03 (2001,362,0000) | 3.9142E-03 (2001,008,0000) |
| 1661 | -232.376 | -415.904 | 9.8888E-03 (2001,360,0000) | 5.9242E-03 (2001,020,0000) | 4.7356E-03 (2001,362,0000) | 3.9680E-03 (2001,008,0000) |
| 1662 | -230.131 | -415.969 | 1.0070E-02 (2001,360,0000) | 5.8605E-03 (2001,020,0000) | 4.9338E-03 (2001,362,0000) | 4.0204E-03 (2001,008,0000) |
| 1663 | -227.887 | -416.033 | 1.0230E-02 (2001,360,0000) | 5.7685E-03 (2001,020,0000) | 5.1336E-03 (2001,362,0000) | 4.0731E-03 (2001,008,0000) |
| 1664 | -225.642 | -416.096 | 1.0370E-02 (2001,360,0000) | 5.6468E-03 (2001,020,0000) | 5.3338E-03 (2001,362,0000) | 4.1227E-03 (2001,008,0000) |
| 1665 | -223.398 | -416.159 | 1.0478E-02 (2001,360,0000) | 5.5294E-03 (2001,362,0000) | 5.4917E-03 (2001,020,0000) | 4.1714E-03 (2001,008,0000) |
| 1666 | -221.153 | -416.222 | 1.0555E-02 (2001,360,0000) | 5.7226E-03 (2001,362,0000) | 5.2581E-03 (2001,020,0000) | 4.2180E-03 (2001,008,0000) |
| 1667 | -218.908 | -416.284 | 1.0337E-02 (2001,360,0000) | 5.9132E-03 (2001,362,0000) | 4.7282E-03 (2001,020,0000) | 4.2650E-03 (2001,008,0000) |
| 1668 | -216.664 | -416.345 | 1.0471E-02 (2001,360,0000) | 6.0952E-03 (2001,362,0000) | 4.6717E-03 (2001,020,0000) | 4.3091E-03 (2001,008,0000) |
| 1669 | -214.419 | -416.405 | 1.0131E-02 (2001,360,0000) | 6.2751E-03 (2001,362,0000) | 4.3512E-03 (2001,008,0000) | 4.2014E-03 (2001,020,0000) |
| 1670 | -212.174 | -416.465 | 1.0061E-02 (2001,360,0000) | 6.4467E-03 (2001,362,0000) | 4.3923E-03 (2001,008,0000) | 3.9785E-03 (2001,020,0000) |
| 1671 | -209.930 | -416.524 | 9.9047E-03 (2001,360,0000) | 6.6102E-03 (2001,362,0000) | 4.4309E-03 (2001,008,0000) | 3.8676E-03 (2001,313,0000) |
| 1672 | -207.685 | -416.583 | 1.0156E-02 (2001,360,0000) | 6.7671E-03 (2001,362,0000) | 4.4667E-03 (2001,008,0000) | 3.9555E-03 (2001,313,0000) |
| 1673 | -328.758 | -409.737 | 8.1971E-03 (2001,017,0000) | 4.8499E-03 (2001,020,0000) | 4.5405E-03 (2001,361,0000) | 4.2973E-03 (2001,040,0000) |
| 1674 | -326.515 | -409.829 | 7.4293E-03 (2001,017,0000) | 4.5380E-03 (2001,020,0000) | 4.5337E-03 (2001,361,0000) | 4.1869E-03 (2001,040,0000) |
| 1675 | -324.272 | -409.921 | 6.6891E-03 (2001,017,0000) | 4.5260E-03 (2001,361,0000) | 4.0559E-03 (2001,040,0000) | 3.6887E-03 (2001,020,0000) |
| 1676 | -322.029 | -410.011 | 5.9850E-03 (2001,017,0000) | 4.5146E-03 (2001,361,0000) | 3.9213E-03 (2001,040,0000) | 3.6665E-03 (2001,020,0000) |
| 1677 | -319.786 | -410.101 | 5.3227E-03 (2001,017,0000) | 4.4996E-03 (2001,361,0000) | 3.8011E-03 (2001,020,0000) | 3.7808E-03 (2001,040,0000) |
| 1678 | -317.543 | -410.191 | 4.7036E-03 (2001,017,0000) | 4.4829E-03 (2001,361,0000) | 3.8331E-03 (2001,068,0000) | 3.8179E-03 (2001,020,0000) |
| 1679 | -315.300 | -410.279 | 4.4631E-03 (2001,361,0000) | 4.1289E-03 (2001,017,0000) | 3.9164E-03 (2001,068,0000) | 3.4352E-03 (2001,040,0000) |
| 1680 | -313.057 | -410.367 | 4.4387E-03 (2001,361,0000) | 4.0063E-03 (2001,020,0000) | 4.0025E-03 (2001,068,0000) | 3.6096E-03 (2001,017,0000) |
| 1681 | -310.814 | -410.455 | 4.4108E-03 (2001,361,0000) | 4.0734E-03 (2001,068,0000) | 3.7181E-03 (2001,020,0000) | 3.1456E-03 (2001,040,0000) |
| 1682 | -308.571 | -410.542 | 4.3781E-03 (2001,361,0000) | 4.1361E-03 (2001,068,0000) | 3.7383E-03 (2001,020,0000) | 2.9802E-03 (2001,040,0000) |
| 1683 | -301.842 | -410.799 | 4.2632E-03 (2001,361,0000) | 4.2576E-03 (2001,068,0000) | 3.6580E-03 (2001,020,0000) | 2.8556E-03 (2001,019,0000) |
| 1684 | -299.599 | -410.883 | 4.2735E-03 (2001,068,0000) | 4.2176E-03 (2001,361,0000) | 3.7925E-03 (2001,020,0000) | 2.9772E-03 (2001,360,0000) |
| 1685 | -297.356 | -410.967 | 4.2796E-03 (2001,068,0000) | 4.1685E-03 (2001,361,0000) | 3.8869E-03 (2001,020,0000) | 3.1382E-03 (2001,360,0000) |
| 1686 | -295.113 | -411.050 | 4.5483E-03 (2001,020,0000) | 4.2715E-03 (2001,068,0000) | 4.1159E-03 (2001,361,0000) | 3.3970E-03 (2001,019,0000) |
| 1687 | -272.680 | -411.846 | 5.2862E-03 (2001,360,0000) | 3.6137E-03 (2001,020,0000) | 3.5650E-03 (2001,068,0000) | 3.4466E-03 (2001,361,0000) |
| 1688 | -270.436 | -411.922 | 5.5710E-03 (2001,360,0000) | 3.9668E-03 (2001,020,0000) | 3.4815E-03 (2001,068,0000) | 3.3662E-03 (2001,361,0000) |
| 1689 | -268.193 | -411.998 | 5.8153E-03 (2001,360,0000) | 3.9997E-03 (2001,020,0000) | 3.3699E-03 (2001,068,0000) | 3.2853E-03 (2001,361,0000) |
| 1690 | -265.949 | -412.073 | 6.0070E-03 (2001,360,0000) | 3.7173E-03 (2001,020,0000) | 3.2604E-03 (2001,008,0000) | 3.2458E-03 (2001,068,0000) |
| 1691 | -263.706 | -412.147 | 6.3293E-03 (2001,360,0000) | 4.2655E-03 (2001,020,0000) | 3.3196E-03 (2001,008,0000) | 3.1447E-03 (2001,068,0000) |
| 1692 | -261.462 | -412.221 | 6.5029E-03 (2001,360,0000) | 3.7905E-03 (2001,020,0000) | 3.3788E-03 (2001,008,0000) | 3.0332E-03 (2001,361,0000) |
| 1693 | -259.219 | -412.294 | 6.7524E-03 (2001,360,0000) | 3.8279E-03 (2001,020,0000) | 3.4385E-03 (2001,008,0000) | 2.9465E-03 (2001,361,0000) |
| 1694 | -256.975 | -412.366 | 7.0942E-03 (2001,360,0000) | 4.1984E-03 (2001,020,0000) | 3.4989E-03 (2001,008,0000) | 2.8576E-03 (2001,361,0000) |
| 1695 | -254.732 | -412.438 | 7.1652E-03 (2001,360,0000) | 3.8612E-03 (2001,020,0000) | 3.5589E-03 (2001,008,0000) | 2.9680E-03 (2001,362,0000) |
| 1696 | -252.488 | -412.509 | 7.5164E-03 (2001,360,0000) | 4.0972E-03 (2001,020,0000) | 3.6199E-03 (2001,008,0000) | 3.1353E-03 (2001,362,0000) |
| 1697 | -250.245 | -412.580 | 7.9410E-03 (2001,360,0000) | 4.8948E-03 (2001,020,0000) | 3.6807E-03 (2001,008,0000) | 3.3135E-03 (2001,362,0000) |
| 1698 | -248.001 | -412.650 | 8.2433E-03 (2001,360,0000) | 5.2597E-03 (2001,020,0000) | 3.7416E-03 (2001,008,0000) | 3.4987E-03 (2001,362,0000) |
| 1699 | -245.757 | -412.719 | 8.5485E-03 (2001,360,0000) | 5.7723E-03 (2001,020,0000) | 3.8024E-03 (2001,008,0000) | 3.6852E-03 (2001,362,0000) |
| 1700 | -243.514 | -412.788 | 8.8143E-03 (2001,360,0000) | 5.8417E-03 (2001,020,0000) | 3.8803E-03 (2001,362,0000) | 3.8634E-03 (2001,008,0000) |
| 1701 | -241.270 | -412.856 | 9.0781E-03 (2001,360,0000) | 5.8994E-03 (2001,020,0000) | 4.0787E-03 (2001,362,0000) | 3.9235E-03 (2001,008,0000) |
| 1702 | -239.026 | -412.923 | 9.3316E-03 (2001,360,0000) | 5.9418E-03 (2001,020,0000) | 4.2813E-03 (2001,362,0000) | 3.9833E-03 (2001,008,0000) |
| 1703 | -236.783 | -412.990 | 9.5707E-03 (2001,360,0000) | 5.9675E-03 (2001,020,0000) | 4.4878E-03 (2001,362,0000) | 4.0428E-03 (2001,008,0000) |
| 1704 | -234.539 | -413.056 | 9.7987E-03 (2001,360,0000) | 5.9685E-03 (2001,020,0000) | 4.6965E-03 (2001,362,0000) | 4.1006E-03 (2001,008,0000) |
| 1705 | -232.295 | -413.121 | 1.0011E-02 (2001,360,0000) | 5.9446E-03 (2001,020,0000) | 4.9043E-03 (2001,362,0000) | 4.1581E-03 (2001,008,0000) |
| 1706 | -230.051 | -413.186 | 1.0204E-02 (2001,360,0000) | 5.8896E-03 (2001,020,0000) | 5.1168E-03 (2001,362,0000) | 4.2146E-03 (2001,008,0000) |
| 1707 | -227.808 | -413.250 | 1.0376E-02 (2001,360,0000) | 5.8047E-03 (2001,020,0000) | 5.3282E-03 (2001,362,0000) | 4.2690E-03 (2001,008,0000) |
| 1708 | -225.564 | -413.314 | 1.0523E-02 (2001,360,0000) | 5.6876E-03 (2001,020,0000) | 5.5375E-03 (2001,362,0000) | 4.3225E-03 (2001,008,0000) |
| 1709 | -223.320 | -413.377 | 1.0635E-02 (2001,360,0000) | 5.7466E-03 (2001,362,0000) | 5.5102E-03 (2001,020,0000) | 4.3747E-03 (2001,008,0000) |
| 1710 | -221.076 | -413.439 | 1.0613E-02 (2001,360,0000) | 5.9514E-03 (2001,362,0000) | 5.1190E-03 (2001,020,0000) | 4.4248E-03 (2001,008,0000) |
| 1711 | -218.832 | -413.501 | 1.0420E-02 (2001,360,0000) | 6.1509E-03 (2001,362,0000) | 4.6153E-03 (2001,020,0000) | 4.4722E-03 (2001,008,0000) |
| 1712 | -216.588 | -413.562 | 1.0218E-02 (2001,360,0000) | 6.3465E-03 (2001,362,0000) | 4.5202E-03 (2001,008,0000) | 4.3984E-03 (2001,020,0000) |
| 1713 | -214.344 | -413.622 | 1.0387E-02 (2001,360,0000) | 6.5352E-03 (2001,362,0000) | 4.5651E-03 (2001,008,0000) | 4.2167E-03 (2001,020,0000) |
| 1714 | -212.101 | -413.682 | 1.0397E-02 (2001,360,0000) | 6.7153E-03 (2001,362,0000) | 4.6071E-03 (2001,008,0000) | 4.0511E-03 (2001,020,0000) |
| 1715 | -209.857 | -413.741 | 1.0048E-02 (2001,360,0000) | 6.8901E-03 (2001,362,0000) | 4.6468E-03 (2001,008,0000) | 3.9059E-03 (2001,313,0000) |
| 1716 | -207.613 | -413.800 | 1.0116E-02 (2001,360,0000) | 7.0524E-03 (2001,362,0000) | 4.6849E-03 (2001,008,0000) | 3.9849E-03 (2001,313,0000) |
| 1717 | -328.643 | -406.956 | 8.5787E-03 (2001,017,0000) | 5.0245E-03 (2001,020,0000) | 4.6489E-03 (2001,361,0000) | 4.3118E-03 (2001,040,0000) |
| 1718 | -326.401 | -407.048 | 7.7815E-03 (2001,017,0000) | 4.6427E-03 (2001,361,0000) | 4.5545E-03 (2001,020,0000) | 4.1972E-03 (2001,040,0000) |
| 1719 | -324.159 | -407.139 | 7.0101E-03 (2001,017,0000) | 4.6326E-03 (2001,361,0000) | 4.0628E-03 (2001,040,0000) | 3.6010E-03 (2001,020,0000) |
| 1720 | -321.917 | -407.230 | 6.2753E-03 (2001,017,0000) | 4.6206E-03 (2001,361,0000) | 3.9250E-03 (2001,040,0000) | 3.6100E-03 (2001,068,0000) |
| 1721 | -319.675 | -407.320 | 5.5830E-03 (2001,017,0000) | 4.6063E-03 (2001,361,0000) | 3.7817E-03 (2001,040,0000) | 3.7318E-03 (2001,020,0000) |
| 1722 | -317.433 | -407.409 | 4.9356E-03 (2001,017,0000) | 4.6472E-03 (2001,020,0000) | 4.5861E-03 (2001,361,0000) | 3.8190E-03 (2001,068,0000) |
| 1723 | -315.191 | -407.498 | 4.5643E-03 (2001,361,0000) | 4.3329E-03 (2001,017,0000) | 3.8947E-03 (2001,068,0000) | 3.6498E-03 (2001,020,0000) |
| 1724 | -312.949 | -407.586 | 4.7234E-03 (2001,020,0000) | 4.5388E-03 (2001,361,0000) | 3.9951E-03 (2001,068,0000) | 3.7848E-03 (2001,017,0000) |
| 1725 | -310.706 | -407.673 | 4.5104E-03 (2001,361,0000) | 4.0510E-03 (2001,068,0000) | 3.8254E-03 (2001,020,0000) | 3.2831E-03 (2001,017,0000) |
| 1726 | -308.464 | -407.760 | 4.4776E-03 (2001,361,0000) | 4.1155E-03 (2001,068,0000) | 3.6064E-03 (2001,020,0000) | 2.9630E-03 (2001,040,0000) |
| 1727 | -306.222 | -407.847 | 4.4394E-03 (2001,361,0000) | 4.1668E-03 (2001,068,0000) | 3.5333E-03 (2001,020,0000) | 2.9248E-03 (2001,019,0000) |
| 1728 | -303.980 | -407.932 | 4.3995E-03 (2001,361,0000) | 4.2089E-03 (2001,068,0000) | 3.4708E-03 (2001,020,0000) | 2.9227E-03 (2001,019,0000) |
| 1729 | -301.737 | -408.017 | 4.3561E-03 (2001,361,0000) | 4.2290E-03 (2001,068,0000) | 2.7675E-03 (2001,360,0000) | 2.7495E-03 (2001,020,0000) |
| 1730 | -299.495 | -408.101 | 4.3098E-03 (2001,361,0000) | 4.2448E-03 (2001,068,0000) | 2.9218E-03 (2001,360,0000) | 2.7332E-03 (2001,020,0000) |
| 1731 | -297.253 | -408.185 | 4.2578E-03 (2001,361,0000) | 4.2507E-03 (2001,068,0000) | 3.4441E-03 (2001,020,0000) | 3.0888E-03 (2001,360,0000) |
| 1732 | -295.010 | -408.268 | 4.2403E-03 (2001,068,0000) | 4.2044E-03 (2001,361,0000) | 3.2535E-03 (2001,360,0000) | 3.1904E-03 (2001,020,0000) |
| 1733 | -292.768 | -408.351 | 4.2334E-03 (2001,068,0000) | 4.1481E-03 (2001,361,0000) | 3.6395E-03 (2001,020,0000) | 3.4432E-03 (2001,360,0000) |
| 1734 | -286.040 | -408.594 | 4.1673E-03 (2001,020,0000) | 4.0982E-03 (2001,068,0000) | 4.0117E-03 (2001,360,0000) | 3.9633E-03 (2001,361,0000) |
| 1735 | -281.555 | -408.753 | 4.4232E-03 (2001,360,0000) | 4.2547E-03 (2001,020,0000) | 3.9724E-03 (2001,068,0000) | 3.8232E-03 (2001,361,0000) |
| 1736 | -279.313 | -408.832 | 4.6401E-03 (2001,360,0000) | 4.3804E-03 (2001,020,0000) | 3.9001E-03 (2001,068,0000) | 3.7504E-03 (2001,361,0000) |
| 1737 | -274.828 | -408.988 | 5.0972E-03 (2001,360,0000) | 4.6372E-03 (2001,020,0000) | 3.7156E-03 (2001,068,0000) | 3.5957E-03 (2001,361,0000) |
| 1738 | -272.585 | -409.064 | 5.3089E-03 (2001,360,0000) | 3.6340E-03 (2001,020,0000) | 3.5669E-03 (2001,068,0000) | 3.5147E-03 (2001,361,0000) |
| 1739 | -270.342 | -409.141 | 5.4662E-03 (2001,360,0000) | 3.4306E-03 (2001,361,0000) | 3.4262E-03 (2001,068,0000) | 3.2783E-03 (2001,008,0000) |
| 1740 | -268.100 | -409.216 | 5.8104E-03 (2001,360,0000) | 3.7605E-03 (2001,020,0000) | 3.3584E-03 (2001,068,0000) | 3.3462E-03 (2001,361,0000) |
| 1741 | -265.857 | -409.291 | 6.0715E-03 (2001,360,0000) | 4.0458E-03 (2001,020,0000) | 3.4015E-03 (2001,008,0000) | 3.2599E-03 (2001,361,0000) |
| 1742 | -263.614 | -409.365 | 6.3643E-03 (2001,360,0000) | 4.9433E-03 (2001,020,0000) | 3.4638E-03 (2001,008,0000) | 3.3472E-03 (2001,332,0000) |
| 1743 | -261.372 | -409.439 | 6.6367E-03 (2001,360,0000) | 5.0960E-03 (2001,020,0000) | 3.5264E-03 (2001,008,0000) | 3.2784E-03 (2001,332,0000) |
| 1744 | -259.129 | -409.512 | 6.8772E-03 (2001,360,0000) | 4.3381E-03 (2001,020,0000) | 3.5902E-03 (2001,008,0000) | 2.9932E-03 (2001,361,0000) |
| 1745 | -256.886 | -409.584 | 7.1739E-03 (2001,360,0000) | 4.7707E-03 (2001,020,0000) | 3.6540E-03 (2001,008,0000) | 2.9724E-03 (2001,332,0000) |
| 1746 | -254.643 | -409.656 | 7.3608E-03 (2001,360,0000) | 4.0943E-03 (2001,020,0000) | 3.7179E-03 (2001,008,0000) | 3.0433E-03 (2001,362,0000) |
| 1747 | -252.400 | -409.727 | 7.6166E-03 (2001,360,0000) | 4.1881E-03 (2001,020,0000) | 3.7829E-03 (2001,008,0000) | 3.2203E-03 (2001,362,0000) |
| 1748 | -250.158 | -409.798 | 7.9165E-03 (2001,360,0000) | 4.3257E-03 (2001,020,0000) | 3.8477E-03 (2001,008,0000) | 3.4052E-03 (2001,362,0000) |
| 1749 | -247.915 | -409.867 | 8.2220E-03 (2001,360,0000) | 4.5553E-03 (2001,020,0000) | 3.9123E-03 (2001,008,0000) | 3.5957E-03 (2001,362,0000) |
| 1750 | -245.672 | -409.937 | 8.6065E-03 (2001,360,0000) | 5.7183E-03 (2001,020,0000) | 3.9772E-03 (2001,008,0000) | 3.7966E-03 (2001,362,0000) |
| 1751 | -243.429 | -410.005 | 8.8834E-03 (2001,360,0000) | 5.7946E-03 (2001,020,0000) | 4.0424E-03 (2001,008,0000) | 4.0001E-03 (2001,362,0000) |
| 1752 | -241.186 | -410.073 | 9.1558E-03 (2001,360,0000) | 5.8625E-03 (2001,020,0000) | 4.2079E-03 (2001,362,0000) | 4.1065E-03 (2001,008,0000) |
| 1753 | -238.943 | -410.141 | 9.4151E-03 (2001,360,0000) | 5.9155E-03 (2001,020,0000) | 4.4235E-03 (2001,362,0000) | 4.1704E-03 (2001,008,0000) |

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|---|---|---|---|---|---|---|
| 1754 | -236.700 | -410.207 | 9.6666E-03 (2001,360,0000) | 5.9518E-03 (2001,020,0000) | 4.6378E-03 (2001,362,0000) | 4.2328E-03 (2001,008,0000) |
| 1755 | -234.457 | -410.273 | 9.9066E-03 (2001,360,0000) | 5.9649E-03 (2001,020,0000) | 4.8564E-03 (2001,362,0000) | 4.2953E-03 (2001,008,0000) |
| 1756 | -232.214 | -410.339 | 1.0127E-02 (2001,360,0000) | 5.9479E-03 (2001,020,0000) | 5.0786E-03 (2001,362,0000) | 4.3562E-03 (2001,008,0000) |
| 1757 | -229.971 | -410.404 | 1.0330E-02 (2001,360,0000) | 5.9028E-03 (2001,020,0000) | 5.2982E-03 (2001,362,0000) | 4.4161E-03 (2001,008,0000) |
| 1758 | -227.728 | -410.468 | 1.0514E-02 (2001,360,0000) | 5.8243E-03 (2001,020,0000) | 5.5216E-03 (2001,362,0000) | 4.4751E-03 (2001,008,0000) |
| 1759 | -225.485 | -410.531 | 1.0666E-02 (2001,360,0000) | 5.7466E-03 (2001,362,0000) | 5.7115E-03 (2001,020,0000) | 4.5309E-03 (2001,008,0000) |
| 1760 | -223.242 | -410.594 | 1.0790E-02 (2001,360,0000) | 5.9680E-03 (2001,362,0000) | 5.5671E-03 (2001,020,0000) | 4.5862E-03 (2001,008,0000) |
| 1761 | -220.999 | -410.657 | 1.0677E-02 (2001,360,0000) | 6.1832E-03 (2001,362,0000) | 4.9512E-03 (2001,020,0000) | 4.6401E-03 (2001,008,0000) |
| 1762 | -218.756 | -410.718 | 1.0615E-02 (2001,360,0000) | 6.3947E-03 (2001,362,0000) | 4.6916E-03 (2001,008,0000) | 4.6214E-03 (2001,020,0000) |
| 1763 | -216.513 | -410.779 | 1.0534E-02 (2001,360,0000) | 6.6014E-03 (2001,362,0000) | 4.7403E-03 (2001,008,0000) | 4.3916E-03 (2001,020,0000) |
| 1764 | -214.270 | -410.840 | 1.0235E-02 (2001,360,0000) | 6.7996E-03 (2001,362,0000) | 4.7875E-03 (2001,008,0000) | 4.0708E-03 (2001,020,0000) |
| 1765 | -212.027 | -410.900 | 1.0195E-02 (2001,360,0000) | 6.9900E-03 (2001,362,0000) | 4.8323E-03 (2001,008,0000) | 3.8763E-03 (2001,020,0000) |
| 1766 | -209.784 | -410.959 | 1.0683E-02 (2001,360,0000) | 7.1721E-03 (2001,362,0000) | 4.8733E-03 (2001,008,0000) | 3.9682E-03 (2001,313,0000) |
| 1767 | -328.529 | -404.175 | 8.9869E-03 (2001,017,0000) | 4.7593E-03 (2001,361,0000) | 4.5273E-03 (2001,020,0000) | 4.3220E-03 (2001,040,0000) |
| 1768 | -326.288 | -404.267 | 8.1605E-03 (2001,017,0000) | 4.7524E-03 (2001,361,0000) | 4.2577E-03 (2001,020,0000) | 4.2059E-03 (2001,040,0000) |
| 1769 | -324.047 | -404.358 | 7.3579E-03 (2001,017,0000) | 4.7425E-03 (2001,361,0000) | 4.0712E-03 (2001,040,0000) | 3.7071E-03 (2001,020,0000) |
| 1770 | -317.323 | -404.628 | 5.1864E-03 (2001,017,0000) | 4.6929E-03 (2001,361,0000) | 4.4657E-03 (2001,020,0000) | 3.7778E-03 (2001,068,0000) |
| 1771 | -315.081 | -404.717 | 4.6691E-03 (2001,361,0000) | 4.5546E-03 (2001,017,0000) | 4.5444E-03 (2001,020,0000) | 3.8727E-03 (2001,068,0000) |
| 1772 | -312.840 | -404.805 | 4.6424E-03 (2001,361,0000) | 4.5532E-03 (2001,020,0000) | 3.9753E-03 (2001,017,0000) | 3.9560E-03 (2001,068,0000) |
| 1773 | -310.598 | -404.892 | 4.6115E-03 (2001,361,0000) | 4.0199E-03 (2001,068,0000) | 3.8312E-03 (2001,020,0000) | 3.4463E-03 (2001,017,0000) |
| 1774 | -308.357 | -404.979 | 4.5772E-03 (2001,361,0000) | 4.0854E-03 (2001,068,0000) | 3.5384E-03 (2001,020,0000) | 3.0890E-03 (2001,019,0000) |
| 1775 | -306.115 | -405.065 | 4.5396E-03 (2001,361,0000) | 4.1403E-03 (2001,068,0000) | 3.7408E-03 (2001,020,0000) | 3.2793E-03 (2001,019,0000) |
| 1776 | -303.874 | -405.151 | 4.4973E-03 (2001,361,0000) | 4.1726E-03 (2001,068,0000) | 2.9280E-03 (2001,020,0000) | 2.8268E-03 (2001,019,0000) |
| 1777 | -301.632 | -405.236 | 4.4518E-03 (2001,361,0000) | 4.2022E-03 (2001,068,0000) | 3.2206E-03 (2001,020,0000) | 2.9464E-03 (2001,019,0000) |
| 1778 | -299.391 | -405.320 | 4.4040E-03 (2001,361,0000) | 4.3181E-03 (2001,020,0000) | 4.2340E-03 (2001,068,0000) | 3.6230E-03 (2001,019,0000) |
| 1779 | -297.149 | -405.404 | 4.3523E-03 (2001,361,0000) | 4.2382E-03 (2001,068,0000) | 3.4770E-03 (2001,020,0000) | 3.1621E-03 (2001,019,0000) |
| 1780 | -294.907 | -405.487 | 4.2977E-03 (2001,361,0000) | 4.2132E-03 (2001,068,0000) | 3.2090E-03 (2001,360,0000) | 2.7631E-03 (2001,008,0000) |
| 1781 | -292.666 | -405.569 | 4.2401E-03 (2001,361,0000) | 4.1915E-03 (2001,068,0000) | 3.3863E-03 (2001,360,0000) | 2.8247E-03 (2001,020,0000) |
| 1782 | -290.424 | -405.651 | 4.1791E-03 (2001,361,0000) | 4.1713E-03 (2001,068,0000) | 3.5762E-03 (2001,360,0000) | 3.2670E-03 (2001,020,0000) |
| 1783 | -288.182 | -405.732 | 4.1321E-03 (2001,068,0000) | 4.1158E-03 (2001,361,0000) | 3.7787E-03 (2001,360,0000) | 3.4701E-03 (2001,020,0000) |
| 1784 | -285.941 | -405.812 | 4.0536E-03 (2001,068,0000) | 4.0494E-03 (2001,361,0000) | 3.9573E-03 (2001,360,0000) | 3.2259E-03 (2001,020,0000) |
| 1785 | -283.699 | -405.892 | 4.1713E-03 (2001,360,0000) | 4.0004E-03 (2001,068,0000) | 3.9792E-03 (2001,361,0000) | 3.3976E-03 (2001,020,0000) |
| 1786 | -281.457 | -405.972 | 4.3657E-03 (2001,360,0000) | 3.9041E-03 (2001,361,0000) | 3.9037E-03 (2001,068,0000) | 3.1412E-03 (2001,020,0000) |
| 1787 | -279.216 | -406.050 | 4.6143E-03 (2001,360,0000) | 4.1638E-03 (2001,020,0000) | 3.8424E-03 (2001,068,0000) | 3.8294E-03 (2001,361,0000) |
| 1788 | -274.732 | -406.206 | 5.0768E-03 (2001,360,0000) | 4.4537E-03 (2001,020,0000) | 3.6781E-03 (2001,068,0000) | 3.6701E-03 (2001,361,0000) |
| 1789 | -272.490 | -406.282 | 5.2791E-03 (2001,360,0000) | 3.5853E-03 (2001,361,0000) | 3.5272E-03 (2001,068,0000) | 3.3518E-03 (2001,008,0000) |
| 1790 | -270.248 | -406.359 | 5.5526E-03 (2001,360,0000) | 3.7241E-03 (2001,020,0000) | 3.4992E-03 (2001,361,0000) | 3.4459E-03 (2001,068,0000) |
| 1791 | -268.006 | -406.434 | 5.7136E-03 (2001,360,0000) | 3.4805E-03 (2001,008,0000) | 3.4107E-03 (2001,361,0000) | 3.2842E-03 (2001,068,0000) |
| 1792 | -265.764 | -406.509 | 6.0668E-03 (2001,360,0000) | 3.8148E-03 (2001,020,0000) | 3.5461E-03 (2001,008,0000) | 3.3209E-03 (2001,361,0000) |
| 1793 | -263.523 | -406.583 | 6.3347E-03 (2001,360,0000) | 3.8833E-03 (2001,020,0000) | 3.6117E-03 (2001,008,0000) | 3.2296E-03 (2001,361,0000) |
| 1794 | -261.281 | -406.657 | 6.6266E-03 (2001,360,0000) | 4.4781E-03 (2001,020,0000) | 3.6788E-03 (2001,008,0000) | 3.1377E-03 (2001,361,0000) |
| 1795 | -259.039 | -406.730 | 6.9256E-03 (2001,360,0000) | 5.1872E-03 (2001,020,0000) | 3.7455E-03 (2001,008,0000) | 3.1628E-03 (2001,332,0000) |
| 1796 | -256.797 | -406.802 | 7.2128E-03 (2001,360,0000) | 5.0913E-03 (2001,020,0000) | 3.8140E-03 (2001,008,0000) | 3.0575E-03 (2001,332,0000) |
| 1797 | -254.555 | -406.874 | 7.4427E-03 (2001,360,0000) | 4.2306E-03 (2001,020,0000) | 3.8823E-03 (2001,008,0000) | 3.1165E-03 (2001,362,0000) |
| 1798 | -252.313 | -406.945 | 7.7915E-03 (2001,360,0000) | 5.2571E-03 (2001,020,0000) | 3.9508E-03 (2001,008,0000) | 3.3029E-03 (2001,362,0000) |
| 1799 | -250.071 | -407.015 | 8.0753E-03 (2001,360,0000) | 5.2137E-03 (2001,020,0000) | 4.0199E-03 (2001,008,0000) | 3.4967E-03 (2001,362,0000) |
| 1800 | -247.828 | -407.085 | 8.3712E-03 (2001,360,0000) | 5.4337E-03 (2001,020,0000) | 4.0889E-03 (2001,008,0000) | 3.6955E-03 (2001,362,0000) |
| 1801 | -245.586 | -407.154 | 8.6598E-03 (2001,360,0000) | 5.4689E-03 (2001,020,0000) | 4.1575E-03 (2001,008,0000) | 3.9056E-03 (2001,362,0000) |
| 1802 | -243.344 | -407.223 | 8.9486E-03 (2001,360,0000) | 5.7358E-03 (2001,020,0000) | 4.2272E-03 (2001,008,0000) | 4.1182E-03 (2001,362,0000) |
| 1803 | -241.102 | -407.291 | 9.2287E-03 (2001,360,0000) | 5.8100E-03 (2001,020,0000) | 4.3362E-03 (2001,362,0000) | 4.2952E-03 (2001,008,0000) |
| 1804 | -238.860 | -407.358 | 9.4997E-03 (2001,360,0000) | 5.8731E-03 (2001,020,0000) | 4.5591E-03 (2001,362,0000) | 4.3627E-03 (2001,008,0000) |
| 1805 | -236.618 | -407.425 | 9.7607E-03 (2001,360,0000) | 5.9176E-03 (2001,020,0000) | 4.7869E-03 (2001,362,0000) | 4.4302E-03 (2001,008,0000) |
| 1806 | -234.376 | -407.491 | 1.0007E-02 (2001,360,0000) | 5.9397E-03 (2001,020,0000) | 5.0205E-03 (2001,362,0000) | 4.4959E-03 (2001,008,0000) |
| 1807 | -232.133 | -407.557 | 1.0240E-02 (2001,360,0000) | 5.9343E-03 (2001,020,0000) | 5.2530E-03 (2001,362,0000) | 4.5604E-03 (2001,008,0000) |
| 1808 | -229.891 | -407.621 | 1.0453E-02 (2001,360,0000) | 5.8960E-03 (2001,020,0000) | 5.4886E-03 (2001,362,0000) | 4.6253E-03 (2001,008,0000) |
| 1809 | -227.649 | -407.685 | 1.0643E-02 (2001,360,0000) | 5.8250E-03 (2001,020,0000) | 5.7228E-03 (2001,362,0000) | 4.6869E-03 (2001,008,0000) |
| 1810 | -225.407 | -407.749 | 1.0805E-02 (2001,360,0000) | 5.9555E-03 (2001,362,0000) | 5.7188E-03 (2001,020,0000) | 4.7469E-03 (2001,008,0000) |
| 1811 | -223.165 | -407.812 | 1.0935E-02 (2001,360,0000) | 6.1894E-03 (2001,362,0000) | 5.5784E-03 (2001,020,0000) | 4.8060E-03 (2001,008,0000) |
| 1812 | -220.922 | -407.874 | 1.1041E-02 (2001,360,0000) | 6.4181E-03 (2001,362,0000) | 5.4042E-03 (2001,020,0000) | 4.8625E-03 (2001,008,0000) |
| 1813 | -218.680 | -407.936 | 1.1113E-02 (2001,360,0000) | 6.6410E-03 (2001,362,0000) | 5.1968E-03 (2001,020,0000) | 4.9170E-03 (2001,008,0000) |
| 1814 | -216.438 | -407.997 | 1.0985E-02 (2001,360,0000) | 6.8634E-03 (2001,362,0000) | 4.9698E-03 (2001,008,0000) | 4.6492E-03 (2001,020,0000) |
| 1815 | -214.195 | -408.057 | 1.0785E-02 (2001,360,0000) | 7.0719E-03 (2001,362,0000) | 5.0199E-03 (2001,008,0000) | 4.2101E-03 (2001,020,0000) |
| 1816 | -211.953 | -408.117 | 9.6326E-03 (2001,360,0000) | 7.2737E-03 (2001,362,0000) | 5.0665E-03 (2001,008,0000) | 3.5779E-03 (2001,020,0000) |
| 1817 | -317.212 | -401.847 | 5.4566E-03 (2001,017,0000) | 4.8007E-03 (2001,361,0000) | 3.7281E-03 (2001,068,0000) | 3.7258E-03 (2001,020,0000) |
| 1818 | -314.971 | -401.935 | 4.7940E-03 (2001,017,0000) | 4.7764E-03 (2001,361,0000) | 4.5726E-03 (2001,020,0000) | 3.8727E-03 (2001,033,0000) |
| 1819 | -312.731 | -402.023 | 4.7481E-03 (2001,361,0000) | 4.5134E-03 (2001,020,0000) | 4.1825E-03 (2001,017,0000) | 3.9226E-03 (2001,068,0000) |
| 1820 | -310.490 | -402.111 | 4.7169E-03 (2001,361,0000) | 4.4034E-03 (2001,020,0000) | 3.9880E-03 (2001,068,0000) | 3.6916E-03 (2001,033,0000) |
| 1821 | -308.249 | -402.198 | 4.6812E-03 (2001,361,0000) | 4.2718E-03 (2001,020,0000) | 4.0492E-03 (2001,068,0000) | 3.5904E-03 (2001,019,0000) |
| 1822 | -306.009 | -402.284 | 4.6421E-03 (2001,361,0000) | 4.1003E-03 (2001,068,0000) | 3.2478E-03 (2001,020,0000) | 3.0723E-03 (2001,019,0000) |
| 1823 | -303.768 | -402.369 | 4.5993E-03 (2001,361,0000) | 4.1348E-03 (2001,068,0000) | 2.7814E-03 (2001,019,0000) | 2.7015E-03 (2001,020,0000) |
| 1824 | -301.527 | -402.454 | 4.5525E-03 (2001,361,0000) | 4.1791E-03 (2001,068,0000) | 3.7232E-03 (2001,020,0000) | 3.4901E-03 (2001,019,0000) |
| 1825 | -299.286 | -402.538 | 4.5017E-03 (2001,361,0000) | 4.1938E-03 (2001,068,0000) | 3.2693E-03 (2001,020,0000) | 3.1887E-03 (2001,019,0000) |
| 1826 | -297.046 | -402.622 | 4.4494E-03 (2001,361,0000) | 4.2053E-03 (2001,068,0000) | 4.1765E-03 (2001,020,0000) | 3.7721E-03 (2001,019,0000) |
| 1827 | -294.805 | -402.705 | 4.3949E-03 (2001,361,0000) | 4.1969E-03 (2001,068,0000) | 3.8256E-03 (2001,020,0000) | 3.6680E-03 (2001,019,0000) |
| 1828 | -292.564 | -402.787 | 4.3355E-03 (2001,361,0000) | 4.1582E-03 (2001,068,0000) | 3.3531E-03 (2001,360,0000) | 3.1060E-03 (2001,019,0000) |
| 1829 | -290.323 | -402.869 | 4.2738E-03 (2001,361,0000) | 4.1383E-03 (2001,068,0000) | 3.5417E-03 (2001,360,0000) | 3.2412E-03 (2001,019,0000) |
| 1830 | -288.082 | -402.950 | 4.2070E-03 (2001,361,0000) | 4.0776E-03 (2001,068,0000) | 3.7275E-03 (2001,360,0000) | 3.1539E-03 (2001,019,0000) |
| 1831 | -285.841 | -403.031 | 4.1388E-03 (2001,361,0000) | 4.0356E-03 (2001,068,0000) | 3.9362E-03 (2001,360,0000) | 3.2567E-03 (2001,019,0000) |
| 1832 | -283.600 | -403.111 | 4.1178E-03 (2001,360,0000) | 4.0681E-03 (2001,361,0000) | 3.9475E-03 (2001,068,0000) | 3.1653E-03 (2001,008,0000) |
| 1833 | -281.359 | -403.190 | 4.3430E-03 (2001,360,0000) | 3.9931E-03 (2001,361,0000) | 3.8883E-03 (2001,068,0000) | 3.2283E-03 (2001,008,0000) |
| 1834 | -279.118 | -403.269 | 4.5829E-03 (2001,360,0000) | 3.9129E-03 (2001,361,0000) | 3.8104E-03 (2001,068,0000) | 3.6256E-03 (2001,020,0000) |
| 1835 | -276.877 | -403.347 | 4.8181E-03 (2001,360,0000) | 4.1678E-03 (2001,020,0000) | 3.8321E-03 (2001,361,0000) | 3.7788E-03 (2001,019,0000) |
| 1836 | -272.395 | -403.501 | 5.2993E-03 (2001,360,0000) | 4.2937E-03 (2001,020,0000) | 3.6613E-03 (2001,361,0000) | 3.6511E-03 (2001,019,0000) |
| 1837 | -270.154 | -403.577 | 5.5553E-03 (2001,360,0000) | 4.4222E-03 (2001,020,0000) | 3.5715E-03 (2001,361,0000) | 3.5657E-03 (2001,019,0000) |
| 1838 | -267.913 | -403.652 | 5.7903E-03 (2001,360,0000) | 3.6247E-03 (2001,008,0000) | 3.4809E-03 (2001,361,0000) | 3.3801E-03 (2001,020,0000) |
| 1839 | -265.672 | -403.727 | 5.9483E-03 (2001,360,0000) | 3.6942E-03 (2001,008,0000) | 3.3872E-03 (2001,361,0000) | 3.1325E-03 (2001,068,0000) |
| 1840 | -263.431 | -403.801 | 6.3356E-03 (2001,360,0000) | 3.7639E-03 (2001,008,0000) | 3.7379E-03 (2001,020,0000) | 3.2919E-03 (2001,361,0000) |
| 1841 | -261.190 | -403.875 | 6.6203E-03 (2001,360,0000) | 4.0048E-03 (2001,020,0000) | 3.8342E-03 (2001,008,0000) | 3.1956E-03 (2001,361,0000) |
| 1842 | -258.948 | -403.948 | 6.9320E-03 (2001,360,0000) | 4.7679E-03 (2001,020,0000) | 3.9061E-03 (2001,008,0000) | 3.0990E-03 (2001,361,0000) |
| 1843 | -256.707 | -404.020 | 7.2283E-03 (2001,360,0000) | 5.0721E-03 (2001,020,0000) | 3.9780E-03 (2001,008,0000) | 3.0084E-03 (2001,362,0000) |
| 1844 | -254.466 | -404.092 | 7.5241E-03 (2001,360,0000) | 5.2204E-03 (2001,020,0000) | 4.0510E-03 (2001,008,0000) | 3.1879E-03 (2001,362,0000) |
| 1845 | -252.225 | -404.163 | 7.8196E-03 (2001,360,0000) | 5.2949E-03 (2001,020,0000) | 4.1239E-03 (2001,008,0000) | 3.3815E-03 (2001,362,0000) |
| 1846 | -249.984 | -404.233 | 8.1161E-03 (2001,360,0000) | 5.3822E-03 (2001,020,0000) | 4.1966E-03 (2001,008,0000) | 3.5834E-03 (2001,362,0000) |
| 1847 | -247.742 | -404.303 | 8.4140E-03 (2001,360,0000) | 5.4751E-03 (2001,020,0000) | 4.2699E-03 (2001,008,0000) | 3.7933E-03 (2001,362,0000) |
| 1848 | -245.501 | -404.372 | 8.7140E-03 (2001,360,0000) | 5.5699E-03 (2001,020,0000) | 4.3439E-03 (2001,008,0000) | 4.0082E-03 (2001,362,0000) |
| 1849 | -243.260 | -404.441 | 9.0083E-03 (2001,360,0000) | 5.6615E-03 (2001,020,0000) | 4.4168E-03 (2001,008,0000) | 4.2332E-03 (2001,362,0000) |
| 1850 | -241.018 | -404.509 | 9.2953E-03 (2001,360,0000) | 5.7441E-03 (2001,020,0000) | 4.4895E-03 (2001,008,0000) | 4.4646E-03 (2001,362,0000) |
| 1851 | -238.777 | -404.576 | 9.5779E-03 (2001,360,0000) | 5.8146E-03 (2001,020,0000) | 4.7000E-03 (2001,362,0000) | 4.5624E-03 (2001,008,0000) |
| 1852 | -236.536 | -404.643 | 9.8480E-03 (2001,360,0000) | 5.8683E-03 (2001,020,0000) | 4.9402E-03 (2001,362,0000) | 4.6326E-03 (2001,008,0000) |
| 1853 | -234.294 | -404.709 | 1.0106E-02 (2001,360,0000) | 5.8973E-03 (2001,020,0000) | 5.1828E-03 (2001,362,0000) | 4.7033E-03 (2001,008,0000) |
| 1854 | -232.053 | -404.774 | 1.0349E-02 (2001,360,0000) | 5.9017E-03 (2001,020,0000) | 5.4299E-03 (2001,362,0000) | 4.7728E-03 (2001,008,0000) |
| 1855 | -229.811 | -404.839 | 1.0571E-02 (2001,360,0000) | 5.8709E-03 (2001,020,0000) | 5.6792E-03 (2001,362,0000) | 4.8405E-03 (2001,008,0000) |
| 1856 | -211.879 | -405.335 | 9.7987E-03 (2001,360,0000) | 7.5565E-03 (2001,362,0000) | 5.3103E-03 (2001,008,0000) | 3.5546E-03 (2001,313,0000) |
| 1857 | -314.862 | -399.154 | 5.0553E-03 (2001,017,0000) | 4.8872E-03 (2001,361,0000) | 4.4037E-03 (2001,020,0000) | 4.0051E-03 (2001,033,0000) |
| 1858 | -312.622 | -399.242 | 4.8575E-03 (2001,361,0000) | 4.4119E-03 (2001,017,0000) | 4.2657E-03 (2001,020,0000) | 3.9244E-03 (2001,033,0000) |
| 1859 | -310.382 | -399.330 | 4.8248E-03 (2001,361,0000) | 4.1993E-03 (2001,020,0000) | 3.9370E-03 (2001,068,0000) | 3.8514E-03 (2001,033,0000) |
| 1860 | -308.142 | -399.416 | 4.7882E-03 (2001,361,0000) | 4.1358E-03 (2001,020,0000) | 4.0025E-03 (2001,068,0000) | 3.7646E-03 (2001,033,0000) |
| 1861 | -305.902 | -399.502 | 4.7482E-03 (2001,361,0000) | 4.0570E-03 (2001,068,0000) | 3.3091E-03 (2001,019,0000) | 3.2987E-03 (2001,020,0000) |
| 1862 | -303.662 | -399.588 | 4.7030E-03 (2001,361,0000) | 4.0978E-03 (2001,068,0000) | 3.0930E-03 (2001,019,0000) | 2.9297E-03 (2001,020,0000) |
| 1863 | -301.422 | -399.673 | 4.6560E-03 (2001,361,0000) | 4.1336E-03 (2001,068,0000) | 3.7006E-03 (2001,020,0000) | 3.6291E-03 (2001,019,0000) |
| 1864 | -299.182 | -399.757 | 4.6048E-03 (2001,361,0000) | 4.1557E-03 (2001,068,0000) | 4.1471E-03 (2001,020,0000) | 3.8563E-03 (2001,019,0000) |
| 1865 | -296.942 | -399.841 | 4.5522E-03 (2001,361,0000) | 4.1888E-03 (2001,020,0000) | 4.1641E-03 (2001,068,0000) | 3.9258E-03 (2001,019,0000) |
| 1866 | -294.702 | -399.924 | 4.4953E-03 (2001,361,0000) | 4.1554E-03 (2001,068,0000) | 4.0399E-03 (2001,020,0000) | 3.9277E-03 (2001,019,0000) |
| 1867 | -292.462 | -400.006 | 4.4355E-03 (2001,361,0000) | 4.1345E-03 (2001,068,0000) | 3.7529E-03 (2001,019,0000) | 3.5376E-03 (2001,020,0000) |

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|---|---|---|---|---|---|---|
| 1868 | -290.222 | -400.088 | 4.3721E-03 (2001,361,0000) | 4.1019E-03 (2001,068,0000) | 3.5097E-03 (2001,360,0000) | 3.4328E-03 (2001,019,0000) |
| 1869 | -287.982 | -400.169 | 4.3046E-03 (2001,361,0000) | 4.0327E-03 (2001,068,0000) | 3.6899E-03 (2001,360,0000) | 3.1619E-03 (2001,008,0000) |
| 1870 | -285.742 | -400.249 | 4.2340E-03 (2001,361,0000) | 3.9714E-03 (2001,068,0000) | 3.8806E-03 (2001,360,0000) | 3.2253E-03 (2001,008,0000) |
| 1871 | -283.502 | -400.329 | 4.1598E-03 (2001,361,0000) | 4.0832E-03 (2001,360,0000) | 3.9014E-03 (2001,068,0000) | 3.2897E-03 (2001,008,0000) |
| 1872 | -281.261 | -400.408 | 4.3280E-03 (2001,360,0000) | 4.0844E-03 (2001,361,0000) | 3.8570E-03 (2001,068,0000) | 3.4494E-03 (2001,019,0000) |
| 1873 | -279.021 | -400.487 | 4.5263E-03 (2001,360,0000) | 4.0034E-03 (2001,361,0000) | 3.7368E-03 (2001,068,0000) | 3.4219E-03 (2001,008,0000) |
| 1874 | -276.781 | -400.565 | 4.7848E-03 (2001,360,0000) | 3.9172E-03 (2001,361,0000) | 3.6763E-03 (2001,068,0000) | 3.6118E-03 (2001,019,0000) |
| 1875 | -274.541 | -400.642 | 5.0343E-03 (2001,360,0000) | 4.3253E-03 (2001,020,0000) | 4.0292E-03 (2001,019,0000) | 3.8315E-03 (2001,361,0000) |
| 1876 | -272.300 | -400.719 | 5.2699E-03 (2001,360,0000) | 3.7407E-03 (2001,361,0000) | 3.6292E-03 (2001,008,0000) | 3.4694E-03 (2001,019,0000) |
| 1877 | -270.060 | -400.795 | 5.5395E-03 (2001,360,0000) | 4.4068E-03 (2001,020,0000) | 3.8557E-03 (2001,019,0000) | 3.7005E-03 (2001,008,0000) |
| 1878 | -267.820 | -400.870 | 5.7989E-03 (2001,360,0000) | 4.0706E-03 (2001,020,0000) | 3.7723E-03 (2001,008,0000) | 3.6569E-03 (2001,019,0000) |
| 1879 | -265.579 | -400.945 | 5.9574E-03 (2001,360,0000) | 3.8457E-03 (2001,008,0000) | 3.4564E-03 (2001,361,0000) | 3.0931E-03 (2001,068,0000) |
| 1880 | -263.339 | -401.019 | 6.2489E-03 (2001,360,0000) | 3.9195E-03 (2001,008,0000) | 3.3592E-03 (2001,361,0000) | 2.9857E-03 (2001,068,0000) |
| 1881 | -261.099 | -401.093 | 6.6132E-03 (2001,360,0000) | 3.9941E-03 (2001,008,0000) | 3.5929E-03 (2001,020,0000) | 3.2584E-03 (2001,361,0000) |
| 1882 | -258.858 | -401.166 | 6.9210E-03 (2001,360,0000) | 4.1864E-03 (2001,020,0000) | 4.0696E-03 (2001,008,0000) | 3.1572E-03 (2001,361,0000) |
| 1883 | -256.618 | -401.238 | 7.2322E-03 (2001,360,0000) | 4.6566E-03 (2001,020,0000) | 4.1465E-03 (2001,008,0000) | 3.0686E-03 (2001,362,0000) |
| 1884 | -216.287 | -402.432 | 1.1349E-02 (2001,360,0000) | 7.3955E-03 (2001,362,0000) | 5.4537E-03 (2001,008,0000) | 4.6362E-03 (2001,020,0000) |
| 1885 | -214.046 | -402.493 | 1.0045E-02 (2001,360,0000) | 7.6302E-03 (2001,362,0000) | 5.5094E-03 (2001,008,0000) | 3.6318E-03 (2001,020,0000) |
| 1886 | -211.805 | -402.552 | 1.1209E-02 (2001,360,0000) | 7.8545E-03 (2001,362,0000) | 5.5617E-03 (2001,008,0000) | 4.0400E-03 (2001,020,0000) |
| 1887 | -314.752 | -396.373 | 5.3420E-03 (2001,017,0000) | 4.9990E-03 (2001,361,0000) | 4.0999E-03 (2001,020,0000) | 4.0907E-03 (2001,033,0000) |
| 1888 | -312.513 | -396.461 | 4.9708E-03 (2001,361,0000) | 4.6633E-03 (2001,017,0000) | 4.1138E-03 (2001,020,0000) | 4.0997E-03 (2001,033,0000) |
| 1889 | -310.274 | -396.548 | 4.9358E-03 (2001,361,0000) | 4.0728E-03 (2001,020,0000) | 4.0675E-03 (2001,033,0000) | 4.0425E-03 (2001,017,0000) |
| 1890 | -308.035 | -396.635 | 4.8985E-03 (2001,361,0000) | 4.0278E-03 (2001,020,0000) | 4.0145E-03 (2001,033,0000) | 3.9476E-03 (2001,068,0000) |
| 1891 | -305.796 | -396.721 | 4.8569E-03 (2001,361,0000) | 4.0020E-03 (2001,068,0000) | 3.2812E-03 (2001,033,0000) | 3.2560E-03 (2001,019,0000) |
| 1892 | -303.556 | -396.807 | 4.8123E-03 (2001,361,0000) | 4.0485E-03 (2001,068,0000) | 3.8722E-03 (2001,020,0000) | 3.7599E-03 (2001,019,0000) |
| 1893 | -301.317 | -396.892 | 4.7635E-03 (2001,361,0000) | 4.0809E-03 (2001,068,0000) | 3.6402E-03 (2001,019,0000) | 3.4161E-03 (2001,020,0000) |
| 1894 | -299.078 | -396.976 | 4.7127E-03 (2001,361,0000) | 4.1036E-03 (2001,068,0000) | 4.0568E-03 (2001,020,0000) | 3.9548E-03 (2001,019,0000) |
| 1895 | -296.839 | -397.059 | 4.6583E-03 (2001,361,0000) | 4.1104E-03 (2001,068,0000) | 4.0511E-03 (2001,020,0000) | 4.0188E-03 (2001,019,0000) |
| 1896 | -294.599 | -397.142 | 4.6011E-03 (2001,361,0000) | 4.1021E-03 (2001,068,0000) | 3.9525E-03 (2001,019,0000) | 3.6997E-03 (2001,020,0000) |
| 1897 | -292.360 | -397.225 | 4.5407E-03 (2001,361,0000) | 4.0818E-03 (2001,068,0000) | 3.5929E-03 (2001,019,0000) | 3.2825E-03 (2001,360,0000) |
| 1898 | -290.121 | -397.306 | 4.4749E-03 (2001,361,0000) | 4.0494E-03 (2001,068,0000) | 3.5704E-03 (2001,019,0000) | 3.4674E-03 (2001,360,0000) |
| 1899 | -287.882 | -397.387 | 4.4054E-03 (2001,361,0000) | 4.0154E-03 (2001,019,0000) | 4.0071E-03 (2001,068,0000) | 3.6657E-03 (2001,360,0000) |
| 1900 | -285.642 | -397.468 | 4.3335E-03 (2001,361,0000) | 3.9506E-03 (2001,068,0000) | 3.8674E-03 (2001,360,0000) | 3.8438E-03 (2001,019,0000) |
| 1901 | -283.403 | -397.548 | 4.2584E-03 (2001,361,0000) | 4.0722E-03 (2001,360,0000) | 3.8736E-03 (2001,068,0000) | 3.5256E-03 (2001,019,0000) |
| 1902 | -281.163 | -397.627 | 4.2821E-03 (2001,360,0000) | 4.1801E-03 (2001,361,0000) | 3.7952E-03 (2001,068,0000) | 3.4846E-03 (2001,008,0000) |
| 1903 | -278.924 | -397.705 | 4.5184E-03 (2001,360,0000) | 4.0968E-03 (2001,361,0000) | 3.7210E-03 (2001,068,0000) | 3.5546E-03 (2001,019,0000) |
| 1904 | -276.684 | -397.783 | 4.7541E-03 (2001,360,0000) | 4.0097E-03 (2001,361,0000) | 3.6264E-03 (2001,068,0000) | 3.6260E-03 (2001,008,0000) |
| 1905 | -274.445 | -397.861 | 4.9877E-03 (2001,360,0000) | 3.9201E-03 (2001,361,0000) | 3.6980E-03 (2001,008,0000) | 3.5133E-03 (2001,068,0000) |
| 1906 | -272.206 | -397.937 | 5.2491E-03 (2001,360,0000) | 3.8256E-03 (2001,361,0000) | 3.7717E-03 (2001,008,0000) | 3.6483E-03 (2001,019,0000) |
| 1907 | -269.966 | -398.013 | 5.4977E-03 (2001,360,0000) | 3.8462E-03 (2001,008,0000) | 3.7285E-03 (2001,361,0000) | 3.3214E-03 (2001,019,0000) |
| 1908 | -267.726 | -398.089 | 5.6858E-03 (2001,360,0000) | 3.9228E-03 (2001,008,0000) | 3.6311E-03 (2001,361,0000) | 3.1537E-03 (2001,068,0000) |
| 1909 | -265.487 | -398.164 | 5.9471E-03 (2001,360,0000) | 3.9996E-03 (2001,008,0000) | 3.5304E-03 (2001,361,0000) | 3.0427E-03 (2001,068,0000) |
| 1910 | -263.247 | -398.238 | 6.3312E-03 (2001,360,0000) | 4.0777E-03 (2001,008,0000) | 3.5327E-03 (2001,020,0000) | 3.4660E-03 (2001,019,0000) |
| 1911 | -261.008 | -398.311 | 6.5880E-03 (2001,360,0000) | 4.1568E-03 (2001,008,0000) | 3.3255E-03 (2001,361,0000) | 3.1092E-03 (2001,020,0000) |
| 1912 | -258.768 | -398.384 | 6.8694E-03 (2001,360,0000) | 4.2373E-03 (2001,008,0000) | 3.2205E-03 (2001,361,0000) | 3.1131E-03 (2001,020,0000) |
| 1913 | -256.528 | -398.456 | 7.2485E-03 (2001,360,0000) | 4.8333E-03 (2001,020,0000) | 4.3179E-03 (2001,008,0000) | 3.2594E-03 (2001,019,0000) |
| 1914 | -254.289 | -398.528 | 7.5529E-03 (2001,360,0000) | 5.0431E-03 (2001,020,0000) | 4.3993E-03 (2001,008,0000) | 3.3246E-03 (2001,362,0000) |
| 1915 | -213.972 | -399.710 | 1.1083E-02 (2001,360,0000) | 7.9177E-03 (2001,362,0000) | 5.7667E-03 (2001,008,0000) | 4.0827E-03 (2001,284,0000) |
| 1916 | -211.732 | -399.770 | 1.0184E-02 (2001,360,0000) | 8.1534E-03 (2001,362,0000) | 5.8232E-03 (2001,008,0000) | 3.7766E-03 (2001,284,0000) |
| 1917 | -209.492 | -399.829 | 1.0818E-02 (2001,360,0000) | 8.3799E-03 (2001,362,0000) | 5.8742E-03 (2001,008,0000) | 4.0412E-03 (2001,284,0000) |
| 1918 | -314.642 | -393.592 | 5.6565E-03 (2001,017,0000) | 5.1138E-03 (2001,361,0000) | 4.2012E-03 (2001,033,0000) | 3.8554E-03 (2001,020,0000) |
| 1919 | -312.404 | -393.680 | 5.0841E-03 (2001,361,0000) | 4.9410E-03 (2001,017,0000) | 4.2642E-03 (2001,033,0000) | 3.9174E-03 (2001,020,0000) |
| 1920 | -310.166 | -393.767 | 5.0512E-03 (2001,361,0000) | 4.3252E-03 (2001,033,0000) | 4.2835E-03 (2001,017,0000) | 4.0020E-03 (2001,020,0000) |
| 1921 | -307.927 | -393.854 | 5.0137E-03 (2001,361,0000) | 4.2759E-03 (2001,033,0000) | 3.9194E-03 (2001,020,0000) | 3.8827E-03 (2001,068,0000) |
| 1922 | -305.689 | -393.940 | 4.9716E-03 (2001,361,0000) | 4.1885E-03 (2001,033,0000) | 3.9402E-03 (2001,068,0000) | 3.8838E-03 (2001,020,0000) |
| 1923 | -303.451 | -394.025 | 4.9246E-03 (2001,361,0000) | 3.9852E-03 (2001,068,0000) | 3.9175E-03 (2001,033,0000) | 3.8058E-03 (2001,019,0000) |
| 1924 | -301.212 | -394.110 | 4.8764E-03 (2001,361,0000) | 4.0200E-03 (2001,068,0000) | 3.9374E-03 (2001,019,0000) | 3.8743E-03 (2001,020,0000) |
| 1925 | -298.974 | -394.194 | 4.8238E-03 (2001,361,0000) | 4.0412E-03 (2001,068,0000) | 4.0218E-03 (2001,019,0000) | 3.9020E-03 (2001,020,0000) |
| 1926 | -296.735 | -394.278 | 4.7694E-03 (2001,361,0000) | 4.0646E-03 (2001,019,0000) | 4.0476E-03 (2001,068,0000) | 3.8119E-03 (2001,020,0000) |
| 1927 | -294.497 | -394.361 | 4.7115E-03 (2001,361,0000) | 4.1157E-03 (2001,019,0000) | 4.0414E-03 (2001,068,0000) | 3.7528E-03 (2001,020,0000) |
| 1928 | -292.258 | -394.443 | 4.6483E-03 (2001,361,0000) | 4.1826E-03 (2001,019,0000) | 4.0229E-03 (2001,068,0000) | 3.7503E-03 (2001,020,0000) |
| 1929 | -290.020 | -394.525 | 4.5831E-03 (2001,361,0000) | 4.2511E-03 (2001,019,0000) | 3.9911E-03 (2001,068,0000) | 3.7649E-03 (2001,020,0000) |
| 1930 | -287.781 | -394.606 | 4.5117E-03 (2001,361,0000) | 4.3275E-03 (2001,019,0000) | 3.9481E-03 (2001,068,0000) | 3.8167E-03 (2001,020,0000) |
| 1931 | -285.543 | -394.686 | 4.4385E-03 (2001,361,0000) | 4.3623E-03 (2001,019,0000) | 3.8931E-03 (2001,068,0000) | 3.8295E-03 (2001,360,0000) |
| 1932 | -283.304 | -394.766 | 4.4024E-03 (2001,019,0000) | 4.3608E-03 (2001,361,0000) | 4.0426E-03 (2001,360,0000) | 3.8280E-03 (2001,068,0000) |
| 1933 | -281.065 | -394.845 | 4.2806E-03 (2001,361,0000) | 4.2475E-03 (2001,360,0000) | 3.7362E-03 (2001,068,0000) | 3.6149E-03 (2001,008,0000) |
| 1934 | -278.827 | -394.924 | 4.4853E-03 (2001,360,0000) | 4.1954E-03 (2001,361,0000) | 3.6883E-03 (2001,008,0000) | 3.6743E-03 (2001,019,0000) |
| 1935 | -276.588 | -395.002 | 4.7112E-03 (2001,360,0000) | 4.1058E-03 (2001,361,0000) | 3.7628E-03 (2001,008,0000) | 3.5551E-03 (2001,068,0000) |
| 1936 | -274.349 | -395.079 | 4.9369E-03 (2001,360,0000) | 4.0118E-03 (2001,361,0000) | 3.8391E-03 (2001,008,0000) | 3.4257E-03 (2001,068,0000) |
| 1937 | -272.111 | -395.156 | 5.1869E-03 (2001,360,0000) | 3.9158E-03 (2001,008,0000) | 3.9155E-03 (2001,361,0000) | 3.3200E-03 (2001,068,0000) |
| 1938 | -269.872 | -395.232 | 5.4641E-03 (2001,360,0000) | 3.9950E-03 (2001,008,0000) | 3.8155E-03 (2001,361,0000) | 3.4157E-03 (2001,019,0000) |
| 1939 | -267.633 | -395.307 | 5.7567E-03 (2001,360,0000) | 4.0748E-03 (2001,008,0000) | 3.7145E-03 (2001,361,0000) | 3.6598E-03 (2001,019,0000) |
| 1940 | -265.394 | -395.382 | 6.0389E-03 (2001,360,0000) | 4.1563E-03 (2001,008,0000) | 3.8367E-03 (2001,019,0000) | 3.6104E-03 (2001,361,0000) |
| 1941 | -263.156 | -395.456 | 6.3223E-03 (2001,360,0000) | 4.2393E-03 (2001,008,0000) | 3.7627E-03 (2001,019,0000) | 3.5042E-03 (2001,361,0000) |
| 1942 | -260.917 | -395.530 | 6.6194E-03 (2001,360,0000) | 4.3224E-03 (2001,008,0000) | 3.7317E-03 (2001,019,0000) | 3.6883E-03 (2001,020,0000) |
| 1943 | -258.678 | -395.602 | 6.9146E-03 (2001,360,0000) | 4.4076E-03 (2001,008,0000) | 3.6004E-03 (2001,020,0000) | 3.5129E-03 (2001,019,0000) |
| 1944 | -216.136 | -396.868 | 1.1628E-02 (2001,360,0000) | 7.9490E-03 (2001,362,0000) | 5.9696E-03 (2001,008,0000) | 4.4757E-03 (2001,020,0000) |
| 1945 | -213.897 | -396.928 | 1.1615E-02 (2001,360,0000) | 8.2124E-03 (2001,362,0000) | 6.0318E-03 (2001,008,0000) | 4.2590E-03 (2001,284,0000) |
| 1946 | -211.658 | -396.988 | 1.1067E-02 (2001,360,0000) | 8.4635E-03 (2001,362,0000) | 6.0910E-03 (2001,008,0000) | 4.2243E-03 (2001,284,0000) |
| 1947 | -209.419 | -397.047 | 1.1500E-02 (2001,360,0000) | 8.7025E-03 (2001,362,0000) | 6.1469E-03 (2001,008,0000) | 4.2159E-03 (2001,284,0000) |
| 1948 | -285.443 | -391.905 | 4.5476E-03 (2001,361,0000) | 4.4429E-03 (2001,019,0000) | 3.8249E-03 (2001,068,0000) | 3.7847E-03 (2001,360,0000) |
| 1949 | -283.205 | -391.985 | 4.4686E-03 (2001,361,0000) | 3.9988E-03 (2001,360,0000) | 3.8858E-03 (2001,019,0000) | 3.7587E-03 (2001,068,0000) |
| 1950 | -280.967 | -392.064 | 4.3841E-03 (2001,361,0000) | 4.2007E-03 (2001,360,0000) | 3.7467E-03 (2001,008,0000) | 3.6394E-03 (2001,068,0000) |
| 1951 | -278.730 | -392.142 | 4.4507E-03 (2001,360,0000) | 4.2982E-03 (2001,361,0000) | 3.8343E-03 (2001,019,0000) | 3.8229E-03 (2001,008,0000) |
| 1952 | -276.492 | -392.220 | 4.6947E-03 (2001,360,0000) | 4.2068E-03 (2001,361,0000) | 4.1548E-03 (2001,019,0000) | 3.9015E-03 (2001,008,0000) |
| 1953 | -274.254 | -392.298 | 4.9422E-03 (2001,360,0000) | 4.1109E-03 (2001,361,0000) | 3.9811E-03 (2001,008,0000) | 3.9550E-03 (2001,019,0000) |
| 1954 | -272.016 | -392.374 | 5.1951E-03 (2001,360,0000) | 4.0623E-03 (2001,008,0000) | 4.0114E-03 (2001,361,0000) | 3.7689E-03 (2001,019,0000) |
| 1955 | -269.778 | -392.450 | 5.4656E-03 (2001,360,0000) | 4.1452E-03 (2001,008,0000) | 3.9475E-03 (2001,019,0000) | 3.9081E-03 (2001,361,0000) |
| 1956 | -267.540 | -392.526 | 5.7371E-03 (2001,360,0000) | 4.2296E-03 (2001,008,0000) | 3.9539E-03 (2001,019,0000) | 3.8013E-03 (2001,361,0000) |
| 1957 | -265.302 | -392.600 | 6.0251E-03 (2001,360,0000) | 4.3157E-03 (2001,008,0000) | 4.1569E-03 (2001,019,0000) | 3.6965E-03 (2001,361,0000) |
| 1958 | -263.064 | -392.674 | 6.3326E-03 (2001,360,0000) | 4.5509E-03 (2001,020,0000) | 4.4022E-03 (2001,008,0000) | 4.3742E-03 (2001,019,0000) |
| 1959 | -260.826 | -392.748 | 6.6327E-03 (2001,360,0000) | 4.5452E-03 (2001,020,0000) | 4.4910E-03 (2001,008,0000) | 4.2348E-03 (2001,019,0000) |
| 1960 | -258.588 | -392.821 | 6.9229E-03 (2001,360,0000) | 4.5804E-03 (2001,008,0000) | 4.0109E-03 (2001,019,0000) | 3.9628E-03 (2001,020,0000) |
| 1961 | -213.823 | -394.146 | 1.1777E-02 (2001,360,0000) | 8.5126E-03 (2001,362,0000) | 6.3048E-03 (2001,008,0000) | 4.4247E-03 (2001,284,0000) |
| 1962 | -211.584 | -394.206 | 1.1770E-02 (2001,360,0000) | 8.7761E-03 (2001,362,0000) | 6.3670E-03 (2001,008,0000) | 4.4124E-03 (2001,284,0000) |
| 1963 | -285.344 | -389.124 | 4.6619E-03 (2001,361,0000) | 4.4928E-03 (2001,019,0000) | 3.7473E-03 (2001,068,0000) | 3.7386E-03 (2001,360,0000) |
| 1964 | -283.107 | -389.203 | 4.5803E-03 (2001,361,0000) | 3.9451E-03 (2001,360,0000) | 3.8000E-03 (2001,008,0000) | 3.6443E-03 (2001,068,0000) |
| 1965 | -280.869 | -389.283 | 4.4958E-03 (2001,361,0000) | 4.1698E-03 (2001,360,0000) | 3.8784E-03 (2001,008,0000) | 3.5658E-03 (2001,068,0000) |
| 1966 | -278.632 | -389.361 | 4.4066E-03 (2001,361,0000) | 4.4025E-03 (2001,360,0000) | 3.9592E-03 (2001,008,0000) | 3.7269E-03 (2001,019,0000) |
| 1967 | -276.395 | -389.439 | 4.6592E-03 (2001,360,0000) | 4.3127E-03 (2001,361,0000) | 4.1580E-03 (2001,019,0000) | 4.0409E-03 (2001,008,0000) |
| 1968 | -274.158 | -389.516 | 4.9151E-03 (2001,360,0000) | 4.8815E-03 (2001,019,0000) | 4.2147E-03 (2001,361,0000) | 4.1251E-03 (2001,008,0000) |
| 1969 | -269.684 | -389.669 | 5.4511E-03 (2001,360,0000) | 4.8802E-03 (2001,019,0000) | 4.2972E-03 (2001,008,0000) | 4.0054E-03 (2001,361,0000) |
| 1970 | -267.447 | -389.744 | 5.7282E-03 (2001,360,0000) | 4.8022E-03 (2001,019,0000) | 4.3862E-03 (2001,008,0000) | 3.8962E-03 (2001,361,0000) |
| 1971 | -211.510 | -391.424 | 1.1902E-02 (2001,360,0000) | 9.0979E-03 (2001,362,0000) | 6.6498E-03 (2001,008,0000) | 4.5718E-03 (2001,284,0000) |
| 1972 | -209.273 | -391.483 | 1.0531E-02 (2001,360,0000) | 9.3671E-03 (2001,362,0000) | 6.7114E-03 (2001,008,0000) | 4.0761E-03 (2001,284,0000) |
| 1973 | -278.535 | -386.580 | 4.5207E-03 (2001,361,0000) | 4.3606E-03 (2001,360,0000) | 4.0961E-03 (2001,008,0000) | 3.6325E-03 (2001,019,0000) |
| 1974 | -276.299 | -386.658 | 4.6205E-03 (2001,360,0000) | 4.4252E-03 (2001,361,0000) | 4.2598E-03 (2001,019,0000) | 4.1818E-03 (2001,008,0000) |
| 1975 | -215.910 | -388.522 | 1.1981E-02 (2001,360,0000) | 8.8212E-03 (2001,362,0000) | 6.7946E-03 (2001,008,0000) | 4.7448E-03 (2001,284,0000) |
| 1976 | -213.599 | -385.800 | 1.2137E-02 (2001,360,0000) | 9.4451E-03 (2001,362,0000) | 7.1629E-03 (2001,008,0000) | 4.9284E-03 (2001,284,0000) |
| 1977 | -211.363 | -385.860 | 1.2155E-02 (2001,360,0000) | 9.7615E-03 (2001,362,0000) | 7.2352E-03 (2001,008,0000) | 4.9167E-03 (2001,284,0000) |
| 1978 | -209.054 | -383.137 | 1.2290E-02 (2001,360,0000) | 1.0422E-02 (2001,362,0000) | 7.6116E-03 (2001,008,0000) | 5.0574E-03 (2001,284,0000) |
| 1979 | -206.746 | -380.413 | 1.1128E-02 (2001,360,0000) | 1.1104E-02 (2001,362,0000) | 7.9923E-03 (2001,008,0000) | 4.6335E-03 (2001,284,0000) |
| 1980 | -204.440 | -377.689 | 1.2314E-02 (2001,360,0000) | 1.1808E-02 (2001,362,0000) | 8.3771E-03 (2001,008,0000) | 5.2620E-03 (2001,284,0000) |
| 1981 | -202.136 | -374.965 | 1.2527E-02 (2001,362,0000) | 1.1549E-02 (2001,360,0000) | 8.7639E-03 (2001,008,0000) | 5.2988E-03 (2001,284,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1982 | -202.065 | -372.183 | 1.2948E-02 (2001,362,0000) | 1.0357E-02 (2001,360,0000) | 9.0905E-03 (2001,008,0000) | 4.7757E-03 (2001,005,0000) |
| 1983 | -201.994 | -369.401 | 1.3373E-02 (2001,362,0000) | 1.1333E-02 (2001,360,0000) | 9.4170E-03 (2001,008,0000) | 5.5708E-03 (2001,284,0000) |
| 1984 | -199.763 | -369.458 | 1.3700E-02 (2001,362,0000) | 1.0401E-02 (2001,360,0000) | 9.4796E-03 (2001,008,0000) | 4.9823E-03 (2001,005,0000) |
| 1985 | -199.693 | -366.676 | 1.4138E-02 (2001,362,0000) | 1.1610E-02 (2001,360,0000) | 9.8069E-03 (2001,008,0000) | 5.5795E-03 (2001,284,0000) |
| 1986 | -195.231 | -366.787 | 1.4750E-02 (2001,362,0000) | 1.1077E-02 (2001,360,0000) | 9.9119E-03 (2001,008,0000) | 5.2136E-03 (2001,284,0000) |
| 1987 | -197.393 | -363.950 | 1.4913E-02 (2001,362,0000) | 1.0861E-02 (2001,360,0000) | 1.0191E-02 (2001,008,0000) | 5.5034E-03 (2001,284,0000) |
| 1988 | -192.798 | -358.497 | 1.6474E-02 (2001,362,0000) | 1.0931E-02 (2001,008,0000) | 9.1676E-03 (2001,360,0000) | 5.8302E-03 (2001,005,0000) |

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CALPOST Version 5.6394 Level 070622

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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1198 | -355.887 | -464.319 | 1.2590E-04 | 1593 | -221.307 | -421.787 | 2.5180E-04 |
| 1199 | -353.629 | -464.418 | 1.2571E-04 | 1594 | -219.061 | -421.849 | 2.5341E-04 |
| 1200 | -351.371 | -464.517 | 1.2425E-04 | 1595 | -216.814 | -421.910 | 2.5201E-04 |
| 1201 | -362.536 | -461.234 | 1.3709E-04 | 1596 | -214.568 | -421.971 | 2.5068E-04 |
| 1202 | -360.279 | -461.336 | 1.3539E-04 | 1597 | -212.322 | -422.030 | 2.5123E-04 |
| 1203 | -358.021 | -461.436 | 1.3518E-04 | 1598 | -210.076 | -422.090 | 2.5325E-04 |
| 1204 | -355.764 | -461.536 | 1.3739E-04 | 1599 | -207.829 | -422.148 | 2.4447E-04 |
| 1205 | -353.507 | -461.636 | 1.3715E-04 | 1600 | -205.583 | -422.206 | 2.4642E-04 |
| 1206 | -351.249 | -461.735 | 1.3098E-04 | 1601 | -203.337 | -422.264 | 2.5875E-04 |
| 1207 | -348.992 | -461.833 | 1.2823E-04 | 1602 | -326.742 | -415.392 | 1.9287E-04 |
| 1208 | -366.923 | -458.247 | 1.3944E-04 | 1603 | -324.498 | -415.483 | 1.8766E-04 |
| 1209 | -364.667 | -458.350 | 1.4621E-04 | 1604 | -322.253 | -415.574 | 1.8245E-04 |
| 1210 | -362.410 | -458.452 | 1.4130E-04 | 1605 | -302.052 | -416.362 | 1.7598E-04 |
| 1211 | -360.154 | -458.553 | 1.4493E-04 | 1606 | -268.380 | -417.562 | 2.0165E-04 |
| 1212 | -357.897 | -458.654 | 1.4337E-04 | 1607 | -266.134 | -417.637 | 1.9133E-04 |
| 1213 | -355.641 | -458.754 | 1.4347E-04 | 1608 | -263.889 | -417.712 | 1.8468E-04 |
| 1214 | -353.384 | -458.853 | 1.4074E-04 | 1609 | -261.644 | -417.785 | 1.9902E-04 |
| 1215 | -351.128 | -458.952 | 1.4045E-04 | 1610 | -259.399 | -417.858 | 2.0641E-04 |
| 1216 | -348.871 | -459.050 | 1.3853E-04 | 1611 | -257.154 | -417.931 | 2.0552E-04 |
| 1217 | -346.614 | -459.148 | 1.3063E-04 | 1612 | -254.909 | -418.003 | 1.9653E-04 |
| 1218 | -373.563 | -455.154 | 1.4996E-04 | 1613 | -252.664 | -418.074 | 2.0655E-04 |
| 1219 | -366.796 | -455.465 | 1.4459E-04 | 1614 | -250.419 | -418.144 | 2.1141E-04 |
| 1220 | -364.541 | -455.568 | 1.5050E-04 | 1615 | -248.174 | -418.214 | 2.2504E-04 |
| 1221 | -362.285 | -455.670 | 1.5033E-04 | 1616 | -245.928 | -418.284 | 2.2219E-04 |
| 1222 | -360.029 | -455.771 | 1.4972E-04 | 1617 | -243.683 | -418.352 | 2.3094E-04 |
| 1223 | -357.774 | -455.872 | 1.4899E-04 | 1618 | -241.438 | -418.420 | 2.3174E-04 |
| 1224 | -355.518 | -455.972 | 1.4920E-04 | 1619 | -239.193 | -418.488 | 2.3076E-04 |
| 1225 | -353.262 | -456.071 | 1.4672E-04 | 1620 | -236.947 | -418.555 | 2.4141E-04 |
| 1226 | -351.006 | -456.170 | 1.4359E-04 | 1621 | -234.702 | -418.621 | 2.4423E-04 |
| 1227 | -348.750 | -456.268 | 1.3824E-04 | 1622 | -232.457 | -418.686 | 2.4695E-04 |
| 1228 | -346.494 | -456.366 | 1.3439E-04 | 1623 | -230.211 | -418.751 | 2.4959E-04 |
| 1229 | -375.689 | -452.267 | 1.5035E-04 | 1624 | -227.966 | -418.815 | 2.5194E-04 |
| 1230 | -373.434 | -452.372 | 1.5394E-04 | 1625 | -225.721 | -418.879 | 2.5431E-04 |
| 1231 | -371.179 | -452.476 | 1.4953E-04 | 1626 | -223.475 | -418.942 | 2.5643E-04 |
| 1232 | -368.924 | -452.580 | 1.5633E-04 | 1627 | -221.230 | -419.004 | 2.5834E-04 |
| 1233 | -366.670 | -452.683 | 1.5637E-04 | 1628 | -218.984 | -419.066 | 2.5987E-04 |
| 1234 | -364.415 | -452.786 | 1.5157E-04 | 1629 | -216.739 | -419.127 | 2.5902E-04 |
| 1235 | -362.160 | -452.888 | 1.5533E-04 | 1630 | -214.494 | -419.188 | 2.6095E-04 |
| 1236 | -359.905 | -452.989 | 1.5314E-04 | 1631 | -212.248 | -419.248 | 2.6080E-04 |
| 1237 | -357.650 | -453.089 | 1.5477E-04 | 1632 | -210.003 | -419.307 | 2.5957E-04 |
| 1238 | -353.140 | -453.289 | 1.5106E-04 | 1633 | -207.757 | -419.365 | 2.4978E-04 |
| 1239 | -350.885 | -453.388 | 1.4887E-04 | 1634 | -205.512 | -419.423 | 2.6221E-04 |
| 1240 | -348.630 | -453.486 | 1.4557E-04 | 1635 | -203.266 | -419.481 | 2.6560E-04 |
| 1241 | -346.375 | -453.583 | 1.4609E-04 | 1636 | -328.872 | -412.519 | 2.0857E-04 |
| 1242 | -377.813 | -449.379 | 1.5478E-04 | 1637 | -326.629 | -412.611 | 2.0235E-04 |
| 1243 | -375.559 | -449.485 | 1.5764E-04 | 1638 | -324.385 | -412.702 | 1.9622E-04 |
| 1244 | -373.305 | -449.590 | 1.5489E-04 | 1639 | -322.141 | -412.793 | 1.9344E-04 |
| 1245 | -371.051 | -449.694 | 1.5578E-04 | 1640 | -319.898 | -412.883 | 1.9213E-04 |
| 1246 | -368.797 | -449.798 | 1.6165E-04 | 1641 | -317.654 | -412.972 | 1.7612E-04 |
| 1247 | -366.543 | -449.901 | 1.6135E-04 | 1642 | -301.947 | -413.580 | 1.7420E-04 |
| 1248 | -364.289 | -450.004 | 1.5604E-04 | 1643 | -272.775 | -414.628 | 1.8762E-04 |
| 1249 | -362.034 | -450.105 | 1.5668E-04 | 1644 | -270.530 | -414.705 | 1.9241E-04 |
| 1250 | -359.780 | -450.207 | 1.5843E-04 | 1645 | -268.286 | -414.780 | 1.9319E-04 |
| 1251 | -357.526 | -450.307 | 1.5828E-04 | 1646 | -266.042 | -414.855 | 1.8712E-04 |
| 1252 | -353.018 | -450.507 | 1.5755E-04 | 1647 | -263.798 | -414.929 | 2.0265E-04 |
| 1253 | -350.763 | -450.605 | 1.5387E-04 | 1648 | -261.553 | -415.003 | 1.9558E-04 |
| 1254 | -348.509 | -450.703 | 1.5082E-04 | 1649 | -259.309 | -415.076 | 2.0590E-04 |
| 1255 | -346.255 | -450.801 | 1.5012E-04 | 1650 | -257.065 | -415.149 | 2.0370E-04 |
| 1256 | -344.000 | -450.898 | 1.4024E-04 | 1651 | -254.820 | -415.220 | 1.9728E-04 |
| 1257 | -379.935 | -446.491 | 1.5851E-04 | 1652 | -252.576 | -415.292 | 2.1011E-04 |
| 1258 | -377.682 | -446.597 | 1.6664E-04 | 1653 | -250.332 | -415.362 | 2.2669E-04 |
| 1259 | -375.429 | -446.703 | 1.6683E-04 | 1654 | -248.087 | -415.432 | 2.2866E-04 |
| 1260 | -373.175 | -446.808 | 1.6486E-04 | 1655 | -245.843 | -415.501 | 2.3456E-04 |
| 1261 | -370.922 | -446.912 | 1.6539E-04 | 1656 | -243.598 | -415.570 | 2.3776E-04 |
| 1262 | -368.669 | -447.016 | 1.6627E-04 | 1657 | -241.354 | -415.638 | 2.4057E-04 |
| 1263 | -366.416 | -447.119 | 1.6601E-04 | 1658 | -239.109 | -415.705 | 2.3909E-04 |
| 1264 | -364.162 | -447.222 | 1.6392E-04 | 1659 | -236.865 | -415.772 | 2.4719E-04 |
| 1265 | -361.909 | -447.323 | 1.6310E-04 | 1660 | -234.620 | -415.838 | 2.5017E-04 |
| 1266 | -359.656 | -447.425 | 1.6338E-04 | 1661 | -232.376 | -415.904 | 2.5308E-04 |
| 1267 | -350.642 | -447.823 | 1.5873E-04 | 1662 | -230.131 | -415.969 | 2.5583E-04 |
| 1268 | -348.388 | -447.921 | 1.5532E-04 | 1663 | -227.887 | -416.033 | 2.5841E-04 |
| 1269 | -346.135 | -448.019 | 1.4985E-04 | 1664 | -225.642 | -416.096 | 2.6077E-04 |
| 1270 | -379.803 | -443.709 | 1.6239E-04 | 1665 | -223.398 | -416.159 | 2.6301E-04 |
| 1271 | -377.551 | -443.816 | 1.7092E-04 | 1666 | -221.153 | -416.222 | 2.6471E-04 |
| 1272 | -375.299 | -443.921 | 1.7125E-04 | 1667 | -218.908 | -416.284 | 2.6256E-04 |
| 1273 | -373.046 | -444.026 | 1.7124E-04 | 1668 | -216.664 | -416.345 | 2.6686E-04 |
| 1274 | -370.794 | -444.131 | 1.6667E-04 | 1669 | -214.419 | -416.405 | 2.6161E-04 |
| 1275 | -368.541 | -444.234 | 1.7056E-04 | 1670 | -212.174 | -416.465 | 2.6306E-04 |
| 1276 | -366.289 | -444.337 | 1.6993E-04 | 1671 | -209.930 | -416.524 | 2.6396E-04 |
| 1277 | -364.036 | -444.440 | 1.6976E-04 | 1672 | -207.685 | -416.583 | 2.7145E-04 |
| 1278 | -355.026 | -444.843 | 1.6806E-04 | 1673 | -328.758 | -409.737 | 2.1699E-04 |
| 1279 | -350.520 | -445.041 | 1.6534E-04 | 1674 | -326.515 | -409.829 | 2.1274E-04 |
| 1280 | -348.268 | -445.139 | 1.5992E-04 | 1675 | -324.272 | -409.921 | 2.0143E-04 |
| 1281 | -346.015 | -445.237 | 1.5524E-04 | 1676 | -322.029 | -410.011 | 1.9819E-04 |
| 1282 | -381.923 | -440.821 | 1.6566E-04 | 1677 | -319.786 | -410.101 | 1.9772E-04 |
| 1283 | -379.672 | -440.928 | 1.7097E-04 | 1678 | -317.543 | -410.191 | 1.9553E-04 |
| 1284 | -377.420 | -441.034 | 1.7186E-04 | 1679 | -315.300 | -410.279 | 1.8194E-04 |
| 1285 | -375.169 | -441.140 | 1.7516E-04 | 1680 | -313.057 | -410.367 | 1.9363E-04 |
| 1286 | -372.917 | -441.245 | 1.7556E-04 | 1681 | -310.814 | -410.455 | 1.8721E-04 |
| 1287 | -370.665 | -441.349 | 1.7403E-04 | 1682 | -308.571 | -410.542 | 1.8583E-04 |
| 1288 | -368.414 | -441.453 | 1.7352E-04 | 1683 | -301.842 | -410.799 | 1.8160E-04 |

| | | | |
|---|---|---|---|
| 1289 | -366.162 | -441.556 | 1.7288E-04 |
| 1290 | -354.903 | -442.061 | 1.7070E-04 |
| 1291 | -352.651 | -442.161 | 1.6581E-04 |
| 1292 | -350.399 | -442.259 | 1.6701E-04 |
| 1293 | -348.147 | -442.357 | 1.6210E-04 |
| 1294 | -345.895 | -442.454 | 1.6140E-04 |
| 1295 | -397.546 | -437.275 | 1.6625E-04 |
| 1296 | -384.042 | -437.932 | 1.6924E-04 |
| 1297 | -381.791 | -438.040 | 1.6947E-04 |
| 1298 | -379.540 | -438.146 | 1.7768E-04 |
| 1299 | -377.289 | -438.253 | 1.7861E-04 |
| 1300 | -375.039 | -438.358 | 1.7962E-04 |
| 1301 | -372.788 | -438.463 | 1.8106E-04 |
| 1302 | -370.537 | -438.567 | 1.7843E-04 |
| 1303 | -368.286 | -438.671 | 1.7866E-04 |
| 1304 | -366.035 | -438.774 | 1.7447E-04 |
| 1305 | -363.784 | -438.876 | 1.7716E-04 |
| 1306 | -361.533 | -438.978 | 1.7679E-04 |
| 1307 | -359.282 | -439.079 | 1.7725E-04 |
| 1308 | -352.529 | -439.379 | 1.7339E-04 |
| 1309 | -350.278 | -439.477 | 1.6982E-04 |
| 1310 | -348.026 | -439.575 | 1.6435E-04 |
| 1311 | -345.775 | -439.673 | 1.5805E-04 |
| 1312 | -228.679 | -443.862 | 1.9837E-04 |
| 1313 | -226.427 | -443.926 | 1.9971E-04 |
| 1314 | -224.175 | -443.990 | 2.0095E-04 |
| 1315 | -221.922 | -444.052 | 2.0216E-04 |
| 1316 | -219.670 | -444.114 | 2.0331E-04 |
| 1317 | -401.907 | -434.269 | 1.6448E-04 |
| 1318 | -399.658 | -434.382 | 1.6675E-04 |
| 1319 | -397.408 | -434.493 | 1.6918E-04 |
| 1320 | -383.909 | -435.151 | 1.7957E-04 |
| 1321 | -381.659 | -435.258 | 1.8147E-04 |
| 1322 | -379.409 | -435.365 | 1.8325E-04 |
| 1323 | -377.159 | -435.471 | 1.8055E-04 |
| 1324 | -374.909 | -435.577 | 1.8189E-04 |
| 1325 | -372.659 | -435.682 | 1.8513E-04 |
| 1326 | -368.158 | -435.889 | 1.8350E-04 |
| 1327 | -365.908 | -435.992 | 1.8137E-04 |
| 1328 | -361.408 | -436.196 | 1.8157E-04 |
| 1329 | -359.157 | -436.297 | 1.8136E-04 |
| 1330 | -352.407 | -436.597 | 1.7847E-04 |
| 1331 | -350.156 | -436.695 | 1.7366E-04 |
| 1332 | -347.906 | -436.793 | 1.7441E-04 |
| 1333 | -235.355 | -440.884 | 1.9918E-04 |
| 1334 | -233.103 | -440.950 | 2.0091E-04 |
| 1335 | -230.852 | -441.015 | 2.0260E-04 |
| 1336 | -228.600 | -441.079 | 2.0406E-04 |
| 1337 | -226.349 | -441.143 | 2.0555E-04 |
| 1338 | -224.097 | -441.206 | 2.0645E-04 |
| 1339 | -221.845 | -441.269 | 2.0317E-04 |
| 1340 | -219.594 | -441.331 | 2.0688E-04 |
| 1341 | -217.342 | -441.392 | 2.1055E-04 |
| 1342 | -215.090 | -441.453 | 2.1154E-04 |
| 1343 | -212.838 | -441.513 | 2.1255E-04 |
| 1344 | -401.768 | -431.488 | 1.6636E-04 |
| 1345 | -399.519 | -431.601 | 1.6833E-04 |
| 1346 | -397.270 | -431.713 | 1.7133E-04 |
| 1347 | -386.025 | -432.262 | 1.7439E-04 |
| 1348 | -383.776 | -432.370 | 1.8473E-04 |
| 1349 | -381.526 | -432.477 | 1.8613E-04 |
| 1350 | -379.277 | -432.584 | 1.8733E-04 |
| 1351 | -377.028 | -432.690 | 1.8746E-04 |
| 1352 | -374.779 | -432.795 | 1.8847E-04 |
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| 1853 | -234.294 | -404.709 | 2.7517E-04 |
| 1854 | -232.053 | -404.774 | 2.7871E-04 |
| 1855 | -229.811 | -404.839 | 2.8209E-04 |
| 1856 | -211.879 | -405.335 | 2.7725E-04 |
| 1857 | -314.862 | -399.154 | 2.2585E-04 |
| 1858 | -312.622 | -399.242 | 2.2236E-04 |
| 1859 | -310.382 | -399.330 | 2.1976E-04 |
| 1860 | -308.142 | -399.416 | 2.1742E-04 |
| 1861 | -305.902 | -399.502 | 2.0547E-04 |
| 1862 | -303.662 | -399.588 | 1.9780E-04 |
| 1863 | -301.422 | -399.673 | 2.0841E-04 |
| 1864 | -299.182 | -399.757 | 2.1249E-04 |
| 1865 | -296.942 | -399.841 | 2.1201E-04 |
| 1866 | -294.702 | -399.924 | 2.0976E-04 |
| 1867 | -292.462 | -400.006 | 2.0339E-04 |
| 1868 | -290.222 | -400.088 | 1.9630E-04 |
| 1869 | -287.982 | -400.169 | 1.8751E-04 |
| 1870 | -285.742 | -400.249 | 1.8058E-04 |
| 1871 | -283.502 | -400.329 | 1.8030E-04 |
| 1872 | -281.261 | -400.408 | 1.9863E-04 |
| 1873 | -279.021 | -400.487 | 1.9244E-04 |
| 1874 | -276.781 | -400.565 | 2.0556E-04 |
| 1875 | -274.541 | -400.642 | 2.2026E-04 |
| 1876 | -272.300 | -400.719 | 2.0923E-04 |
| 1877 | -270.060 | -400.795 | 2.2503E-04 |
| 1878 | -267.820 | -400.870 | 2.2430E-04 |
| 1879 | -265.579 | -400.945 | 1.9843E-04 |
| 1880 | -263.339 | -401.019 | 2.0903E-04 |
| 1881 | -261.099 | -401.093 | 2.2482E-04 |
| 1882 | -258.858 | -401.166 | 2.3559E-04 |
| 1883 | -256.618 | -401.238 | 2.4263E-04 |
| 1884 | -216.287 | -402.432 | 3.0284E-04 |
| 1885 | -214.046 | -402.493 | 2.8181E-04 |
| 1886 | -211.805 | -402.552 | 3.0319E-04 |
| 1887 | -314.752 | -396.373 | 2.2996E-04 |
| 1888 | -312.513 | -396.461 | 2.2791E-04 |
| 1889 | -310.274 | -396.548 | 2.2553E-04 |
| 1890 | -308.035 | -396.635 | 2.2324E-04 |
| 1891 | -305.796 | -396.721 | 2.0810E-04 |
| 1892 | -303.556 | -396.807 | 2.1847E-04 |
| 1893 | -301.317 | -396.892 | 2.1156E-04 |
| 1894 | -299.078 | -396.976 | 2.1787E-04 |
| 1895 | -296.839 | -397.059 | 2.1680E-04 |
| 1896 | -294.599 | -397.142 | 2.1210E-04 |
| 1897 | -292.360 | -397.225 | 2.0254E-04 |
| 1898 | -290.121 | -397.306 | 2.0104E-04 |
| 1899 | -287.882 | -397.387 | 2.0955E-04 |
| 1900 | -285.642 | -397.468 | 2.0518E-04 |
| 1901 | -283.403 | -397.548 | 1.9994E-04 |
| 1902 | -281.163 | -397.627 | 1.9892E-04 |
| 1903 | -278.924 | -397.705 | 2.0308E-04 |
| 1904 | -276.684 | -397.783 | 2.0573E-04 |
| 1905 | -274.445 | -397.861 | 2.0515E-04 |
| 1906 | -272.206 | -397.937 | 2.1294E-04 |
| 1907 | -269.966 | -398.013 | 2.1025E-04 |
| 1908 | -267.726 | -398.089 | 1.9571E-04 |
| 1909 | -265.487 | -398.164 | 2.0018E-04 |
| 1910 | -263.247 | -398.238 | 2.2861E-04 |
| 1911 | -261.008 | -398.311 | 2.2228E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1517 | -248.432 | -426.562 | 1.9725E-04 | 1912 | -258.768 | -398.384 | 2.2463E-04 |
| 1518 | -246.185 | -426.631 | 1.9604E-04 | 1913 | -256.528 | -398.456 | 2.4916E-04 |
| 1519 | -243.937 | -426.700 | 2.0978E-04 | 1914 | -254.289 | -398.528 | 2.5318E-04 |
| 1520 | -241.690 | -426.768 | 2.1311E-04 | 1915 | -213.972 | -399.710 | 3.0175E-04 |
| 1521 | -239.442 | -426.836 | 2.1001E-04 | 1916 | -211.732 | -399.770 | 2.9250E-04 |
| 1522 | -237.195 | -426.903 | 2.1901E-04 | 1917 | -209.492 | -399.829 | 3.0282E-04 |
| 1523 | -234.947 | -426.969 | 2.1602E-04 | 1918 | -314.642 | -393.592 | 2.3485E-04 |
| 1524 | -232.699 | -427.034 | 2.2191E-04 | 1919 | -312.404 | -393.680 | 2.3330E-04 |
| 1525 | -230.452 | -427.099 | 2.2450E-04 | 1920 | -310.166 | -393.767 | 2.3213E-04 |
| 1526 | -228.204 | -427.164 | 2.3344E-04 | 1921 | -307.927 | -393.854 | 2.2934E-04 |
| 1527 | -225.956 | -427.227 | 2.2715E-04 | 1922 | -305.689 | -393.940 | 2.2720E-04 |
| 1528 | -223.708 | -427.290 | 2.3084E-04 | 1923 | -303.451 | -394.025 | 2.2341E-04 |
| 1529 | -221.461 | -427.353 | 2.3894E-04 | 1924 | -301.212 | -394.110 | 2.2379E-04 |
| 1530 | -219.213 | -427.415 | 2.4043E-04 | 1925 | -298.974 | -394.194 | 2.2278E-04 |
| 1531 | -216.965 | -427.476 | 2.4110E-04 | 1926 | -296.735 | -394.278 | 2.2072E-04 |
| 1532 | -214.717 | -427.536 | 2.4214E-04 | 1927 | -294.497 | -394.361 | 2.1930E-04 |
| 1533 | -212.469 | -427.596 | 2.3883E-04 | 1928 | -292.258 | -394.443 | 2.1879E-04 |
| 1534 | -210.222 | -427.656 | 2.3423E-04 | 1929 | -290.020 | -394.525 | 2.1877E-04 |
| 1535 | -207.974 | -427.714 | 2.3400E-04 | 1930 | -287.781 | -394.606 | 2.1952E-04 |
| 1536 | -205.726 | -427.772 | 2.4545E-04 | 1931 | -285.543 | -394.686 | 2.1955E-04 |
| 1537 | -203.478 | -427.830 | 2.4525E-04 | 1932 | -283.304 | -394.766 | 2.2035E-04 |
| 1538 | -385.355 | -418.357 | 2.0024E-04 | 1933 | -281.065 | -394.845 | 2.0260E-04 |
| 1539 | -347.182 | -420.104 | 1.9903E-04 | 1934 | -278.827 | -394.924 | 2.0651E-04 |
| 1540 | -266.320 | -423.202 | 1.9563E-04 | 1935 | -276.588 | -395.002 | 2.0558E-04 |
| 1541 | -264.073 | -423.276 | 1.9367E-04 | 1936 | -274.349 | -395.079 | 1.9862E-04 |
| 1542 | -261.826 | -423.350 | 2.0093E-04 | 1937 | -272.111 | -395.156 | 2.0194E-04 |
| 1543 | -259.580 | -423.423 | 2.0319E-04 | 1938 | -269.872 | -395.232 | 2.1208E-04 |
| 1544 | -257.333 | -423.496 | 2.0581E-04 | 1939 | -267.633 | -395.307 | 2.2150E-04 |
| 1545 | -255.086 | -423.568 | 2.0567E-04 | 1940 | -265.394 | -395.382 | 2.2995E-04 |
| 1546 | -252.840 | -423.639 | 1.9634E-04 | 1941 | -263.156 | -395.456 | 2.3421E-04 |
| 1547 | -250.593 | -423.709 | 1.9826E-04 | 1942 | -260.917 | -395.530 | 2.4046E-04 |
| 1548 | -248.346 | -423.779 | 2.0004E-04 | 1943 | -258.678 | -395.602 | 2.4205E-04 |
| 1549 | -246.099 | -423.849 | 2.1103E-04 | 1944 | -216.136 | -396.868 | 3.1799E-04 |
| 1550 | -243.853 | -423.917 | 2.1002E-04 | 1945 | -213.897 | -396.928 | 3.1878E-04 |
| 1551 | -241.606 | -423.986 | 2.1999E-04 | 1946 | -211.658 | -396.988 | 3.0849E-04 |
| 1552 | -239.359 | -424.053 | 2.2545E-04 | 1947 | -209.419 | -397.047 | 3.2076E-04 |
| 1553 | -237.112 | -424.120 | 2.2257E-04 | 1948 | -285.443 | -391.905 | 2.2319E-04 |
| 1554 | -234.865 | -424.186 | 2.2455E-04 | 1949 | -283.205 | -391.985 | 2.1105E-04 |
| 1555 | -232.618 | -424.252 | 2.2921E-04 | 1950 | -280.967 | -392.064 | 1.9337E-04 |
| 1556 | -230.371 | -424.317 | 2.2926E-04 | 1951 | -278.730 | -392.142 | 2.1145E-04 |
| 1557 | -228.125 | -424.381 | 2.3734E-04 | 1952 | -276.492 | -392.220 | 2.1842E-04 |
| 1558 | -225.878 | -424.445 | 2.4151E-04 | 1953 | -274.254 | -392.298 | 2.1763E-04 |
| 1559 | -223.631 | -424.508 | 2.4358E-04 | 1954 | -272.016 | -392.374 | 2.1680E-04 |
| 1560 | -221.384 | -424.570 | 2.4498E-04 | 1955 | -269.778 | -392.450 | 2.2353E-04 |
| 1561 | -219.137 | -424.632 | 2.4687E-04 | 1956 | -267.540 | -392.526 | 2.2724E-04 |
| 1562 | -216.890 | -424.693 | 2.4521E-04 | 1957 | -265.302 | -392.600 | 2.3660E-04 |
| 1563 | -214.643 | -424.754 | 2.4320E-04 | 1958 | -263.064 | -392.674 | 2.5065E-04 |
| 1564 | -212.396 | -424.813 | 2.4087E-04 | 1959 | -260.826 | -392.748 | 2.5390E-04 |
| 1565 | -210.149 | -424.873 | 2.4011E-04 | 1960 | -258.588 | -392.821 | 2.5381E-04 |
| 1566 | -207.902 | -424.931 | 2.3821E-04 | 1961 | -213.823 | -394.146 | 3.2728E-04 |
| 1567 | -205.654 | -424.989 | 2.5172E-04 | 1962 | -211.584 | -394.206 | 3.2906E-04 |
| 1568 | -203.407 | -425.047 | 2.5208E-04 | 1963 | -285.344 | -389.124 | 2.2693E-04 |
| 1569 | -349.306 | -417.225 | 2.0540E-04 | 1964 | -283.107 | -389.203 | 2.0811E-04 |
| 1570 | -329.101 | -418.081 | 1.8764E-04 | 1965 | -280.869 | -389.283 | 2.0438E-04 |
| 1571 | -326.856 | -418.173 | 1.8099E-04 | 1966 | -278.632 | -389.361 | 2.1126E-04 |
| 1572 | -302.157 | -419.144 | 1.8365E-04 | 1967 | -276.395 | -389.439 | 2.2113E-04 |
| 1573 | -266.227 | -420.420 | 1.9105E-04 | 1968 | -274.158 | -389.516 | 2.3914E-04 |
| 1574 | -263.981 | -420.494 | 1.9264E-04 | 1969 | -269.684 | -389.669 | 2.4540E-04 |
| 1575 | -261.735 | -420.568 | 1.9911E-04 | 1970 | -267.447 | -389.744 | 2.4743E-04 |
| 1576 | -259.489 | -420.641 | 2.0753E-04 | 1971 | -211.510 | -391.424 | 3.3688E-04 |
| 1577 | -257.244 | -420.713 | 2.1002E-04 | 1972 | -209.273 | -391.483 | 3.1603E-04 |
| 1578 | -254.998 | -420.785 | 1.9807E-04 | 1973 | -278.535 | -386.580 | 2.1132E-04 |
| 1579 | -252.752 | -420.856 | 1.9656E-04 | 1974 | -276.299 | -386.658 | 2.2575E-04 |
| 1580 | -250.506 | -420.927 | 2.0436E-04 | 1975 | -215.910 | -388.522 | 3.4123E-04 |
| 1581 | -248.260 | -420.997 | 2.1194E-04 | 1976 | -213.599 | -385.800 | 3.5130E-04 |
| 1582 | -246.014 | -421.066 | 2.1828E-04 | 1977 | -211.363 | -385.860 | 3.5349E-04 |
| 1583 | -243.768 | -421.135 | 2.1960E-04 | 1978 | -209.054 | -383.137 | 3.6524E-04 |
| 1584 | -241.522 | -421.203 | 2.2028E-04 | 1979 | -206.746 | -380.413 | 3.5618E-04 |
| 1585 | -239.276 | -421.270 | 2.3136E-04 | 1980 | -204.440 | -377.689 | 3.8821E-04 |
| 1586 | -237.030 | -421.337 | 2.3502E-04 | 1981 | -202.136 | -374.965 | 3.9156E-04 |
| 1587 | -234.784 | -421.403 | 2.3736E-04 | 1982 | -202.065 | -372.183 | 3.8371E-04 |
| 1588 | -232.538 | -421.469 | 2.4016E-04 | 1983 | -201.994 | -369.401 | 4.0912E-04 |
| 1589 | -230.291 | -421.534 | 2.4313E-04 | 1984 | -199.763 | -369.458 | 4.0292E-04 |
| 1590 | -228.045 | -421.598 | 2.3806E-04 | 1985 | -199.693 | -366.676 | 4.3060E-04 |
| 1591 | -225.799 | -421.662 | 2.4793E-04 | 1986 | -195.231 | -366.787 | 4.3822E-04 |
| 1592 | -223.553 | -421.725 | 2.4997E-04 | 1987 | -197.393 | -363.950 | 4.4074E-04 |
| | | | | 1988 | -192.798 | -358.497 | 4.5218E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD |
|---|---|---|---|---|---|---|
| 1988 | -192.798 | -358.497 | DISCRETE | 1.6474E-02 (2001,362,0000) | RANK 1 | 24 HOUR |
| 1980 | -204.440 | -377.689 | DISCRETE | 1.1808E-02 (2001,362,0000) | RANK 2 | 24 HOUR |
| 1987 | -197.393 | -363.950 | DISCRETE | 1.0191E-02 (2001,008,0000) | RANK 3 | 24 HOUR |
| 1988 | -192.798 | -358.497 | DISCRETE | 5.8302E-03 (2001,005,0000) | RANK 4 | 24 HOUR |
| 1988 | -192.798 | -358.497 | DISCRETE | 4.5218E-04 | RANK 1 | 8735 HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2001 CALPUFF Run
     CALPOST Control File for Zion

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2001   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1988*0, 224*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                              (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2001) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1951 2050
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2001
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

OUTPUT FILES

| Default Name | Unit No. | File Name and Path |
|---|---|---|
| CALPOST.LST | 8 | C:\SPC_FF\CALPOST\2001\2001_ZION_PM.LST |
| (TOPN) | 11 | C:\SPC_FF\CALPOST\2001\GRAPHICS\RANK()_SPECIES_ttHR_CONC_ZI.DAT |

CALPOST Version 5.6394 Level 070622

PM10 1

4 RANKED 24 HOUR AVERAGE CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR (YEAR,DAY,ENDING TIME) (ug/m**3)

| RECEPTOR | COORDINATES (km) | | 1 RANK | 2 RANK | 3 RANK | 4 RANK |
|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 2.1924E-02 (2001,017,0000) | 1.4643E-02 (2001,016,0000) | 1.1373E-02 (2001,018,0000) | 9.2513E-03 (2001,358,0000) |
| 1990 | -306.221 | -311.322 | 2.2310E-02 (2001,017,0000) | 1.4582E-02 (2001,016,0000) | 1.1552E-02 (2001,018,0000) | 9.0005E-03 (2001,029,0000) |
| 1991 | -304.745 | -311.379 | 2.2777E-02 (2001,017,0000) | 1.4485E-02 (2001,016,0000) | 1.2017E-02 (2001,018,0000) | 8.8423E-03 (2001,029,0000) |
| 1992 | -303.268 | -311.436 | 2.3112E-02 (2001,017,0000) | 1.4345E-02 (2001,016,0000) | 1.2143E-02 (2001,018,0000) | 8.6797E-03 (2001,029,0000) |
| 1993 | -301.791 | -311.492 | 2.3036E-02 (2001,017,0000) | 1.4132E-02 (2001,016,0000) | 1.1997E-02 (2001,018,0000) | 8.5152E-03 (2001,029,0000) |
| 1994 | -307.626 | -309.412 | 2.1555E-02 (2001,017,0000) | 1.5068E-02 (2001,016,0000) | 1.1192E-02 (2001,018,0000) | 9.6347E-03 (2001,358,0000) |
| 1995 | -306.150 | -309.469 | 2.1976E-02 (2001,017,0000) | 1.5044E-02 (2001,016,0000) | 1.1223E-02 (2001,018,0000) | 9.2426E-03 (2001,358,0000) |
| 1996 | -304.673 | -309.526 | 2.2590E-02 (2001,017,0000) | 1.4987E-02 (2001,016,0000) | 1.2011E-02 (2001,018,0000) | 8.8680E-03 (2001,029,0000) |
| 1997 | -303.197 | -309.583 | 2.3108E-02 (2001,017,0000) | 1.4884E-02 (2001,016,0000) | 1.2256E-02 (2001,018,0000) | 8.6879E-03 (2001,029,0000) |
| 1998 | -301.720 | -309.640 | 2.2982E-02 (2001,017,0000) | 1.4691E-02 (2001,016,0000) | 1.2010E-02 (2001,018,0000) | 8.5026E-03 (2001,029,0000) |
| 1999 | -300.244 | -309.696 | 2.3095E-02 (2001,017,0000) | 1.4478E-02 (2001,016,0000) | 1.2035E-02 (2001,018,0000) | 8.3193E-03 (2001,029,0000) |
| 2000 | -298.767 | -309.752 | 2.2856E-02 (2001,017,0000) | 1.4195E-02 (2001,016,0000) | 1.1849E-02 (2001,018,0000) | 8.1367E-03 (2001,029,0000) |
| 2001 | -317.886 | -307.150 | 1.4898E-02 (2001,017,0000) | 1.4081E-02 (2001,016,0000) | 1.2009E-02 (2001,358,0000) | 1.0215E-02 (2001,029,0000) |
| 2002 | -316.410 | -307.209 | 1.5906E-02 (2001,017,0000) | 1.4387E-02 (2001,016,0000) | 1.1832E-02 (2001,358,0000) | 1.0138E-02 (2001,029,0000) |
| 2003 | -314.934 | -307.268 | 1.6888E-02 (2001,017,0000) | 1.4661E-02 (2001,016,0000) | 1.1611E-02 (2001,358,0000) | 1.0036E-02 (2001,018,0000) |
| 2004 | -313.458 | -307.327 | 1.7910E-02 (2001,017,0000) | 1.4904E-02 (2001,016,0000) | 1.1357E-02 (2001,358,0000) | 1.0409E-02 (2001,018,0000) |
| 2005 | -311.982 | -307.385 | 1.8887E-02 (2001,017,0000) | 1.5116E-02 (2001,016,0000) | 1.1068E-02 (2001,358,0000) | 1.0926E-02 (2001,018,0000) |
| 2006 | -309.030 | -307.501 | 2.0598E-02 (2001,017,0000) | 1.5405E-02 (2001,016,0000) | 1.1622E-02 (2001,018,0000) | 1.0397E-02 (2001,358,0000) |
| 2007 | -307.554 | -307.559 | 2.1695E-02 (2001,017,0000) | 1.5506E-02 (2001,016,0000) | 1.2250E-02 (2001,018,0000) | 1.0058E-02 (2001,358,0000) |
| 2008 | -306.078 | -307.616 | 2.2001E-02 (2001,017,0000) | 1.5505E-02 (2001,016,0000) | 1.2082E-02 (2001,018,0000) | 9.6431E-03 (2001,358,0000) |
| 2009 | -304.602 | -307.673 | 2.2731E-02 (2001,017,0000) | 1.5493E-02 (2001,016,0000) | 1.2372E-02 (2001,018,0000) | 9.2563E-03 (2001,358,0000) |
| 2010 | -303.125 | -307.730 | 2.2744E-02 (2001,017,0000) | 1.5383E-02 (2001,016,0000) | 1.2093E-02 (2001,018,0000) | 8.8252E-03 (2001,358,0000) |
| 2011 | -301.649 | -307.787 | 2.2665E-02 (2001,017,0000) | 1.5216E-02 (2001,016,0000) | 1.1218E-02 (2001,018,0000) | 8.4602E-03 (2001,029,0000) |
| 2012 | -300.173 | -307.843 | 2.3035E-02 (2001,017,0000) | 1.5049E-02 (2001,016,0000) | 1.2014E-02 (2001,018,0000) | 8.2630E-03 (2001,029,0000) |
| 2013 | -298.697 | -307.899 | 2.2660E-02 (2001,017,0000) | 1.4771E-02 (2001,016,0000) | 1.1431E-02 (2001,018,0000) | 8.0647E-03 (2001,029,0000) |
| 2014 | -317.812 | -305.297 | 1.4126E-02 (2001,016,0000) | 1.4062E-02 (2001,017,0000) | 1.2275E-02 (2001,358,0000) | 1.0392E-02 (2001,029,0000) |
| 2015 | -316.336 | -305.356 | 1.4991E-02 (2001,017,0000) | 1.4450E-02 (2001,016,0000) | 1.2108E-02 (2001,358,0000) | 1.0218E-02 (2001,029,0000) |
| 2016 | -314.860 | -305.415 | 1.6140E-02 (2001,017,0000) | 1.4791E-02 (2001,016,0000) | 1.1927E-02 (2001,358,0000) | 1.0176E-02 (2001,029,0000) |
| 2017 | -313.385 | -305.474 | 1.7487E-02 (2001,017,0000) | 1.5102E-02 (2001,016,0000) | 1.1741E-02 (2001,358,0000) | 1.1066E-02 (2001,018,0000) |
| 2018 | -311.909 | -305.533 | 1.8517E-02 (2001,017,0000) | 1.5357E-02 (2001,016,0000) | 1.1467E-02 (2001,358,0000) | 1.1417E-02 (2001,018,0000) |
| 2019 | -308.957 | -305.649 | 1.9781E-02 (2001,017,0000) | 1.5693E-02 (2001,016,0000) | 1.0751E-02 (2001,358,0000) | 1.0616E-02 (2001,018,0000) |
| 2020 | -307.482 | -305.706 | 2.0795E-02 (2001,017,0000) | 1.5830E-02 (2001,016,0000) | 1.1651E-02 (2001,018,0000) | 1.0404E-02 (2001,358,0000) |
| 2021 | -306.006 | -305.764 | 2.1901E-02 (2001,017,0000) | 1.5935E-02 (2001,016,0000) | 1.2321E-02 (2001,018,0000) | 1.0054E-02 (2001,358,0000) |
| 2022 | -304.530 | -305.821 | 2.2539E-02 (2001,017,0000) | 1.5955E-02 (2001,016,0000) | 1.2470E-02 (2001,018,0000) | 9.6517E-03 (2001,358,0000) |
| 2023 | -303.054 | -305.878 | 2.2833E-02 (2001,017,0000) | 1.5898E-02 (2001,016,0000) | 1.2357E-02 (2001,018,0000) | 9.2226E-03 (2001,358,0000) |
| 2024 | -301.579 | -305.934 | 2.3264E-02 (2001,017,0000) | 1.5808E-02 (2001,016,0000) | 1.2463E-02 (2001,018,0000) | 8.8036E-03 (2001,358,0000) |
| 2025 | -300.103 | -305.990 | 2.3392E-02 (2001,017,0000) | 1.5647E-02 (2001,016,0000) | 1.2374E-02 (2001,018,0000) | 8.3747E-03 (2001,358,0000) |
| 2026 | -298.627 | -306.046 | 2.3272E-02 (2001,017,0000) | 1.5414E-02 (2001,016,0000) | 1.2154E-02 (2001,018,0000) | 7.9710E-03 (2001,029,0000) |
| 2027 | -319.212 | -303.385 | 1.3713E-02 (2001,016,0000) | 1.2592E-02 (2001,358,0000) | 1.2194E-02 (2001,017,0000) | 1.0613E-02 (2001,029,0000) |
| 2028 | -317.737 | -303.445 | 1.4116E-02 (2001,016,0000) | 1.3159E-02 (2001,017,0000) | 1.2502E-02 (2001,358,0000) | 1.0533E-02 (2001,029,0000) |
| 2029 | -316.262 | -303.504 | 1.4502E-02 (2001,016,0000) | 1.4221E-02 (2001,017,0000) | 1.2382E-02 (2001,358,0000) | 1.0422E-02 (2001,029,0000) |
| 2030 | -314.786 | -303.563 | 1.5237E-02 (2001,017,0000) | 1.4861E-02 (2001,016,0000) | 1.2205E-02 (2001,358,0000) | 1.0283E-02 (2001,029,0000) |
| 2031 | -313.311 | -303.622 | 1.6340E-02 (2001,017,0000) | 1.5195E-02 (2001,016,0000) | 1.1999E-02 (2001,358,0000) | 1.0261E-02 (2001,018,0000) |
| 2032 | -311.836 | -303.680 | 1.7790E-02 (2001,017,0000) | 1.5529E-02 (2001,016,0000) | 1.1822E-02 (2001,358,0000) | 1.1257E-02 (2001,018,0000) |
| 2033 | -310.360 | -303.738 | 1.8421E-02 (2001,017,0000) | 1.5754E-02 (2001,016,0000) | 1.1457E-02 (2001,358,0000) | 1.1049E-02 (2001,018,0000) |
| 2034 | -308.885 | -303.796 | 1.9230E-02 (2001,017,0000) | 1.5957E-02 (2001,016,0000) | 1.1114E-02 (2001,358,0000) | 1.0532E-02 (2001,018,0000) |
| 2035 | -307.409 | -303.854 | 2.0090E-02 (2001,017,0000) | 1.6125E-02 (2001,016,0000) | 1.0760E-02 (2001,358,0000) | 1.0721E-02 (2001,018,0000) |
| 2036 | -305.934 | -303.911 | 2.1125E-02 (2001,017,0000) | 1.6268E-02 (2001,016,0000) | 1.1943E-02 (2001,018,0000) | 1.0406E-02 (2001,358,0000) |
| 2037 | -304.459 | -303.968 | 2.1961E-02 (2001,017,0000) | 1.6344E-02 (2001,016,0000) | 1.2227E-02 (2001,018,0000) | 1.0019E-02 (2001,358,0000) |
| 2038 | -302.983 | -304.025 | 2.2631E-02 (2001,017,0000) | 1.6359E-02 (2001,016,0000) | 1.2410E-02 (2001,018,0000) | 9.6109E-03 (2001,358,0000) |
| 2039 | -301.508 | -304.082 | 2.3213E-02 (2001,017,0000) | 1.6320E-02 (2001,016,0000) | 1.2599E-02 (2001,018,0000) | 9.1954E-03 (2001,358,0000) |
| 2040 | -300.032 | -304.138 | 2.3533E-02 (2001,017,0000) | 1.6214E-02 (2001,016,0000) | 1.2608E-02 (2001,018,0000) | 8.7639E-03 (2001,358,0000) |
| 2041 | -298.557 | -304.194 | 2.3619E-02 (2001,017,0000) | 1.6028E-02 (2001,016,0000) | 1.2500E-02 (2001,018,0000) | 8.3236E-03 (2001,358,0000) |
| 2042 | -319.137 | -301.533 | 1.3611E-02 (2001,016,0000) | 1.2738E-02 (2001,358,0000) | 1.1255E-02 (2001,017,0000) | 1.0748E-02 (2001,029,0000) |
| 2043 | -317.662 | -301.592 | 1.4049E-02 (2001,016,0000) | 1.2693E-02 (2001,358,0000) | 1.2239E-02 (2001,017,0000) | 1.0656E-02 (2001,029,0000) |
| 2044 | -316.187 | -301.651 | 1.4478E-02 (2001,016,0000) | 1.3328E-02 (2001,017,0000) | 1.2612E-02 (2001,358,0000) | 1.0528E-02 (2001,029,0000) |
| 2045 | -314.712 | -301.710 | 1.4878E-02 (2001,016,0000) | 1.4368E-02 (2001,017,0000) | 1.2465E-02 (2001,358,0000) | 1.0367E-02 (2001,029,0000) |
| 2046 | -313.237 | -301.769 | 1.5525E-02 (2001,017,0000) | 1.5258E-02 (2001,016,0000) | 1.2294E-02 (2001,358,0000) | 1.0180E-02 (2001,029,0000) |
| 2047 | -311.762 | -301.827 | 1.6962E-02 (2001,017,0000) | 1.5639E-02 (2001,016,0000) | 1.2146E-02 (2001,358,0000) | 1.0985E-02 (2001,018,0000) |
| 2048 | -310.287 | -301.886 | 1.8052E-02 (2001,017,0000) | 1.5954E-02 (2001,016,0000) | 1.1872E-02 (2001,358,0000) | 1.1368E-02 (2001,018,0000) |
| 2049 | -308.812 | -301.944 | 1.9101E-02 (2001,017,0000) | 1.6225E-02 (2001,016,0000) | 1.1712E-02 (2001,018,0000) | 1.1557E-02 (2001,358,0000) |
| 2050 | -307.337 | -302.001 | 1.9688E-02 (2001,017,0000) | 1.6406E-02 (2001,016,0000) | 1.1550E-02 (2001,018,0000) | 1.1147E-02 (2001,358,0000) |
| 2051 | -305.862 | -302.059 | 2.0908E-02 (2001,017,0000) | 1.6608E-02 (2001,016,0000) | 1.2153E-02 (2001,018,0000) | 1.0822E-02 (2001,358,0000) |
| 2052 | -304.387 | -302.116 | 2.1762E-02 (2001,017,0000) | 1.6733E-02 (2001,016,0000) | 1.2402E-02 (2001,018,0000) | 1.0430E-02 (2001,358,0000) |
| 2053 | -302.912 | -302.172 | 2.2504E-02 (2001,017,0000) | 1.6803E-02 (2001,016,0000) | 1.2597E-02 (2001,018,0000) | 1.0021E-02 (2001,358,0000) |
| 2054 | -301.437 | -302.229 | 2.3027E-02 (2001,017,0000) | 1.6795E-02 (2001,016,0000) | 1.2640E-02 (2001,018,0000) | 9.5849E-03 (2001,358,0000) |
| 2055 | -299.962 | -302.285 | 2.3429E-02 (2001,017,0000) | 1.6725E-02 (2001,016,0000) | 1.2661E-02 (2001,018,0000) | 9.1458E-03 (2001,358,0000) |
| 2056 | -298.487 | -302.341 | 2.3623E-02 (2001,017,0000) | 1.6586E-02 (2001,016,0000) | 1.2577E-02 (2001,018,0000) | 8.6985E-03 (2001,358,0000) |
| 2057 | -319.062 | -299.680 | 1.3468E-02 (2001,016,0000) | 1.2902E-02 (2001,358,0000) | 1.0863E-02 (2001,029,0000) | 1.0469E-02 (2001,017,0000) |
| 2058 | -317.588 | -299.740 | 1.3952E-02 (2001,016,0000) | 1.2927E-02 (2001,358,0000) | 1.1544E-02 (2001,017,0000) | 1.0755E-02 (2001,029,0000) |
| 2059 | -316.113 | -299.799 | 1.4419E-02 (2001,016,0000) | 1.2895E-02 (2001,358,0000) | 1.2669E-02 (2001,017,0000) | 1.0610E-02 (2001,029,0000) |
| 2060 | -314.639 | -299.858 | 1.4844E-02 (2001,016,0000) | 1.3563E-02 (2001,017,0000) | 1.2717E-02 (2001,358,0000) | 1.0429E-02 (2001,029,0000) |
| 2061 | -313.164 | -299.917 | 1.5270E-02 (2001,016,0000) | 1.4743E-02 (2001,017,0000) | 1.2583E-02 (2001,358,0000) | 1.0221E-02 (2001,029,0000) |
| 2062 | -311.689 | -299.975 | 1.5865E-02 (2001,017,0000) | 1.5664E-02 (2001,016,0000) | 1.2379E-02 (2001,358,0000) | 1.0390E-02 (2001,018,0000) |
| 2063 | -310.214 | -300.033 | 1.7236E-02 (2001,017,0000) | 1.6053E-02 (2001,016,0000) | 1.2200E-02 (2001,358,0000) | 1.1098E-02 (2001,018,0000) |
| 2064 | -308.740 | -300.091 | 1.8349E-02 (2001,017,0000) | 1.6375E-02 (2001,016,0000) | 1.1907E-02 (2001,358,0000) | 1.1482E-02 (2001,018,0000) |
| 2065 | -307.265 | -300.149 | 1.9406E-02 (2001,017,0000) | 1.6652E-02 (2001,016,0000) | 1.1824E-02 (2001,018,0000) | 1.1573E-02 (2001,358,0000) |
| 2066 | -305.790 | -300.206 | 1.9822E-02 (2001,017,0000) | 1.6815E-02 (2001,016,0000) | 1.1122E-02 (2001,358,0000) | 1.0880E-02 (2001,018,0000) |
| 2067 | -304.316 | -300.263 | 2.1291E-02 (2001,017,0000) | 1.7054E-02 (2001,016,0000) | 1.2344E-02 (2001,018,0000) | 1.0820E-02 (2001,358,0000) |
| 2068 | -302.841 | -300.320 | 2.2123E-02 (2001,017,0000) | 1.7179E-02 (2001,016,0000) | 1.2566E-02 (2001,018,0000) | 1.0414E-02 (2001,358,0000) |
| 2069 | -301.366 | -300.376 | 2.2798E-02 (2001,017,0000) | 1.7232E-02 (2001,016,0000) | 1.2698E-02 (2001,018,0000) | 9.9858E-03 (2001,358,0000) |
| 2070 | -299.891 | -300.432 | 2.3334E-02 (2001,017,0000) | 1.7217E-02 (2001,016,0000) | 1.2773E-02 (2001,018,0000) | 9.5452E-03 (2001,358,0000) |
| 2071 | -298.417 | -300.488 | 2.3702E-02 (2001,017,0000) | 1.7129E-02 (2001,016,0000) | 1.2779E-02 (2001,018,0000) | 9.0960E-03 (2001,358,0000) |
| 2072 | -318.988 | -297.828 | 1.3247E-02 (2001,016,0000) | 1.2893E-02 (2001,358,0000) | 1.0902E-02 (2001,029,0000) | 9.4147E-03 (2001,017,0000) |
| 2073 | -317.513 | -297.887 | 1.3766E-02 (2001,016,0000) | 1.2990E-02 (2001,358,0000) | 1.0825E-02 (2001,029,0000) | 1.0523E-02 (2001,017,0000) |
| 2074 | -316.039 | -297.946 | 1.4263E-02 (2001,016,0000) | 1.2977E-02 (2001,358,0000) | 1.1560E-02 (2001,017,0000) | 1.0662E-02 (2001,029,0000) |
| 2075 | -314.565 | -298.005 | 1.4772E-02 (2001,016,0000) | 1.3019E-02 (2001,358,0000) | 1.2899E-02 (2001,017,0000) | 1.0467E-02 (2001,029,0000) |
| 2076 | -313.090 | -298.064 | 1.5230E-02 (2001,016,0000) | 1.3993E-02 (2001,017,0000) | 1.2874E-02 (2001,358,0000) | 1.0236E-02 (2001,029,0000) |
| 2077 | -311.616 | -298.122 | 1.5679E-02 (2001,016,0000) | 1.5214E-02 (2001,017,0000) | 1.2730E-02 (2001,358,0000) | 1.0323E-02 (2001,018,0000) |
| 2078 | -310.142 | -298.181 | 1.6388E-02 (2001,017,0000) | 1.6090E-02 (2001,016,0000) | 1.2508E-02 (2001,358,0000) | 1.0787E-02 (2001,018,0000) |
| 2079 | -308.667 | -298.238 | 1.7547E-02 (2001,017,0000) | 1.6467E-02 (2001,016,0000) | 1.2241E-02 (2001,358,0000) | 1.1218E-02 (2001,018,0000) |
| 2080 | -307.193 | -298.296 | 1.8656E-02 (2001,017,0000) | 1.6796E-02 (2001,016,0000) | 1.1923E-02 (2001,358,0000) | 1.1592E-02 (2001,018,0000) |
| 2081 | -305.719 | -298.353 | 1.9642E-02 (2001,017,0000) | 1.7068E-02 (2001,016,0000) | 1.1825E-02 (2001,018,0000) | 1.1560E-02 (2001,358,0000) |
| 2082 | -304.244 | -298.410 | 2.0744E-02 (2001,017,0000) | 1.7317E-02 (2001,016,0000) | 1.2243E-02 (2001,018,0000) | 1.1207E-02 (2001,358,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2083 | -302.770 | -298.467 | 2.1655E-02 (2001,017,0000) | 1.7496E-02 (2001,016,0000) | 1.2492E-02 (2001,018,0000) | 1.0807E-02 (2001,358,0000) |
| 2084 | -301.295 | -298.524 | 2.2448E-02 (2001,017,0000) | 1.7609E-02 (2001,016,0000) | 1.2677E-02 (2001,018,0000) | 1.0384E-02 (2001,358,0000) |
| 2085 | -299.821 | -298.580 | 2.3106E-02 (2001,017,0000) | 1.7655E-02 (2001,016,0000) | 1.2804E-02 (2001,018,0000) | 9.9434E-03 (2001,358,0000) |
| 2086 | -318.913 | -295.975 | 1.3005E-02 (2001,016,0000) | 1.2959E-02 (2001,358,0000) | 1.1001E-02 (2001,029,0000) | 8.6617E-03 (2001,017,0000) |
| 2087 | -317.439 | -296.035 | 1.3546E-02 (2001,016,0000) | 1.3087E-02 (2001,358,0000) | 1.0868E-02 (2001,029,0000) | 9.6903E-03 (2001,017,0000) |
| 2088 | -315.965 | -296.094 | 1.4057E-02 (2001,016,0000) | 1.3062E-02 (2001,358,0000) | 1.0689E-02 (2001,029,0000) | 1.0602E-02 (2001,017,0000) |
| 2089 | -314.491 | -296.153 | 1.4587E-02 (2001,016,0000) | 1.3084E-02 (2001,358,0000) | 1.1777E-02 (2001,017,0000) | 1.0472E-02 (2001,029,0000) |
| 2090 | -313.017 | -296.212 | 1.5080E-02 (2001,016,0000) | 1.2987E-02 (2001,358,0000) | 1.2855E-02 (2001,017,0000) | 1.0222E-02 (2001,029,0000) |
| 2091 | -311.543 | -296.270 | 1.5576E-02 (2001,016,0000) | 1.4128E-02 (2001,017,0000) | 1.2900E-02 (2001,358,0000) | 9.9433E-03 (2001,029,0000) |
| 2092 | -310.069 | -296.328 | 1.6065E-02 (2001,016,0000) | 1.5510E-02 (2001,017,0000) | 1.2792E-02 (2001,358,0000) | 1.0441E-02 (2001,018,0000) |
| 2093 | -308.595 | -296.386 | 1.6699E-02 (2001,017,0000) | 1.6488E-02 (2001,016,0000) | 1.2547E-02 (2001,358,0000) | 1.0903E-02 (2001,018,0000) |
| 2094 | -307.121 | -296.444 | 1.7891E-02 (2001,017,0000) | 1.6877E-02 (2001,016,0000) | 1.2271E-02 (2001,358,0000) | 1.1347E-02 (2001,018,0000) |
| 2095 | -305.647 | -296.501 | 1.9000E-02 (2001,017,0000) | 1.7214E-02 (2001,016,0000) | 1.1932E-02 (2001,358,0000) | 1.1700E-02 (2001,018,0000) |
| 2096 | -304.173 | -296.558 | 2.0078E-02 (2001,017,0000) | 1.7508E-02 (2001,016,0000) | 1.2046E-02 (2001,018,0000) | 1.1574E-02 (2001,358,0000) |
| 2097 | -302.699 | -296.615 | 2.0962E-02 (2001,017,0000) | 1.7726E-02 (2001,016,0000) | 1.2200E-02 (2001,018,0000) | 1.1167E-02 (2001,358,0000) |
| 2098 | -301.225 | -296.671 | 2.2017E-02 (2001,017,0000) | 1.7930E-02 (2001,016,0000) | 1.2622E-02 (2001,018,0000) | 1.0781E-02 (2001,358,0000) |
| 2099 | -318.838 | -294.123 | 1.3046E-02 (2001,358,0000) | 1.2724E-02 (2001,016,0000) | 1.1023E-02 (2001,029,0000) | 7.9953E-03 (2001,017,0000) |
| 2100 | -317.364 | -294.182 | 1.3288E-02 (2001,016,0000) | 1.3210E-02 (2001,358,0000) | 1.0877E-02 (2001,029,0000) | 8.9727E-03 (2001,017,0000) |
| 2101 | -315.890 | -294.242 | 1.3822E-02 (2001,016,0000) | 1.3186E-02 (2001,358,0000) | 1.0682E-02 (2001,029,0000) | 9.8321E-03 (2001,017,0000) |
| 2102 | -314.417 | -294.301 | 1.4401E-02 (2001,016,0000) | 1.3333E-02 (2001,358,0000) | 1.1082E-02 (2001,017,0000) | 1.0450E-02 (2001,029,0000) |
| 2103 | -312.943 | -294.359 | 1.4931E-02 (2001,016,0000) | 1.3261E-02 (2001,358,0000) | 1.2175E-02 (2001,017,0000) | 1.0179E-02 (2001,029,0000) |
| 2104 | -311.470 | -294.418 | 1.5467E-02 (2001,016,0000) | 1.3400E-02 (2001,017,0000) | 1.3200E-02 (2001,358,0000) | 9.8801E-03 (2001,029,0000) |
| 2105 | -309.996 | -294.476 | 1.5972E-02 (2001,016,0000) | 1.4613E-02 (2001,017,0000) | 1.3048E-02 (2001,358,0000) | 1.0058E-02 (2001,018,0000) |
| 2106 | -308.522 | -294.534 | 1.6446E-02 (2001,016,0000) | 1.5840E-02 (2001,017,0000) | 1.2846E-02 (2001,358,0000) | 1.0569E-02 (2001,018,0000) |
| 2107 | -307.049 | -294.591 | 1.7064E-02 (2001,017,0000) | 1.6894E-02 (2001,016,0000) | 1.2593E-02 (2001,358,0000) | 1.1050E-02 (2001,018,0000) |
| 2108 | -305.575 | -294.648 | 1.8208E-02 (2001,017,0000) | 1.7279E-02 (2001,016,0000) | 1.2271E-02 (2001,358,0000) | 1.1416E-02 (2001,018,0000) |
| 2109 | -304.101 | -294.705 | 1.9368E-02 (2001,017,0000) | 1.7632E-02 (2001,016,0000) | 1.1937E-02 (2001,358,0000) | 1.1822E-02 (2001,018,0000) |
| 2110 | -302.627 | -294.762 | 2.0512E-02 (2001,017,0000) | 1.7949E-02 (2001,016,0000) | 1.2232E-02 (2001,018,0000) | 1.1584E-02 (2001,358,0000) |
| 2111 | -301.154 | -294.819 | 2.1508E-02 (2001,017,0000) | 1.8189E-02 (2001,016,0000) | 1.2523E-02 (2001,018,0000) | 1.1179E-02 (2001,358,0000) |
| 2112 | -318.763 | -292.271 | 1.3018E-02 (2001,358,0000) | 1.2389E-02 (2001,016,0000) | 1.1005E-02 (2001,029,0000) | 7.2546E-03 (2001,017,0000) |
| 2113 | -317.289 | -292.330 | 1.3186E-02 (2001,358,0000) | 1.2963E-02 (2001,016,0000) | 1.0850E-02 (2001,029,0000) | 8.1367E-03 (2001,017,0000) |
| 2114 | -315.816 | -292.389 | 1.3548E-02 (2001,016,0000) | 1.3347E-02 (2001,358,0000) | 1.0645E-02 (2001,029,0000) | 9.1436E-03 (2001,017,0000) |
| 2115 | -314.343 | -292.448 | 1.4129E-02 (2001,016,0000) | 1.3426E-02 (2001,358,0000) | 1.0395E-02 (2001,029,0000) | 1.0195E-02 (2001,017,0000) |
| 2116 | -312.870 | -292.507 | 1.4696E-02 (2001,016,0000) | 1.3414E-02 (2001,358,0000) | 1.1301E-02 (2001,017,0000) | 1.0107E-02 (2001,029,0000) |
| 2117 | -311.396 | -292.565 | 1.5267E-02 (2001,016,0000) | 1.3384E-02 (2001,358,0000) | 1.2486E-02 (2001,017,0000) | 9.7882E-03 (2001,029,0000) |
| 2118 | -309.923 | -292.623 | 1.5807E-02 (2001,016,0000) | 1.3696E-02 (2001,017,0000) | 1.3264E-02 (2001,358,0000) | 9.6360E-03 (2001,018,0000) |
| 2119 | -308.450 | -292.681 | 1.6340E-02 (2001,016,0000) | 1.4949E-02 (2001,017,0000) | 1.3112E-02 (2001,358,0000) | 1.0193E-02 (2001,018,0000) |
| 2120 | -306.976 | -292.739 | 1.6825E-02 (2001,016,0000) | 1.6194E-02 (2001,017,0000) | 1.2880E-02 (2001,358,0000) | 1.0698E-02 (2001,018,0000) |
| 2121 | -305.503 | -292.796 | 1.7234E-02 (2001,016,0000) | 1.7178E-02 (2001,017,0000) | 1.2526E-02 (2001,358,0000) | 1.0836E-02 (2001,018,0000) |
| 2122 | -304.030 | -292.853 | 1.8357E-02 (2001,017,0000) | 1.7643E-02 (2001,016,0000) | 1.2215E-02 (2001,358,0000) | 1.1234E-02 (2001,018,0000) |
| 2123 | -302.556 | -292.910 | 1.9426E-02 (2001,017,0000) | 1.7992E-02 (2001,016,0000) | 1.1851E-02 (2001,358,0000) | 1.1522E-02 (2001,018,0000) |
| 2124 | -301.083 | -292.966 | 2.0580E-02 (2001,017,0000) | 1.8312E-02 (2001,016,0000) | 1.1942E-02 (2001,018,0000) | 1.1492E-02 (2001,358,0000) |
| 2125 | -318.688 | -290.418 | 1.2933E-02 (2001,358,0000) | 1.2009E-02 (2001,016,0000) | 1.0947E-02 (2001,029,0000) | 6.5290E-03 (2001,017,0000) |
| 2126 | -317.215 | -290.478 | 1.3163E-02 (2001,358,0000) | 1.2599E-02 (2001,016,0000) | 1.0784E-02 (2001,029,0000) | 7.3845E-03 (2001,017,0000) |
| 2127 | -315.742 | -290.537 | 1.3351E-02 (2001,358,0000) | 1.3199E-02 (2001,016,0000) | 1.0567E-02 (2001,029,0000) | 8.3215E-03 (2001,017,0000) |
| 2128 | -314.269 | -290.596 | 1.3803E-02 (2001,016,0000) | 1.3471E-02 (2001,358,0000) | 1.0304E-02 (2001,029,0000) | 9.3362E-03 (2001,017,0000) |
| 2129 | -312.796 | -290.654 | 1.4406E-02 (2001,016,0000) | 1.3533E-02 (2001,358,0000) | 1.0427E-02 (2001,017,0000) | 9.9990E-03 (2001,029,0000) |
| 2130 | -311.323 | -290.713 | 1.4994E-02 (2001,016,0000) | 1.3505E-02 (2001,358,0000) | 1.1560E-02 (2001,017,0000) | 9.6627E-03 (2001,029,0000) |
| 2131 | -309.850 | -290.771 | 1.5591E-02 (2001,016,0000) | 1.3470E-02 (2001,358,0000) | 1.2792E-02 (2001,017,0000) | 9.3018E-03 (2001,029,0000) |
| 2132 | -308.377 | -290.829 | 1.6158E-02 (2001,016,0000) | 1.4046E-02 (2001,017,0000) | 1.3348E-02 (2001,358,0000) | 9.7817E-03 (2001,018,0000) |
| 2133 | -306.904 | -290.886 | 1.6703E-02 (2001,016,0000) | 1.5325E-02 (2001,017,0000) | 1.3169E-02 (2001,358,0000) | 1.0335E-02 (2001,018,0000) |
| 2134 | -305.431 | -290.943 | 1.7127E-02 (2001,016,0000) | 1.6181E-02 (2001,017,0000) | 1.2764E-02 (2001,358,0000) | 1.0275E-02 (2001,018,0000) |
| 2135 | -303.958 | -291.000 | 1.7879E-02 (2001,017,0000) | 1.7699E-02 (2001,016,0000) | 1.2652E-02 (2001,358,0000) | 1.1360E-02 (2001,018,0000) |
| 2136 | -302.485 | -291.057 | 1.9115E-02 (2001,017,0000) | 1.8127E-02 (2001,016,0000) | 1.2325E-02 (2001,358,0000) | 1.1809E-02 (2001,018,0000) |
| 2137 | -301.012 | -291.114 | 2.0287E-02 (2001,017,0000) | 1.8502E-02 (2001,016,0000) | 1.2208E-02 (2001,018,0000) | 1.1958E-02 (2001,358,0000) |
| 2138 | -318.613 | -288.566 | 1.2778E-02 (2001,358,0000) | 1.1589E-02 (2001,016,0000) | 1.0845E-02 (2001,029,0000) | 6.3731E-03 (2001,324,0000) |
| 2139 | -317.140 | -288.625 | 1.3063E-02 (2001,358,0000) | 1.2190E-02 (2001,016,0000) | 1.0675E-02 (2001,029,0000) | 6.6447E-03 (2001,017,0000) |
| 2140 | -315.668 | -288.684 | 1.3294E-02 (2001,358,0000) | 1.2804E-02 (2001,016,0000) | 1.0451E-02 (2001,029,0000) | 7.5343E-03 (2001,017,0000) |
| 2141 | -314.195 | -288.743 | 1.3471E-02 (2001,358,0000) | 1.3427E-02 (2001,016,0000) | 1.0176E-02 (2001,029,0000) | 8.5069E-03 (2001,017,0000) |
| 2142 | -312.722 | -288.802 | 1.4055E-02 (2001,016,0000) | 1.3585E-02 (2001,358,0000) | 9.8598E-03 (2001,029,0000) | 9.5606E-03 (2001,017,0000) |
| 2143 | -311.250 | -288.860 | 1.4681E-02 (2001,016,0000) | 1.3637E-02 (2001,358,0000) | 1.0690E-02 (2001,017,0000) | 9.5096E-03 (2001,029,0000) |
| 2144 | -309.777 | -288.918 | 1.5302E-02 (2001,016,0000) | 1.3624E-02 (2001,358,0000) | 1.1887E-02 (2001,017,0000) | 9.1351E-03 (2001,029,0000) |
| 2145 | -308.305 | -288.976 | 1.5912E-02 (2001,016,0000) | 1.3552E-02 (2001,358,0000) | 1.3135E-02 (2001,017,0000) | 9.3400E-03 (2001,018,0000) |
| 2146 | -306.832 | -289.034 | 1.6499E-02 (2001,016,0000) | 1.4415E-02 (2001,017,0000) | 1.3401E-02 (2001,358,0000) | 9.9197E-03 (2001,018,0000) |
| 2147 | -305.359 | -289.091 | 1.7068E-02 (2001,016,0000) | 1.5724E-02 (2001,017,0000) | 1.3207E-02 (2001,358,0000) | 1.0487E-02 (2001,018,0000) |
| 2148 | -303.887 | -289.148 | 1.7593E-02 (2001,016,0000) | 1.7021E-02 (2001,017,0000) | 1.2952E-02 (2001,358,0000) | 1.1000E-02 (2001,018,0000) |
| 2149 | -302.414 | -289.205 | 1.8341E-02 (2001,017,0000) | 1.8103E-02 (2001,016,0000) | 1.2675E-02 (2001,358,0000) | 1.1528E-02 (2001,018,0000) |
| 2150 | -300.941 | -289.261 | 1.9587E-02 (2001,017,0000) | 1.8550E-02 (2001,016,0000) | 1.2331E-02 (2001,358,0000) | 1.1964E-02 (2001,018,0000) |
| 2151 | -320.010 | -286.654 | 1.2188E-02 (2001,358,0000) | 1.0806E-02 (2001,029,0000) | 1.0547E-02 (2001,016,0000) | 6.2595E-03 (2001,324,0000) |
| 2152 | -318.538 | -286.714 | 1.2567E-02 (2001,358,0000) | 1.1136E-02 (2001,016,0000) | 1.0699E-02 (2001,029,0000) | 6.3764E-03 (2001,324,0000) |
| 2153 | -317.066 | -286.773 | 1.2905E-02 (2001,358,0000) | 1.1746E-02 (2001,016,0000) | 1.0528E-02 (2001,029,0000) | 6.4955E-03 (2001,324,0000) |
| 2154 | -315.593 | -286.832 | 1.3190E-02 (2001,358,0000) | 1.2372E-02 (2001,016,0000) | 1.0296E-02 (2001,029,0000) | 6.7868E-03 (2001,017,0000) |
| 2155 | -314.121 | -286.891 | 1.3421E-02 (2001,358,0000) | 1.3006E-02 (2001,016,0000) | 1.0015E-02 (2001,029,0000) | 7.7122E-03 (2001,017,0000) |
| 2156 | -312.649 | -286.950 | 1.3653E-02 (2001,016,0000) | 1.3588E-02 (2001,358,0000) | 9.6888E-03 (2001,029,0000) | 8.7255E-03 (2001,017,0000) |
| 2157 | -311.177 | -287.008 | 1.4302E-02 (2001,016,0000) | 1.3695E-02 (2001,358,0000) | 9.8208E-03 (2001,017,0000) | 9.3275E-03 (2001,029,0000) |
| 2158 | -309.704 | -287.066 | 1.4956E-02 (2001,016,0000) | 1.3738E-02 (2001,358,0000) | 1.0991E-02 (2001,017,0000) | 8.9394E-03 (2001,029,0000) |
| 2159 | -308.232 | -287.124 | 1.5585E-02 (2001,016,0000) | 1.3670E-02 (2001,358,0000) | 1.2189E-02 (2001,017,0000) | 8.8060E-03 (2001,018,0000) |
| 2160 | -306.760 | -287.181 | 1.6241E-02 (2001,016,0000) | 1.3628E-02 (2001,358,0000) | 1.3522E-02 (2001,017,0000) | 9.4857E-03 (2001,018,0000) |
| 2161 | -305.288 | -287.239 | 1.6842E-02 (2001,016,0000) | 1.4826E-02 (2001,017,0000) | 1.3455E-02 (2001,358,0000) | 1.0064E-02 (2001,018,0000) |
| 2162 | -303.815 | -287.296 | 1.7385E-02 (2001,016,0000) | 1.5979E-02 (2001,017,0000) | 1.3160E-02 (2001,358,0000) | 1.0333E-02 (2001,018,0000) |
| 2163 | -302.343 | -287.352 | 1.8007E-02 (2001,016,0000) | 1.7528E-02 (2001,017,0000) | 1.3010E-02 (2001,358,0000) | 1.1191E-02 (2001,018,0000) |
| 2164 | -300.871 | -287.409 | 1.8833E-02 (2001,017,0000) | 1.8515E-02 (2001,016,0000) | 1.2688E-02 (2001,358,0000) | 1.1674E-02 (2001,018,0000) |
| 2165 | -325.822 | -284.560 | 1.0304E-02 (2001,029,0000) | 9.7813E-03 (2001,358,0000) | 7.9317E-03 (2001,016,0000) | 7.2231E-03 (2001,028,0000) |
| 2166 | -324.350 | -284.621 | 1.0491E-02 (2001,029,0000) | 1.0332E-02 (2001,358,0000) | 8.4303E-03 (2001,016,0000) | 7.0525E-03 (2001,028,0000) |
| 2167 | -322.878 | -284.681 | 1.0920E-02 (2001,358,0000) | 1.0608E-02 (2001,029,0000) | 8.9584E-03 (2001,016,0000) | 6.8394E-03 (2001,028,0000) |
| 2168 | -321.407 | -284.742 | 1.1426E-02 (2001,358,0000) | 1.0648E-02 (2001,029,0000) | 9.5093E-03 (2001,016,0000) | 6.5855E-03 (2001,028,0000) |
| 2169 | -319.935 | -284.802 | 1.1854E-02 (2001,358,0000) | 1.0614E-02 (2001,029,0000) | 1.0066E-02 (2001,016,0000) | 6.2942E-03 (2001,028,0000) |
| 2170 | -318.463 | -284.861 | 1.2311E-02 (2001,358,0000) | 1.0661E-02 (2001,016,0000) | 1.0508E-02 (2001,029,0000) | 6.3429E-03 (2001,324,0000) |
| 2171 | -314.047 | -285.039 | 1.3314E-02 (2001,358,0000) | 1.2546E-02 (2001,016,0000) | 9.8190E-03 (2001,029,0000) | 6.9597E-03 (2001,017,0000) |
| 2172 | -312.575 | -285.097 | 1.3542E-02 (2001,358,0000) | 1.3203E-02 (2001,016,0000) | 9.4862E-03 (2001,029,0000) | 7.9231E-03 (2001,017,0000) |
| 2173 | -311.103 | -285.156 | 1.3878E-02 (2001,016,0000) | 1.3706E-02 (2001,358,0000) | 9.1170E-03 (2001,029,0000) | 8.9776E-03 (2001,017,0000) |
| 2174 | -309.632 | -285.214 | 1.4555E-02 (2001,016,0000) | 1.3805E-02 (2001,358,0000) | 1.0119E-02 (2001,017,0000) | 8.7206E-03 (2001,029,0000) |
| 2175 | -327.217 | -282.647 | 9.7705E-03 (2001,029,0000) | 8.9257E-03 (2001,358,0000) | 7.5004E-03 (2001,028,0000) | 7.0491E-03 (2001,016,0000) |
| 2176 | -325.745 | -282.708 | 1.0036E-02 (2001,029,0000) | 9.3582E-03 (2001,358,0000) | 7.4906E-03 (2001,016,0000) | 7.4220E-03 (2001,028,0000) |
| 2177 | -324.274 | -282.769 | 1.0234E-02 (2001,029,0000) | 9.9835E-03 (2001,358,0000) | 7.9834E-03 (2001,016,0000) | 7.3029E-03 (2001,028,0000) |
| 2178 | -322.802 | -282.829 | 1.0534E-02 (2001,358,0000) | 1.0358E-02 (2001,029,0000) | 8.4920E-03 (2001,016,0000) | 7.1396E-03 (2001,028,0000) |
| 2179 | -321.331 | -282.889 | 1.1015E-02 (2001,358,0000) | 1.0404E-02 (2001,029,0000) | 9.0209E-03 (2001,016,0000) | 6.9304E-03 (2001,028,0000) |
| 2180 | -319.859 | -282.949 | 1.1537E-02 (2001,358,0000) | 1.0376E-02 (2001,029,0000) | 9.5788E-03 (2001,016,0000) | 6.6770E-03 (2001,028,0000) |
| 2181 | -318.388 | -283.009 | 1.2006E-02 (2001,358,0000) | 1.0277E-02 (2001,029,0000) | 1.0165E-02 (2001,016,0000) | 6.3867E-03 (2001,028,0000) |
| 2182 | -309.559 | -283.361 | 1.4100E-02 (2001,016,0000) | 1.3812E-02 (2001,358,0000) | 9.2689E-03 (2001,017,0000) | 8.4821E-03 (2001,029,0000) |
| 2183 | -327.140 | -280.795 | 9.4507E-03 (2001,029,0000) | 8.4552E-03 (2001,358,0000) | 7.5891E-03 (2001,028,0000) | 6.6238E-03 (2001,016,0000) |
| 2184 | -325.669 | -280.856 | 9.7258E-03 (2001,029,0000) | 8.9551E-03 (2001,358,0000) | 7.5650E-03 (2001,028,0000) | 7.0546E-03 (2001,016,0000) |
| 2185 | -324.198 | -280.917 | 9.9316E-03 (2001,029,0000) | 9.4698E-03 (2001,358,0000) | 7.5138E-03 (2001,016,0000) | 7.4983E-03 (2001,028,0000) |
| 2186 | -322.726 | -280.977 | 1.0064E-02 (2001,029,0000) | 9.9781E-03 (2001,358,0000) | 7.9985E-03 (2001,016,0000) | 7.3866E-03 (2001,028,0000) |
| 2187 | -321.255 | -281.037 | 1.0626E-02 (2001,358,0000) | 1.0123E-02 (2001,029,0000) | 8.5338E-03 (2001,016,0000) | 7.2275E-03 (2001,028,0000) |
| 2188 | -319.784 | -281.097 | 1.1154E-02 (2001,358,0000) | 1.0105E-02 (2001,029,0000) | 9.0782E-03 (2001,016,0000) | 7.0216E-03 (2001,028,0000) |
| 2189 | -318.313 | -281.157 | 1.1652E-02 (2001,358,0000) | 1.0012E-02 (2001,029,0000) | 9.6535E-03 (2001,016,0000) | 6.7730E-03 (2001,028,0000) |
| 2190 | -327.063 | -278.943 | 9.1016E-03 (2001,029,0000) | 7.9880E-03 (2001,358,0000) | 7.6184E-03 (2001,028,0000) | 6.2040E-03 (2001,016,0000) |
| 2191 | -325.592 | -279.004 | 9.3866E-03 (2001,029,0000) | 8.4795E-03 (2001,358,0000) | 7.6458E-03 (2001,028,0000) | 6.6135E-03 (2001,016,0000) |
| 2192 | -324.121 | -279.064 | 9.6030E-03 (2001,029,0000) | 9.0760E-03 (2001,358,0000) | 7.6333E-03 (2001,028,0000) | 7.0690E-03 (2001,016,0000) |
| 2193 | -322.650 | -279.125 | 9.7444E-03 (2001,029,0000) | 9.6299E-03 (2001,358,0000) | 7.5766E-03 (2001,028,0000) | 7.5436E-03 (2001,016,0000) |
| 2194 | -321.180 | -279.185 | 1.0184E-02 (2001,358,0000) | 9.8104E-03 (2001,029,0000) | 8.0403E-03 (2001,016,0000) | 7.4719E-03 (2001,028,0000) |
| 2195 | -319.709 | -279.245 | 1.0693E-02 (2001,358,0000) | 9.8000E-03 (2001,029,0000) | 8.5624E-03 (2001,016,0000) | 7.3201E-03 (2001,028,0000) |
| 2196 | -318.238 | -279.305 | 1.1248E-02 (2001,358,0000) | 9.7156E-03 (2001,029,0000) | 9.1274E-03 (2001,016,0000) | 7.1186E-03 (2001,028,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2197 | -326.986 | -277.091 | 8.7371E-03 (2001,029,0000) | 7.5837E-03 (2001,028,0000) | 7.5146E-03 (2001,358,0000) | 5.7929E-03 (2001,016,0000) |
| 2198 | -325.515 | -277.152 | 9.0281E-03 (2001,029,0000) | 8.0186E-03 (2001,358,0000) | 7.6669E-03 (2001,028,0000) | 6.1887E-03 (2001,016,0000) |
| 2199 | -324.045 | -277.212 | 9.2522E-03 (2001,029,0000) | 8.5862E-03 (2001,358,0000) | 7.7059E-03 (2001,028,0000) | 6.6175E-03 (2001,016,0000) |
| 2200 | -322.574 | -277.273 | 9.4041E-03 (2001,029,0000) | 9.1477E-03 (2001,358,0000) | 7.7027E-03 (2001,028,0000) | 7.0702E-03 (2001,016,0000) |
| 2201 | -328.379 | -275.177 | 8.0042E-03 (2001,029,0000) | 7.3237E-03 (2001,028,0000) | 6.4765E-03 (2001,358,0000) | 5.2376E-03 (2001,040,0000) |
| 2202 | -326.909 | -275.239 | 8.3610E-03 (2001,029,0000) | 7.4900E-03 (2001,028,0000) | 6.9887E-03 (2001,358,0000) | 5.3844E-03 (2001,016,0000) |
| 2203 | -325.439 | -275.300 | 8.6594E-03 (2001,029,0000) | 7.6214E-03 (2001,028,0000) | 7.5163E-03 (2001,358,0000) | 5.7663E-03 (2001,016,0000) |
| 2204 | -323.969 | -275.360 | 8.8948E-03 (2001,029,0000) | 8.0944E-03 (2001,358,0000) | 7.7146E-03 (2001,028,0000) | 6.1750E-03 (2001,016,0000) |
| 2205 | -322.498 | -275.421 | 9.0566E-03 (2001,029,0000) | 8.6506E-03 (2001,358,0000) | 7.7676E-03 (2001,028,0000) | 6.6090E-03 (2001,016,0000) |
| 2206 | -326.832 | -273.387 | 7.9861E-03 (2001,029,0000) | 7.3382E-03 (2001,028,0000) | 6.5522E-03 (2001,358,0000) | 5.3960E-03 (2001,040,0000) |
| 2207 | -325.362 | -273.448 | 8.2928E-03 (2001,029,0000) | 7.5159E-03 (2001,028,0000) | 7.0702E-03 (2001,358,0000) | 5.7591E-03 (2001,003,0000) |
| 2208 | -323.892 | -273.508 | 8.5359E-03 (2001,029,0000) | 7.6615E-03 (2001,028,0000) | 7.5995E-03 (2001,358,0000) | 5.8689E-03 (2001,003,0000) |
| 2209 | -322.422 | -273.569 | 8.7100E-03 (2001,029,0000) | 8.1475E-03 (2001,358,0000) | 7.7674E-03 (2001,028,0000) | 6.1592E-03 (2001,016,0000) |
| 2210 | -325.285 | -271.595 | 7.9269E-03 (2001,029,0000) | 7.3565E-03 (2001,028,0000) | 6.5962E-03 (2001,358,0000) | 5.5301E-03 (2001,003,0000) |
| 2211 | -323.816 | -271.656 | 8.1816E-03 (2001,029,0000) | 7.5452E-03 (2001,028,0000) | 7.0934E-03 (2001,358,0000) | 5.7097E-03 (2001,003,0000) |
| 2212 | -322.346 | -271.717 | 8.3704E-03 (2001,029,0000) | 7.7026E-03 (2001,028,0000) | 7.6462E-03 (2001,358,0000) | 5.9053E-03 (2001,003,0000) |

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CALPOST Version 5.6394 Level 070622
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8735 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2001 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 4.2601E-04 | 2101 | -315.890 | -294.242 | 3.9802E-04 |
| 1990 | -306.221 | -311.322 | 4.2842E-04 | 2102 | -314.417 | -294.301 | 4.3303E-04 |
| 1991 | -304.745 | -311.379 | 4.4434E-04 | 2103 | -312.943 | -294.359 | 4.3488E-04 |
| 1992 | -303.268 | -311.436 | 4.6553E-04 | 2104 | -311.470 | -294.418 | 4.5085E-04 |
| 1993 | -301.791 | -311.492 | 4.6254E-04 | 2105 | -309.996 | -294.476 | 4.5960E-04 |
| 1994 | -307.626 | -309.412 | 4.2482E-04 | 2106 | -308.522 | -294.534 | 4.6812E-04 |
| 1995 | -306.150 | -309.469 | 4.2507E-04 | 2107 | -307.049 | -294.591 | 4.7627E-04 |
| 1996 | -304.673 | -309.526 | 4.4058E-04 | 2108 | -305.575 | -294.648 | 4.7708E-04 |
| 1997 | -303.197 | -309.583 | 4.6585E-04 | 2109 | -304.101 | -294.705 | 4.8514E-04 |
| 1998 | -301.720 | -309.640 | 4.4998E-04 | 2110 | -302.627 | -294.762 | 4.9764E-04 |
| 1999 | -300.244 | -309.696 | 4.6629E-04 | 2111 | -301.154 | -294.819 | 5.0360E-04 |
| 2000 | -298.767 | -309.752 | 4.6575E-04 | 2112 | -318.763 | -292.271 | 3.9846E-04 |
| 2001 | -317.886 | -307.150 | 3.9503E-04 | 2113 | -317.289 | -292.330 | 4.0366E-04 |
| 2002 | -316.410 | -307.209 | 4.0106E-04 | 2114 | -315.816 | -292.389 | 4.1883E-04 |
| 2003 | -314.934 | -307.268 | 4.0555E-04 | 2115 | -314.343 | -292.448 | 4.2866E-04 |
| 2004 | -313.458 | -307.327 | 4.1413E-04 | 2116 | -312.870 | -292.507 | 4.3563E-04 |
| 2005 | -311.982 | -307.385 | 4.2180E-04 | 2117 | -311.396 | -292.565 | 4.4727E-04 |
| 2006 | -309.030 | -307.501 | 4.3300E-04 | 2118 | -309.923 | -292.623 | 4.5543E-04 |
| 2007 | -307.554 | -307.559 | 4.6979E-04 | 2119 | -308.450 | -292.681 | 4.6526E-04 |
| 2008 | -306.078 | -307.616 | 4.4561E-04 | 2120 | -306.976 | -292.739 | 4.7225E-04 |
| 2009 | -304.602 | -307.673 | 4.6983E-04 | 2121 | -305.503 | -292.796 | 4.5293E-04 |
| 2010 | -303.125 | -307.730 | 4.4512E-04 | 2122 | -304.030 | -292.853 | 4.5855E-04 |
| 2011 | -301.649 | -307.787 | 4.3152E-04 | 2123 | -302.556 | -292.910 | 4.6006E-04 |
| 2012 | -300.173 | -307.843 | 4.5153E-04 | 2124 | -301.083 | -292.966 | 4.7244E-04 |
| 2013 | -298.697 | -307.899 | 4.3572E-04 | 2125 | -318.688 | -290.418 | 3.9520E-04 |
| 2014 | -317.812 | -305.297 | 3.9824E-04 | 2126 | -317.215 | -290.478 | 4.0456E-04 |
| 2015 | -316.336 | -305.356 | 3.9649E-04 | 2127 | -315.742 | -290.537 | 4.1452E-04 |
| 2016 | -314.860 | -305.415 | 4.1068E-04 | 2128 | -314.269 | -290.596 | 4.2403E-04 |
| 2017 | -313.385 | -305.474 | 4.4618E-04 | 2129 | -312.796 | -290.654 | 4.3343E-04 |
| 2018 | -311.909 | -305.533 | 4.5455E-04 | 2130 | -311.323 | -290.713 | 4.3956E-04 |
| 2019 | -308.957 | -305.649 | 4.2027E-04 | 2131 | -309.850 | -290.771 | 4.5225E-04 |
| 2020 | -307.482 | -305.706 | 4.3598E-04 | 2132 | -308.377 | -290.829 | 4.6150E-04 |
| 2021 | -306.006 | -305.764 | 4.7229E-04 | 2133 | -306.904 | -290.886 | 4.7060E-04 |
| 2022 | -304.530 | -305.821 | 4.7943E-04 | 2134 | -305.431 | -290.943 | 4.3735E-04 |
| 2023 | -303.054 | -305.878 | 4.6602E-04 | 2135 | -303.958 | -291.000 | 4.8801E-04 |
| 2024 | -301.579 | -305.934 | 4.7800E-04 | 2136 | -302.485 | -291.057 | 4.9619E-04 |
| 2025 | -300.103 | -305.990 | 4.7592E-04 | 2137 | -301.012 | -291.114 | 5.0383E-04 |
| 2026 | -298.627 | -306.046 | 4.6646E-04 | 2138 | -318.613 | -288.566 | 3.9019E-04 |
| 2027 | -319.212 | -303.385 | 3.9539E-04 | 2139 | -317.140 | -288.625 | 3.9962E-04 |
| 2028 | -317.737 | -303.445 | 3.9644E-04 | 2140 | -315.668 | -288.684 | 4.0917E-04 |
| 2029 | -316.262 | -303.504 | 4.0410E-04 | 2141 | -314.195 | -288.743 | 4.1880E-04 |
| 2030 | -314.786 | -303.563 | 4.0695E-04 | 2142 | -312.722 | -288.802 | 4.2842E-04 |
| 2031 | -313.311 | -303.622 | 4.1604E-04 | 2143 | -311.250 | -288.860 | 4.3801E-04 |
| 2032 | -311.836 | -303.680 | 4.6165E-04 | 2144 | -309.777 | -288.918 | 4.4775E-04 |
| 2033 | -310.360 | -303.738 | 4.2881E-04 | 2145 | -308.305 | -288.976 | 4.5746E-04 |
| 2034 | -308.885 | -303.796 | 4.2433E-04 | 2146 | -306.832 | -289.034 | 4.6585E-04 |
| 2035 | -307.409 | -303.854 | 4.2685E-04 | 2147 | -305.359 | -289.091 | 4.7516E-04 |
| 2036 | -305.934 | -303.911 | 4.4590E-04 | 2148 | -303.887 | -289.148 | 4.8205E-04 |
| 2037 | -304.459 | -303.968 | 4.6032E-04 | 2149 | -302.414 | -289.205 | 4.9423E-04 |
| 2038 | -302.983 | -304.025 | 4.7106E-04 | 2150 | -300.941 | -289.261 | 5.0248E-04 |
| 2039 | -301.508 | -304.082 | 4.8697E-04 | 2151 | -320.010 | -286.654 | 3.7544E-04 |
| 2040 | -300.032 | -304.138 | 4.9126E-04 | 2152 | -318.538 | -286.714 | 3.8486E-04 |
| 2041 | -298.557 | -304.194 | 4.8865E-04 | 2153 | -317.066 | -286.773 | 3.9442E-04 |
| 2042 | -319.137 | -301.533 | 3.8959E-04 | 2154 | -315.593 | -286.832 | 4.0393E-04 |
| 2043 | -317.662 | -301.592 | 3.9328E-04 | 2155 | -314.121 | -286.891 | 4.1336E-04 |
| 2044 | -316.187 | -301.651 | 4.0287E-04 | 2156 | -312.649 | -286.950 | 4.2301E-04 |
| 2045 | -314.712 | -301.710 | 4.0611E-04 | 2157 | -311.177 | -287.008 | 4.3292E-04 |
| 2046 | -313.237 | -301.769 | 4.1778E-04 | 2158 | -309.704 | -287.066 | 4.4293E-04 |
| 2047 | -311.762 | -301.827 | 4.6085E-04 | 2159 | -308.232 | -287.124 | 4.4693E-04 |
| 2048 | -310.287 | -301.886 | 4.6748E-04 | 2160 | -306.760 | -287.181 | 4.6286E-04 |
| 2049 | -308.812 | -301.944 | 4.7333E-04 | 2161 | -305.288 | -287.239 | 4.7009E-04 |
| 2050 | -307.337 | -302.001 | 4.4102E-04 | 2162 | -303.815 | -287.296 | 4.5892E-04 |
| 2051 | -305.862 | -302.059 | 4.7371E-04 | 2163 | -302.343 | -287.352 | 4.9136E-04 |
| 2052 | -304.387 | -302.116 | 4.8286E-04 | 2164 | -300.871 | -287.409 | 4.9993E-04 |
| 2053 | -302.912 | -302.172 | 4.9123E-04 | 2165 | -325.822 | -284.560 | 3.1542E-04 |
| 2054 | -301.437 | -302.229 | 4.8999E-04 | 2166 | -324.350 | -284.621 | 3.2998E-04 |
| 2055 | -299.962 | -302.285 | 4.9149E-04 | 2167 | -322.878 | -284.681 | 3.5102E-04 |
| 2056 | -298.487 | -302.341 | 4.8810E-04 | 2168 | -321.407 | -284.742 | 3.6124E-04 |
| 2057 | -319.062 | -299.680 | 3.9929E-04 | 2169 | -319.935 | -284.802 | 3.6838E-04 |
| 2058 | -317.588 | -299.740 | 4.1418E-04 | 2170 | -318.463 | -284.861 | 3.7964E-04 |
| 2059 | -316.113 | -299.799 | 4.2987E-04 | 2171 | -314.047 | -285.039 | 4.0773E-04 |
| 2060 | -314.639 | -299.858 | 4.1186E-04 | 2172 | -312.575 | -285.097 | 4.1759E-04 |
| 2061 | -313.164 | -299.917 | 4.2575E-04 | 2173 | -311.103 | -285.156 | 4.2764E-04 |
| 2062 | -311.689 | -299.975 | 4.3196E-04 | 2174 | -309.632 | -285.214 | 4.3781E-04 |
| 2063 | -310.214 | -300.033 | 4.6645E-04 | 2175 | -327.217 | -282.647 | 3.2048E-04 |
| 2064 | -308.740 | -300.091 | 4.7314E-04 | 2176 | -325.745 | -282.708 | 3.1519E-04 |
| 2065 | -307.265 | -300.149 | 4.7893E-04 | 2177 | -324.274 | -282.769 | 3.3697E-04 |
| 2066 | -305.790 | -300.206 | 4.3540E-04 | 2178 | -322.802 | -282.829 | 3.4743E-04 |
| 2067 | -304.316 | -300.263 | 4.8672E-04 | 2179 | -321.331 | -282.889 | 3.5428E-04 |
| 2068 | -302.841 | -300.320 | 4.9385E-04 | 2180 | -319.859 | -282.949 | 3.6500E-04 |
| 2069 | -301.366 | -300.376 | 4.9745E-04 | 2181 | -318.388 | -283.009 | 3.7384E-04 |
| 2070 | -299.891 | -300.432 | 5.0020E-04 | 2182 | -309.559 | -283.361 | 4.3193E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | 5.0165E-04 | 2183 | -327.140 | -280.795 | 3.1572E-04 |
| 2072 | -318.988 | -297.828 | 3.7448E-04 | 2184 | -325.669 | -280.856 | 3.1866E-04 |
| 2073 | -317.513 | -297.887 | 3.9396E-04 | 2185 | -324.198 | -280.917 | 3.2371E-04 |
| 2074 | -316.039 | -297.946 | 4.0087E-04 | 2186 | -322.726 | -280.977 | 3.2856E-04 |
| 2075 | -314.565 | -298.005 | 4.4054E-04 | 2187 | -321.255 | -281.037 | 3.5075E-04 |
| 2076 | -313.090 | -298.064 | 4.4141E-04 | 2188 | -319.784 | -281.097 | 3.5968E-04 |
| 2077 | -311.616 | -298.122 | 4.5734E-04 | 2189 | -318.313 | -281.157 | 3.6852E-04 |
| 2078 | -310.142 | -298.181 | 4.6484E-04 | 2190 | -327.063 | -278.943 | 3.1193E-04 |
| 2079 | -308.667 | -298.238 | 4.7192E-04 | 2191 | -325.592 | -279.004 | 3.1405E-04 |
| 2080 | -307.193 | -298.296 | 4.7706E-04 | 2192 | -324.121 | -279.064 | 3.2883E-04 |
| 2081 | -305.719 | -298.353 | 4.7308E-04 | 2193 | -322.650 | -279.125 | 3.3727E-04 |
| 2082 | -304.244 | -298.410 | 4.9019E-04 | 2194 | -321.180 | -279.185 | 3.4598E-04 |
| 2083 | -302.770 | -298.467 | 4.9580E-04 | 2195 | -319.709 | -279.245 | 3.5255E-04 |
| 2084 | -301.295 | -298.524 | 5.0026E-04 | 2196 | -318.238 | -279.305 | 3.6345E-04 |
| 2085 | -299.821 | -298.580 | 5.0384E-04 | 2197 | -326.986 | -277.091 | 3.0719E-04 |
| 2086 | -318.913 | -295.975 | 3.7879E-04 | 2198 | -325.515 | -277.152 | 3.1360E-04 |
| 2087 | -317.439 | -296.035 | 3.9555E-04 | 2199 | -324.045 | -277.212 | 3.2422E-04 |
| 2088 | -315.965 | -296.094 | 3.9079E-04 | 2200 | -322.574 | -277.273 | 3.3298E-04 |
| 2089 | -314.491 | -296.153 | 4.0785E-04 | 2201 | -328.379 | -275.177 | 2.8365E-04 |
| 2090 | -313.017 | -296.212 | 4.1132E-04 | 2202 | -326.909 | -275.239 | 2.9565E-04 |
| 2091 | -311.543 | -296.270 | 4.3091E-04 | 2203 | -325.439 | -275.300 | 3.0683E-04 |
| 2092 | -310.069 | -296.328 | 4.6235E-04 | 2204 | -323.969 | -275.360 | 3.2023E-04 |
| 2093 | -308.595 | -296.386 | 4.6942E-04 | 2205 | -322.498 | -275.421 | 3.2876E-04 |
| 2094 | -307.121 | -296.444 | 4.7780E-04 | 2206 | -326.832 | -273.387 | 2.9676E-04 |
| 2095 | -305.647 | -296.501 | 4.8084E-04 | 2207 | -325.362 | -273.448 | 3.0741E-04 |
| 2096 | -304.173 | -296.558 | 4.8717E-04 | 2208 | -323.892 | -273.508 | 3.1586E-04 |
| 2097 | -302.699 | -296.615 | 4.8168E-04 | 2209 | -322.422 | -273.569 | 3.2362E-04 |
| 2098 | -301.225 | -296.671 | 5.0248E-04 | 2210 | -325.285 | -271.595 | 3.0241E-04 |
| 2099 | -318.838 | -294.123 | 3.9605E-04 | 2211 | -323.816 | -271.656 | 3.1011E-04 |
| 2100 | -317.364 | -294.182 | 4.1205E-04 | 2212 | -322.346 | -271.717 | 3.1969E-04 |

**********
CALPOST Version 5.6394 Level 070622
**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | DISCRETE | 2.3702E-02 (2001,017,0000) | RANK 1 | 24 | HOUR |
| 2150 | -300.941 | -289.261 | DISCRETE | 1.8550E-02 (2001,016,0000) | RANK 2 | 24 | HOUR |
| 2160 | -306.760 | -287.181 | DISCRETE | 1.3522E-02 (2001,017,0000) | RANK 3 | 24 | HOUR |
| 2150 | -300.941 | -289.261 | DISCRETE | 1.1964E-02 (2001,018,0000) | RANK 4 | 24 | HOUR |
| 2085 | -299.821 | -298.580 | DISCRETE | 5.0384E-04 | RANK 1 | 8735 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Arches

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1


  Visibility Processing is NOT Selected



  Output options
                      Units requested for output:   (ug/m**3)
```

```
 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                   1-hr averages:     F
                                   3-hr averages:     F
                                  24-hr averages:     T
                                 NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                    Top-N values at each receptor:     T
              Exceedance counts at each receptor:     F
       Output selected information for debugging:     F
                    Echo tables for selected days:     F
                    Time-series for selected days:     F
        Peak value Time-series for selected days:     F

 Top "n" table control
         Number of "top" values at each receptor:     4
         Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                         Plot file format is DATA:  .DAT


 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2002 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8759

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1


 ------------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2002\POST_2002_PM_AR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2002\SPC2002.CON


 ------------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2002\2002_ARCH_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_AR.DAT

*****************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR      COORDINATES (km)             1 RANK                    2 RANK                    3 RANK                    4 RANK
      1       -9.046  -154.175   8.7423E-03 (2002,356,0000)  7.6474E-03 (2002,008,0000)  5.6535E-03 (2002,007,0000)  5.4194E-03 (2002,240,0000)
      2       -7.599  -154.176   8.5258E-03 (2002,356,0000)  7.5405E-03 (2002,008,0000)  5.5253E-03 (2002,007,0000)  5.2266E-03 (2002,240,0000)
      3       -6.152  -154.178   8.3328E-03 (2002,356,0000)  7.4450E-03 (2002,008,0000)  5.3962E-03 (2002,007,0000)  5.0331E-03 (2002,240,0000)
      4       -3.257  -154.179   7.7157E-03 (2002,356,0000)  7.2427E-03 (2002,008,0000)  5.1426E-03 (2002,007,0000)  4.7172E-03 (2002,329,0000)
      5      -10.491  -152.321   9.2858E-03 (2002,356,0000)  7.8870E-03 (2002,008,0000)  5.8419E-03 (2002,007,0000)  5.5191E-03 (2002,240,0000)
      6       -9.044  -152.322   8.7716E-03 (2002,356,0000)  7.7807E-03 (2002,008,0000)  5.7078E-03 (2002,007,0000)  5.3442E-03 (2002,240,0000)
      7       -7.597  -152.324   8.4588E-03 (2002,356,0000)  7.6831E-03 (2002,008,0000)  5.5785E-03 (2002,007,0000)  5.1623E-03 (2002,240,0000)
      8       -6.150  -152.325   8.1901E-03 (2002,356,0000)  7.5866E-03 (2002,008,0000)  5.4441E-03 (2002,007,0000)  4.9843E-03 (2002,240,0000)
      9       -4.703  -152.326   8.0301E-03 (2002,356,0000)  7.4812E-03 (2002,008,0000)  5.3161E-03 (2002,007,0000)  4.8063E-03 (2002,240,0000)
     10       -3.256  -152.327   7.8209E-03 (2002,356,0000)  7.3795E-03 (2002,008,0000)  5.1890E-03 (2002,007,0000)  4.7392E-03 (2002,329,0000)
     11       -1.809  -152.328   7.6267E-03 (2002,356,0000)  7.2757E-03 (2002,008,0000)  5.0671E-03 (2002,007,0000)  4.7065E-03 (2002,329,0000)
     12       -0.362  -152.328   7.2516E-03 (2002,356,0000)  7.1753E-03 (2002,008,0000)  4.9392E-03 (2002,007,0000)  4.6771E-03 (2002,329,0000)
     13      -11.936  -150.466   9.1194E-03 (2002,356,0000)  8.1325E-03 (2002,008,0000)  6.0257E-03 (2002,007,0000)  5.5607E-03 (2002,240,0000)
     14      -10.489  -150.468   8.8084E-03 (2002,356,0000)  8.0272E-03 (2002,008,0000)  5.8887E-03 (2002,007,0000)  5.3982E-03 (2002,240,0000)
     15       -9.042  -150.470   8.5786E-03 (2002,356,0000)  7.9269E-03 (2002,008,0000)  5.7556E-03 (2002,007,0000)  5.2364E-03 (2002,240,0000)
     16       -7.595  -150.472   8.3565E-03 (2002,356,0000)  7.8268E-03 (2002,008,0000)  5.6251E-03 (2002,007,0000)  5.0703E-03 (2002,240,0000)
     17       -6.149  -150.473   8.1276E-03 (2002,356,0000)  7.7266E-03 (2002,008,0000)  5.4921E-03 (2002,007,0000)  4.9094E-03 (2002,240,0000)
     18       -4.702  -150.474   7.9733E-03 (2002,356,0000)  7.6217E-03 (2002,008,0000)  5.3597E-03 (2002,007,0000)  4.7887E-03 (2002,329,0000)
     19       -3.255  -150.475   7.9977E-03 (2002,356,0000)  7.5191E-03 (2002,008,0000)  5.2303E-03 (2002,007,0000)  4.7599E-03 (2002,329,0000)
     20       -1.808  -150.475   7.9093E-03 (2002,356,0000)  7.4137E-03 (2002,008,0000)  5.1055E-03 (2002,007,0000)  4.7294E-03 (2002,329,0000)
     21        1.085  -150.475   7.2036E-03 (2002,008,0000)  7.1073E-03 (2002,356,0000)  4.8585E-03 (2002,007,0000)  4.6693E-03 (2002,329,0000)
     22      -11.933  -148.614   8.9538E-03 (2002,356,0000)  8.2763E-03 (2002,008,0000)  6.0677E-03 (2002,007,0000)  5.3994E-03 (2002,240,0000)
     23      -10.486  -148.616   8.8027E-03 (2002,356,0000)  8.1739E-03 (2002,008,0000)  5.9337E-03 (2002,007,0000)  5.2572E-03 (2002,240,0000)
     24       -9.040  -148.618   8.6119E-03 (2002,356,0000)  8.0751E-03 (2002,008,0000)  5.7990E-03 (2002,007,0000)  5.1052E-03 (2002,240,0000)
     25       -7.594  -148.619   8.3162E-03 (2002,356,0000)  7.9736E-03 (2002,008,0000)  5.6639E-03 (2002,007,0000)  4.9585E-03 (2002,240,0000)
     26       -6.147  -148.621   8.0936E-03 (2002,356,0000)  7.8682E-03 (2002,008,0000)  5.5328E-03 (2002,007,0000)  4.8313E-03 (2002,329,0000)
     27       -4.701  -148.622   7.9360E-03 (2002,356,0000)  7.7646E-03 (2002,008,0000)  5.4016E-03 (2002,007,0000)  4.8028E-03 (2002,329,0000)
     28       -3.254  -148.622   8.0388E-03 (2002,356,0000)  7.6590E-03 (2002,008,0000)  5.2695E-03 (2002,007,0000)  4.7755E-03 (2002,329,0000)
     29       -1.808  -148.623   7.8283E-03 (2002,356,0000)  7.5533E-03 (2002,008,0000)  5.1441E-03 (2002,007,0000)  4.7469E-03 (2002,329,0000)
     30       -0.362  -148.623   7.4464E-03 (2002,008,0000)  7.2890E-03 (2002,356,0000)  5.0178E-03 (2002,007,0000)  4.7185E-03 (2002,329,0000)
     31      -11.930  -146.762   8.8999E-03 (2002,356,0000)  8.4254E-03 (2002,008,0000)  6.1080E-03 (2002,007,0000)  5.2257E-03 (2002,240,0000)
     32      -10.484  -146.764   8.7282E-03 (2002,356,0000)  8.3227E-03 (2002,008,0000)  5.9730E-03 (2002,007,0000)  5.0930E-03 (2002,240,0000)
     33       -9.038  -146.765   8.6155E-03 (2002,356,0000)  8.2223E-03 (2002,008,0000)  5.8354E-03 (2002,007,0000)  4.9607E-03 (2002,240,0000)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 34 | -7.592 | -146.767 | 8.2941E-03 (2002,356,0000) | 8.1172E-03 (2002,008,0000) | 5.7000E-03 (2002,007,0000) | 4.8630E-03 (2002,329,0000) |
| 35 | -6.146 | -146.768 | 8.1200E-03 (2002,356,0000) | 8.0122E-03 (2002,008,0000) | 5.5672E-03 (2002,007,0000) | 4.8366E-03 (2002,329,0000) |
| 36 | -4.700 | -146.769 | 8.1768E-03 (2002,356,0000) | 7.9037E-03 (2002,008,0000) | 5.4356E-03 (2002,007,0000) | 4.8117E-03 (2002,329,0000) |
| 37 | -3.254 | -146.770 | 7.9620E-03 (2002,356,0000) | 7.8006E-03 (2002,008,0000) | 5.3049E-03 (2002,007,0000) | 4.7865E-03 (2002,329,0000) |
| 38 | -1.808 | -146.770 | 7.7438E-03 (2002,356,0000) | 7.6952E-03 (2002,008,0000) | 5.1759E-03 (2002,007,0000) | 4.7584E-03 (2002,329,0000) |
| 39 | -0.362 | -146.771 | 7.5878E-03 (2002,008,0000) | 7.1411E-03 (2002,356,0000) | 5.0465E-03 (2002,007,0000) | 4.7321E-03 (2002,329,0000) |
| 40 | -10.481 | -144.911 | 8.7179E-03 (2002,356,0000) | 8.4737E-03 (2002,008,0000) | 6.0044E-03 (2002,007,0000) | 4.9161E-03 (2002,240,0000) |
| 41 | -9.036 | -144.913 | 8.6409E-03 (2002,356,0000) | 8.3668E-03 (2002,008,0000) | 5.8663E-03 (2002,007,0000) | 4.8815E-03 (2002,329,0000) |
| 42 | -7.590 | -144.915 | 8.5363E-03 (2002,356,0000) | 8.2628E-03 (2002,008,0000) | 5.7312E-03 (2002,007,0000) | 4.8581E-03 (2002,329,0000) |
| 43 | -6.144 | -144.916 | 8.3039E-03 (2002,356,0000) | 8.1608E-03 (2002,008,0000) | 5.5989E-03 (2002,007,0000) | 4.8366E-03 (2002,329,0000) |
| 44 | -4.699 | -144.917 | 8.0790E-03 (2002,356,0000) | 8.0513E-03 (2002,008,0000) | 5.4647E-03 (2002,007,0000) | 4.8131E-03 (2002,329,0000) |
| 45 | -3.253 | -144.918 | 7.9454E-03 (2002,008,0000) | 7.8579E-03 (2002,356,0000) | 5.3315E-03 (2002,007,0000) | 4.7895E-03 (2002,329,0000) |
| 46 | -1.807 | -144.918 | 7.8357E-03 (2002,008,0000) | 7.4261E-03 (2002,356,0000) | 5.2036E-03 (2002,007,0000) | 4.7647E-03 (2002,329,0000) |
| 47 | -10.479 | -143.059 | 8.7398E-03 (2002,356,0000) | 8.6235E-03 (2002,008,0000) | 6.0307E-03 (2002,007,0000) | 4.8850E-03 (2002,329,0000) |
| 48 | -9.033 | -143.061 | 8.6420E-03 (2002,356,0000) | 8.5168E-03 (2002,008,0000) | 5.8951E-03 (2002,007,0000) | 4.8668E-03 (2002,329,0000) |
| 49 | -7.588 | -143.062 | 8.4131E-03 (2002,008,0000) | 8.4045E-03 (2002,356,0000) | 5.7565E-03 (2002,007,0000) | 4.8474E-03 (2002,329,0000) |
| 50 | -6.143 | -143.064 | 8.3026E-03 (2002,008,0000) | 8.0689E-03 (2002,356,0000) | 5.6230E-03 (2002,007,0000) | 4.8275E-03 (2002,329,0000) |
| 51 | -4.697 | -143.065 | 8.1985E-03 (2002,008,0000) | 7.8530E-03 (2002,356,0000) | 5.4911E-03 (2002,007,0000) | 4.8073E-03 (2002,329,0000) |
| 52 | -3.252 | -143.065 | 8.0885E-03 (2002,008,0000) | 7.5498E-03 (2002,356,0000) | 5.3558E-03 (2002,007,0000) | 4.7862E-03 (2002,329,0000) |
| 53 | -1.807 | -143.066 | 7.9771E-03 (2002,008,0000) | 7.2165E-03 (2002,356,0000) | 5.2269E-03 (2002,007,0000) | 4.7640E-03 (2002,329,0000) |
| 54 | -10.476 | -141.207 | 8.7745E-03 (2002,008,0000) | 8.7213E-03 (2002,356,0000) | 6.0524E-03 (2002,007,0000) | 4.8600E-03 (2002,329,0000) |
| 55 | -9.031 | -141.209 | 8.6681E-03 (2002,008,0000) | 8.4961E-03 (2002,356,0000) | 5.9148E-03 (2002,007,0000) | 4.8447E-03 (2002,329,0000) |
| 56 | -7.586 | -141.210 | 8.5581E-03 (2002,008,0000) | 7.9689E-03 (2002,356,0000) | 5.7790E-03 (2002,007,0000) | 4.8296E-03 (2002,329,0000) |
| 57 | -6.141 | -141.211 | 8.4531E-03 (2002,008,0000) | 7.7664E-03 (2002,356,0000) | 5.6428E-03 (2002,007,0000) | 4.8115E-03 (2002,329,0000) |
| 58 | -4.696 | -141.212 | 8.3402E-03 (2002,008,0000) | 7.5327E-03 (2002,356,0000) | 5.5104E-03 (2002,007,0000) | 4.7946E-03 (2002,329,0000) |
| 59 | -3.251 | -141.213 | 8.2277E-03 (2002,008,0000) | 7.3090E-03 (2002,356,0000) | 5.3760E-03 (2002,007,0000) | 4.7762E-03 (2002,329,0000) |
| 60 | -1.806 | -141.214 | 8.1194E-03 (2002,008,0000) | 7.1257E-03 (2002,356,0000) | 5.2429E-03 (2002,007,0000) | 4.7567E-03 (2002,329,0000) |
| 61 | -0.361 | -141.214 | 8.0063E-03 (2002,008,0000) | 6.9449E-03 (2002,356,0000) | 5.1175E-03 (2002,007,0000) | 4.7365E-03 (2002,329,0000) |
| 62 | -14.808 | -139.347 | 9.2412E-03 (2002,008,0000) | 8.9725E-03 (2002,356,0000) | 6.5004E-03 (2002,007,0000) | 4.9840E-03 (2002,277,0000) |
| 63 | -13.363 | -139.350 | 9.1369E-03 (2002,008,0000) | 8.8417E-03 (2002,356,0000) | 6.3555E-03 (2002,007,0000) | 4.8869E-03 (2002,277,0000) |
| 64 | -11.918 | -139.352 | 9.0319E-03 (2002,008,0000) | 8.7853E-03 (2002,356,0000) | 6.2131E-03 (2002,007,0000) | 4.8352E-03 (2002,329,0000) |
| 65 | -10.474 | -139.354 | 9.9240E-03 (2002,008,0000) | 8.5562E-03 (2002,356,0000) | 6.0687E-03 (2002,007,0000) | 4.8246E-03 (2002,329,0000) |
| 66 | -9.029 | -139.356 | 8.8113E-03 (2002,008,0000) | 8.0481E-03 (2002,356,0000) | 5.9326E-03 (2002,007,0000) | 4.8144E-03 (2002,329,0000) |
| 67 | -7.584 | -139.358 | 8.7039E-03 (2002,008,0000) | 7.8462E-03 (2002,356,0000) | 5.7950E-03 (2002,007,0000) | 4.8020E-03 (2002,329,0000) |
| 68 | -6.140 | -139.359 | 8.5933E-03 (2002,008,0000) | 7.7535E-03 (2002,356,0000) | 5.6594E-03 (2002,007,0000) | 4.7874E-03 (2002,329,0000) |
| 69 | -4.695 | -139.360 | 8.4785E-03 (2002,008,0000) | 7.7046E-03 (2002,356,0000) | 5.5252E-03 (2002,007,0000) | 4.7751E-03 (2002,329,0000) |
| 70 | -3.250 | -139.361 | 8.3676E-03 (2002,008,0000) | 7.2699E-03 (2002,356,0000) | 5.3921E-03 (2002,007,0000) | 4.7600E-03 (2002,329,0000) |
| 71 | -1.806 | -139.361 | 8.2547E-03 (2002,008,0000) | 7.0916E-03 (2002,356,0000) | 5.2575E-03 (2002,007,0000) | 4.7419E-03 (2002,329,0000) |
| 72 | -0.361 | -139.361 | 8.1392E-03 (2002,008,0000) | 6.9798E-03 (2002,356,0000) | 5.1260E-03 (2002,007,0000) | 4.7245E-03 (2002,329,0000) |
| 73 | 1.083 | -139.361 | 8.0268E-03 (2002,008,0000) | 6.7831E-03 (2002,356,0000) | 5.0014E-03 (2002,007,0000) | 4.7061E-03 (2002,329,0000) |
| 74 | -14.804 | -137.495 | 9.3955E-03 (2002,008,0000) | 9.0530E-03 (2002,356,0000) | 6.5193E-03 (2002,007,0000) | 5.1306E-03 (2002,277,0000) |
| 75 | -13.360 | -137.498 | 9.2882E-03 (2002,008,0000) | 8.8323E-03 (2002,356,0000) | 6.3701E-03 (2002,007,0000) | 5.0310E-03 (2002,277,0000) |
| 76 | -11.915 | -137.500 | 9.1781E-03 (2002,008,0000) | 8.6033E-03 (2002,356,0000) | 6.2253E-03 (2002,007,0000) | 4.9327E-03 (2002,277,0000) |
| 77 | -10.471 | -137.502 | 9.0679E-03 (2002,008,0000) | 8.3032E-03 (2002,356,0000) | 6.0853E-03 (2002,007,0000) | 4.8401E-03 (2002,277,0000) |
| 78 | -9.027 | -137.504 | 8.9572E-03 (2002,008,0000) | 8.1809E-03 (2002,356,0000) | 5.9444E-03 (2002,007,0000) | 4.7742E-03 (2002,329,0000) |
| 79 | -7.583 | -137.506 | 8.8446E-03 (2002,008,0000) | 7.9857E-03 (2002,356,0000) | 5.8074E-03 (2002,007,0000) | 4.7669E-03 (2002,329,0000) |
| 80 | -6.138 | -137.507 | 8.7295E-03 (2002,008,0000) | 7.7840E-03 (2002,356,0000) | 5.6685E-03 (2002,007,0000) | 4.7577E-03 (2002,329,0000) |
| 81 | -4.694 | -137.508 | 8.6163E-03 (2002,008,0000) | 7.5746E-03 (2002,356,0000) | 5.5362E-03 (2002,007,0000) | 4.7478E-03 (2002,329,0000) |
| 82 | -3.250 | -137.509 | 8.5004E-03 (2002,008,0000) | 7.2223E-03 (2002,356,0000) | 5.4035E-03 (2002,007,0000) | 4.7334E-03 (2002,329,0000) |
| 83 | -1.805 | -137.509 | 8.3853E-03 (2002,008,0000) | 7.0004E-03 (2002,356,0000) | 5.2692E-03 (2002,007,0000) | 4.7200E-03 (2002,329,0000) |
| 84 | -16.245 | -135.640 | 9.6541E-03 (2002,008,0000) | 9.0688E-03 (2002,356,0000) | 6.6814E-03 (2002,007,0000) | 5.3767E-03 (2002,277,0000) |
| 85 | -14.801 | -135.643 | 9.5467E-03 (2002,008,0000) | 8.8627E-03 (2002,356,0000) | 6.5304E-03 (2002,007,0000) | 5.2730E-03 (2002,277,0000) |
| 86 | -13.357 | -135.645 | 9.4355E-03 (2002,008,0000) | 8.6439E-03 (2002,356,0000) | 6.3831E-03 (2002,007,0000) | 5.1714E-03 (2002,277,0000) |
| 87 | -11.913 | -135.648 | 9.3219E-03 (2002,008,0000) | 8.4307E-03 (2002,356,0000) | 6.2374E-03 (2002,007,0000) | 5.0730E-03 (2002,277,0000) |
| 88 | -10.469 | -135.650 | 9.2092E-03 (2002,008,0000) | 8.2242E-03 (2002,356,0000) | 6.0943E-03 (2002,007,0000) | 4.9790E-03 (2002,277,0000) |
| 89 | -9.025 | -135.652 | 9.0962E-03 (2002,008,0000) | 8.0289E-03 (2002,356,0000) | 5.9543E-03 (2002,007,0000) | 4.8887E-03 (2002,277,0000) |
| 90 | -7.581 | -135.653 | 8.9806E-03 (2002,008,0000) | 7.8357E-03 (2002,356,0000) | 5.8119E-03 (2002,007,0000) | 4.8002E-03 (2002,277,0000) |
| 91 | -6.137 | -135.655 | 8.8638E-03 (2002,008,0000) | 7.6295E-03 (2002,356,0000) | 5.6785E-03 (2002,007,0000) | 4.7178E-03 (2002,329,0000) |
| 92 | -4.693 | -135.656 | 8.7466E-03 (2002,008,0000) | 7.2825E-03 (2002,356,0000) | 5.5438E-03 (2002,007,0000) | 4.7094E-03 (2002,329,0000) |
| 93 | -3.249 | -135.656 | 8.6312E-03 (2002,008,0000) | 7.0669E-03 (2002,356,0000) | 5.4097E-03 (2002,007,0000) | 4.7010E-03 (2002,329,0000) |
| 94 | -1.805 | -135.657 | 8.5097E-03 (2002,008,0000) | 6.8440E-03 (2002,356,0000) | 5.2757E-03 (2002,007,0000) | 4.6904E-03 (2002,329,0000) |
| 95 | -16.241 | -133.788 | 9.8017E-03 (2002,008,0000) | 8.8724E-03 (2002,356,0000) | 6.6923E-03 (2002,007,0000) | 5.5198E-03 (2002,277,0000) |
| 96 | -14.797 | -133.791 | 9.6905E-03 (2002,008,0000) | 8.6628E-03 (2002,356,0000) | 6.5379E-03 (2002,007,0000) | 5.4129E-03 (2002,277,0000) |
| 97 | -13.353 | -133.793 | 9.5763E-03 (2002,008,0000) | 8.4520E-03 (2002,356,0000) | 6.3897E-03 (2002,007,0000) | 5.3093E-03 (2002,277,0000) |
| 98 | -11.910 | -133.796 | 9.4620E-03 (2002,008,0000) | 8.2518E-03 (2002,356,0000) | 6.2443E-03 (2002,007,0000) | 5.2118E-03 (2002,277,0000) |
| 99 | -10.466 | -133.798 | 9.3470E-03 (2002,008,0000) | 8.0693E-03 (2002,356,0000) | 6.1015E-03 (2002,007,0000) | 5.1177E-03 (2002,277,0000) |
| 100 | -9.023 | -133.799 | 9.2277E-03 (2002,008,0000) | 7.8692E-03 (2002,356,0000) | 5.9587E-03 (2002,007,0000) | 5.0240E-03 (2002,277,0000) |
| 101 | -7.579 | -133.801 | 9.1102E-03 (2002,008,0000) | 7.6728E-03 (2002,356,0000) | 5.8172E-03 (2002,007,0000) | 4.9325E-03 (2002,277,0000) |
| 102 | -4.692 | -133.803 | 8.8722E-03 (2002,008,0000) | 7.1189E-03 (2002,356,0000) | 5.5483E-03 (2002,007,0000) | 4.7609E-03 (2002,277,0000) |
| 103 | -3.248 | -133.804 | 8.7498E-03 (2002,008,0000) | 6.9257E-03 (2002,356,0000) | 5.4093E-03 (2002,007,0000) | 4.6785E-03 (2002,277,0000) |
| 104 | -14.793 | -131.938 | 9.8285E-03 (2002,008,0000) | 8.4599E-03 (2002,356,0000) | 5.5450E-03 (2002,007,0000) | 5.5481E-03 (2002,277,0000) |
| 105 | -13.350 | -131.941 | 9.7134E-03 (2002,008,0000) | 8.2656E-03 (2002,356,0000) | 6.3940E-03 (2002,007,0000) | 5.4470E-03 (2002,277,0000) |
| 106 | -11.907 | -131.943 | 9.5963E-03 (2002,008,0000) | 8.0814E-03 (2002,356,0000) | 6.2482E-03 (2002,007,0000) | 5.3484E-03 (2002,277,0000) |
| 107 | -10.464 | -131.945 | 9.4744E-03 (2002,008,0000) | 7.8859E-03 (2002,356,0000) | 6.1031E-03 (2002,007,0000) | 5.2488E-03 (2002,277,0000) |
| 108 | -9.020 | -131.947 | 9.3551E-03 (2002,008,0000) | 7.6122E-03 (2002,356,0000) | 5.9599E-03 (2002,007,0000) | 5.1530E-03 (2002,277,0000) |
| 109 | -16.233 | -130.083 | 1.0080E-02 (2002,008,0000) | 8.4430E-03 (2002,356,0000) | 6.6986E-03 (2002,007,0000) | 5.7881E-03 (2002,277,0000) |
| 110 | -14.790 | -130.086 | 9.9636E-03 (2002,008,0000) | 8.2573E-03 (2002,356,0000) | 6.5446E-03 (2002,007,0000) | 5.6813E-03 (2002,277,0000) |
| 111 | -13.347 | -130.089 | 9.8443E-03 (2002,008,0000) | 8.0687E-03 (2002,356,0000) | 6.3960E-03 (2002,007,0000) | 5.5766E-03 (2002,277,0000) |
| 112 | -11.904 | -130.091 | 9.7247E-03 (2002,008,0000) | 7.8805E-03 (2002,356,0000) | 6.2460E-03 (2002,007,0000) | 5.4736E-03 (2002,277,0000) |
| 113 | -17.671 | -128.228 | 1.0329E-02 (2002,008,0000) | 8.4034E-03 (2002,356,0000) | 6.8508E-03 (2002,007,0000) | 6.0248E-03 (2002,277,0000) |
| 114 | -16.229 | -128.231 | 1.0213E-02 (2002,008,0000) | 8.2187E-03 (2002,356,0000) | 6.6928E-03 (2002,007,0000) | 5.9118E-03 (2002,277,0000) |
| 115 | -14.786 | -128.234 | 1.0091E-02 (2002,008,0000) | 8.0393E-03 (2002,356,0000) | 6.5407E-03 (2002,007,0000) | 5.8032E-03 (2002,277,0000) |

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CALPOST Version 5.6394 Level 070622

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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1 | -9.046 | -154.175 | 6.7984E-04 | 58 | -4.696 | -141.212 | 6.5576E-04 |
| 2 | -7.599 | -154.176 | 6.7104E-04 | 59 | -3.251 | -141.213 | 6.4723E-04 |
| 3 | -6.152 | -154.178 | 6.6260E-04 | 60 | -1.806 | -141.214 | 6.3922E-04 |
| 4 | -3.257 | -154.179 | 6.4007E-04 | 61 | -0.361 | -141.214 | 6.3125E-04 |
| 5 | -10.491 | -152.321 | 6.9414E-04 | 62 | -14.808 | -139.347 | 7.1622E-04 |
| 6 | -9.044 | -152.322 | 6.8240E-04 | 63 | -13.363 | -139.350 | 7.0805E-04 |
| 7 | -7.597 | -152.324 | 6.7157E-04 | 64 | -11.918 | -139.352 | 7.0126E-04 |
| 8 | -6.150 | -152.325 | 6.6064E-04 | 65 | -10.474 | -139.354 | 6.9216E-04 |
| 9 | -4.703 | -152.326 | 6.5401E-04 | 66 | -9.029 | -139.356 | 6.8107E-04 |
| 10 | -3.256 | -152.327 | 6.4565E-04 | 67 | -7.584 | -139.358 | 6.7280E-04 |
| 11 | -1.809 | -152.328 | 6.3750E-04 | 68 | -6.140 | -139.359 | 6.6621E-04 |
| 12 | -0.362 | -152.328 | 6.2422E-04 | 69 | -4.695 | -139.360 | 6.5916E-04 |
| 13 | -11.936 | -150.466 | 7.0006E-04 | 70 | -3.250 | -139.361 | 6.4848E-04 |
| 14 | -10.489 | -150.468 | 6.8814E-04 | 71 | -1.806 | -139.361 | 6.4056E-04 |
| 15 | -9.042 | -150.470 | 6.7912E-04 | 72 | -0.361 | -139.361 | 6.3338E-04 |
| 16 | -7.595 | -150.472 | 6.7042E-04 | 73 | 1.083 | -139.361 | 6.2503E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | -6.149 | -150.473 | 6.6157E-04 | 74 | -14.804 | -137.495 | 7.1780E-04 |
| 18 | -4.702 | -150.474 | 6.5511E-04 | 75 | -13.360 | -137.498 | 7.0922E-04 |
| 19 | -3.255 | -150.475 | 6.4924E-04 | 76 | -11.915 | -137.500 | 6.9935E-04 |
| 20 | -1.808 | -150.475 | 6.4307E-04 | 77 | -10.471 | -137.502 | 6.9069E-04 |
| 21 | 1.085 | -150.475 | 6.2022E-04 | 78 | -9.027 | -137.504 | 6.8341E-04 |
| 22 | -11.933 | -148.614 | 6.9710E-04 | 79 | -7.583 | -137.506 | 6.7623E-04 |
| 23 | -10.486 | -148.616 | 6.9074E-04 | 80 | -6.138 | -137.507 | 6.6865E-04 |
| 24 | -9.040 | -148.618 | 6.8285E-04 | 81 | -4.694 | -137.508 | 6.5860E-04 |
| 25 | -7.594 | -148.619 | 6.7250E-04 | 82 | -3.250 | -137.509 | 6.4907E-04 |
| 26 | -6.147 | -148.621 | 6.6379E-04 | 83 | -1.805 | -137.509 | 6.4016E-04 |
| 27 | -4.701 | -148.622 | 6.5656E-04 | 84 | -16.245 | -135.640 | 7.2508E-04 |
| 28 | -3.254 | -148.622 | 6.5065E-04 | 85 | -14.801 | -135.643 | 7.1729E-04 |
| 29 | -1.808 | -148.623 | 6.4399E-04 | 86 | -13.357 | -135.645 | 7.0805E-04 |
| 30 | -0.362 | -148.623 | 6.3047E-04 | 87 | -11.913 | -135.648 | 6.9940E-04 |
| 31 | -11.930 | -146.762 | 6.9880E-04 | 88 | -10.469 | -135.650 | 6.9114E-04 |
| 32 | -10.484 | -146.764 | 6.9099E-04 | 89 | -9.025 | -135.652 | 6.8389E-04 |
| 33 | -9.038 | -146.765 | 6.8374E-04 | 90 | -7.581 | -135.653 | 6.7647E-04 |
| 34 | -7.592 | -146.767 | 6.7404E-04 | 91 | -6.137 | -135.655 | 6.6612E-04 |
| 35 | -6.146 | -146.768 | 6.6579E-04 | 92 | -4.693 | -135.656 | 6.5675E-04 |
| 36 | -4.700 | -146.769 | 6.5988E-04 | 93 | -3.249 | -135.656 | 6.4828E-04 |
| 37 | -3.254 | -146.770 | 6.5299E-04 | 94 | -1.805 | -135.657 | 6.3918E-04 |
| 38 | -1.808 | -146.770 | 6.4491E-04 | 95 | -16.241 | -133.788 | 7.2680E-04 |
| 39 | -0.362 | -146.771 | 6.2880E-04 | 96 | -14.797 | -133.791 | 7.1667E-04 |
| 40 | -10.481 | -144.911 | 6.9176E-04 | 97 | -13.353 | -133.793 | 7.0783E-04 |
| 41 | -9.036 | -144.913 | 6.8459E-04 | 98 | -11.910 | -133.796 | 6.9994E-04 |
| 42 | -7.590 | -144.915 | 6.7719E-04 | 99 | -10.466 | -133.798 | 6.9358E-04 |
| 43 | -6.144 | -144.916 | 6.6886E-04 | 100 | -9.023 | -133.799 | 6.8450E-04 |
| 44 | -4.699 | -144.917 | 6.6092E-04 | 101 | -7.579 | -133.801 | 6.7412E-04 |
| 45 | -3.253 | -144.918 | 6.5314E-04 | 102 | -4.692 | -133.803 | 6.5599E-04 |
| 46 | -1.807 | -144.918 | 6.4097E-04 | 103 | -3.248 | -133.804 | 6.4725E-04 |
| 47 | -10.479 | -143.059 | 6.9269E-04 | 104 | -14.793 | -131.938 | 7.1637E-04 |
| 48 | -9.033 | -143.061 | 6.8558E-04 | 105 | -13.350 | -131.941 | 7.0923E-04 |
| 49 | -7.588 | -143.062 | 6.7689E-04 | 106 | -11.907 | -131.943 | 7.0223E-04 |
| 50 | -6.143 | -143.064 | 6.6710E-04 | 107 | -10.464 | -131.945 | 6.9128E-04 |
| 51 | -4.697 | -143.065 | 6.5880E-04 | 108 | -9.020 | -131.947 | 6.8142E-04 |
| 52 | -3.252 | -143.065 | 6.5001E-04 | 109 | -16.233 | -130.083 | 7.2628E-04 |
| 53 | -1.807 | -143.066 | 6.3922E-04 | 110 | -14.790 | -130.086 | 7.1770E-04 |
| 54 | -10.476 | -141.207 | 6.9364E-04 | 111 | -13.347 | -130.089 | 7.0886E-04 |
| 55 | -9.031 | -141.209 | 6.8515E-04 | 112 | -11.904 | -130.091 | 6.9873E-04 |
| 56 | -7.586 | -141.210 | 6.7317E-04 | 113 | -17.671 | -128.228 | 7.3654E-04 |
| 57 | -6.141 | -141.211 | 6.6494E-04 | 114 | -16.229 | -128.231 | 7.2577E-04 |
| | | | | 115 | -14.786 | -128.234 | 7.1609E-04 |

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CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 113 | -17.671 | -128.228 | DISCRETE | 1.0329E-02 (2002,008,0000) | RANK 1 | 24 | HOUR |
| 84 | -16.245 | -135.640 | DISCRETE | 9.0688E-03 (2002,356,0000) | RANK 2 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 6.8508E-03 (2002,007,0000) | RANK 3 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 6.0248E-03 (2002,277,0000) | RANK 4 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 7.3654E-04 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Bryce Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  115*0, 213*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2002
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                        Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                  Multiplicative scaling factor: 0.0000E+00
                        Additive scaling factor: 0.0000E+00
                 Hourly background values used?: F


  Source information
                 Source contribution processing: 0
                  0= No source contributions
                  1= Contributions are summed
                  2= TRACEBACK mode for 1 receptor
                  3= Reported TOTAL is processed


  Receptor information
                   Gridded receptors processed?: F
                  Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1

  Visibility Processing is NOT Selected
```

```
 Output options
                    Units requested for output:   (ug/m**3)

 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                  1-hr averages:     F
                                  3-hr averages:     F
                                 24-hr averages:     T
                               NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                   Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                   Echo tables for selected days:     F
                   Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                        Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2002 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8759

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2002\POST_2002_PM_BR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2002\SPC2002.CON


 ------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2002\2002_BRYCE_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_BR.DAT

*************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                     2 RANK                     3 RANK                     4 RANK
    116     -243.891  -280.107   1.5797E-02 (2002,343,0000)  1.5325E-02 (2002,144,0000)  1.3900E-02 (2002,306,0000)  1.2770E-02 (2002,036,0000)
    117     -243.156  -280.129   1.6025E-02 (2002,343,0000)  1.4930E-02 (2002,144,0000)  1.4187E-02 (2002,306,0000)  1.3099E-02 (2002,036,0000)
    118     -242.420  -280.152   1.6249E-02 (2002,343,0000)  1.4506E-02 (2002,144,0000)  1.4498E-02 (2002,306,0000)  1.3570E-02 (2002,031,0000)
    119     -241.685  -280.175   1.6466E-02 (2002,343,0000)  1.4836E-02 (2002,306,0000)  1.4181E-02 (2002,031,0000)  1.4061E-02 (2002,144,0000)
    120     -243.862  -279.180   1.5856E-02 (2002,144,0000)  1.5753E-02 (2002,343,0000)  1.3786E-02 (2002,306,0000)  1.2625E-02 (2002,036,0000)
    121     -243.127  -279.203   1.5993E-02 (2002,343,0000)  1.5464E-02 (2002,144,0000)  1.4081E-02 (2002,306,0000)  1.2951E-02 (2002,036,0000)
    122     -242.392  -279.226   1.6224E-02 (2002,343,0000)  1.5042E-02 (2002,144,0000)  1.4404E-02 (2002,306,0000)  1.3531E-02 (2002,031,0000)
    123     -241.656  -279.248   1.6450E-02 (2002,343,0000)  1.4745E-02 (2002,306,0000)  1.4588E-02 (2002,144,0000)  1.4140E-02 (2002,031,0000)
    124     -240.921  -279.271   1.6669E-02 (2002,343,0000)  1.5115E-02 (2002,306,0000)  1.4761E-02 (2002,031,0000)  1.4107E-02 (2002,144,0000)
    125     -243.834  -278.254   1.6411E-02 (2002,144,0000)  1.5702E-02 (2002,343,0000)  1.3689E-02 (2002,306,0000)  1.2485E-02 (2002,036,0000)
    126     -243.098  -278.277   1.6022E-02 (2002,144,0000)  1.5948E-02 (2002,343,0000)  1.4000E-02 (2002,306,0000)  1.2881E-02 (2002,031,0000)
    127     -242.363  -278.299   1.6186E-02 (2002,343,0000)  1.5601E-02 (2002,144,0000)  1.4324E-02 (2002,306,0000)  1.3488E-02 (2002,031,0000)
    128     -241.628  -278.322   1.6422E-02 (2002,343,0000)  1.5148E-02 (2002,144,0000)  1.4677E-02 (2002,306,0000)  1.4104E-02 (2002,031,0000)
    129     -240.892  -278.345   1.6649E-02 (2002,343,0000)  1.5045E-02 (2002,306,0000)  1.4722E-02 (2002,031,0000)  1.4667E-02 (2002,144,0000)
    130     -240.157  -278.367   1.6871E-02 (2002,343,0000)  1.5435E-02 (2002,306,0000)  1.5341E-02 (2002,031,0000)  1.4165E-02 (2002,144,0000)
    131     -243.805  -277.328   1.6977E-02 (2002,144,0000)  1.5637E-02 (2002,343,0000)  1.3620E-02 (2002,306,0000)  1.2541E-02 (2002,017,0000)
    132     -243.070  -277.350   1.6602E-02 (2002,144,0000)  1.5891E-02 (2002,343,0000)  1.3934E-02 (2002,306,0000)  1.2839E-02 (2002,031,0000)
    133     -242.335  -277.373   1.6179E-02 (2002,144,0000)  1.6137E-02 (2002,343,0000)  1.4268E-02 (2002,306,0000)  1.3441E-02 (2002,031,0000)
    134     -241.599  -277.396   1.6379E-02 (2002,343,0000)  1.5721E-02 (2002,144,0000)  1.4615E-02 (2002,306,0000)  1.4057E-02 (2002,031,0000)
    135     -240.864  -277.418   1.6616E-02 (2002,343,0000)  1.5235E-02 (2002,144,0000)  1.4994E-02 (2002,306,0000)  1.4676E-02 (2002,031,0000)
    136     -240.129  -277.441   1.6846E-02 (2002,343,0000)  1.5387E-02 (2002,306,0000)  1.5295E-02 (2002,031,0000)  1.4728E-02 (2002,144,0000)
    137     -243.776  -276.401   1.7567E-02 (2002,144,0000)  1.5562E-02 (2002,343,0000)  1.3567E-02 (2002,306,0000)  1.2810E-02 (2002,017,0000)
    138     -243.041  -276.424   1.7189E-02 (2002,144,0000)  1.5822E-02 (2002,343,0000)  1.3876E-02 (2002,306,0000)  1.2921E-02 (2002,017,0000)
    139     -242.306  -276.447   1.6775E-02 (2002,144,0000)  1.6079E-02 (2002,343,0000)  1.4218E-02 (2002,306,0000)  1.3394E-02 (2002,031,0000)
    140     -241.571  -276.469   1.6329E-02 (2002,343,0000)  1.6320E-02 (2002,144,0000)  1.4576E-02 (2002,306,0000)  1.4005E-02 (2002,031,0000)
    141     -240.836  -276.492   1.6574E-02 (2002,343,0000)  1.5829E-02 (2002,144,0000)  1.4954E-02 (2002,306,0000)  1.4624E-02 (2002,031,0000)
    142     -240.101  -276.514   1.6815E-02 (2002,343,0000)  1.5354E-02 (2002,306,0000)  1.5306E-02 (2002,144,0000)  1.5249E-02 (2002,031,0000)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 143 | -243.747 | -275.475 | 1.8175E-02 (2002,144,0000) | 1.5475E-02 (2002,343,0000) | 1.3512E-02 (2002,306,0000) | 1.3105E-02 (2002,017,0000) |
| 144 | -243.012 | -275.498 | 1.7803E-02 (2002,144,0000) | 1.5742E-02 (2002,343,0000) | 1.3844E-02 (2002,306,0000) | 1.3219E-02 (2002,017,0000) |
| 145 | -242.277 | -275.520 | 1.7384E-02 (2002,144,0000) | 1.6006E-02 (2002,343,0000) | 1.4187E-02 (2002,306,0000) | 1.3353E-02 (2002,017,0000) |
| 146 | -241.542 | -275.543 | 1.6922E-02 (2002,144,0000) | 1.6267E-02 (2002,343,0000) | 1.4548E-02 (2002,306,0000) | 1.3950E-02 (2002,031,0000) |
| 147 | -240.807 | -275.565 | 1.6525E-02 (2002,343,0000) | 1.6419E-02 (2002,144,0000) | 1.4929E-02 (2002,306,0000) | 1.4571E-02 (2002,031,0000) |
| 148 | -240.072 | -275.588 | 1.6772E-02 (2002,343,0000) | 1.5890E-02 (2002,144,0000) | 1.5325E-02 (2002,306,0000) | 1.5200E-02 (2002,031,0000) |
| 149 | -244.454 | -274.526 | 1.9091E-02 (2002,144,0000) | 1.5100E-02 (2002,343,0000) | 1.3337E-02 (2002,017,0000) | 1.3174E-02 (2002,306,0000) |
| 150 | -243.719 | -274.548 | 1.8775E-02 (2002,144,0000) | 1.5378E-02 (2002,343,0000) | 1.3483E-02 (2002,306,0000) | 1.3434E-02 (2002,017,0000) |
| 151 | -242.984 | -274.571 | 1.8412E-02 (2002,144,0000) | 1.5653E-02 (2002,343,0000) | 1.3809E-02 (2002,306,0000) | 1.3547E-02 (2002,017,0000) |
| 152 | -244.425 | -273.599 | 1.9633E-02 (2002,144,0000) | 1.4986E-02 (2002,343,0000) | 1.3677E-02 (2002,017,0000) | 1.3153E-02 (2002,306,0000) |
| 153 | -243.690 | -273.622 | 1.9334E-02 (2002,144,0000) | 1.5273E-02 (2002,343,0000) | 1.3782E-02 (2002,017,0000) | 1.3469E-02 (2002,306,0000) |
| 154 | -242.955 | -273.645 | 1.8984E-02 (2002,144,0000) | 1.5558E-02 (2002,343,0000) | 1.3893E-02 (2002,017,0000) | 1.3800E-02 (2002,306,0000) |
| 155 | -244.396 | -272.673 | 2.0205E-02 (2002,144,0000) | 1.4861E-02 (2002,343,0000) | 1.4051E-02 (2002,017,0000) | 1.3152E-02 (2002,306,0000) |
| 156 | -243.661 | -272.696 | 1.9926E-02 (2002,144,0000) | 1.5157E-02 (2002,343,0000) | 1.4147E-02 (2002,017,0000) | 1.3462E-02 (2002,306,0000) |
| 157 | -242.927 | -272.719 | 1.9595E-02 (2002,144,0000) | 1.5448E-02 (2002,343,0000) | 1.4249E-02 (2002,017,0000) | 1.3791E-02 (2002,306,0000) |
| 158 | -244.367 | -271.747 | 2.0818E-02 (2002,144,0000) | 1.4729E-02 (2002,343,0000) | 1.4433E-02 (2002,017,0000) | 1.3145E-02 (2002,306,0000) |
| 159 | -243.633 | -271.769 | 2.0564E-02 (2002,144,0000) | 1.5029E-02 (2002,343,0000) | 1.4515E-02 (2002,017,0000) | 1.3465E-02 (2002,306,0000) |
| 160 | -242.898 | -271.792 | 2.0258E-02 (2002,144,0000) | 1.5328E-02 (2002,343,0000) | 1.4596E-02 (2002,017,0000) | 1.3808E-02 (2002,306,0000) |
| 161 | -244.339 | -270.820 | 2.1446E-02 (2002,144,0000) | 1.4826E-02 (2002,017,0000) | 1.4583E-02 (2002,343,0000) | 1.3148E-02 (2002,306,0000) |
| 162 | -243.604 | -270.843 | 2.1222E-02 (2002,144,0000) | 1.4894E-02 (2002,343,0000) | 1.4882E-02 (2002,017,0000) | 1.3467E-02 (2002,306,0000) |
| 163 | -242.869 | -270.866 | 2.0926E-02 (2002,144,0000) | 1.5199E-02 (2002,343,0000) | 1.4925E-02 (2002,017,0000) | 1.3810E-02 (2002,306,0000) |
| 164 | -242.135 | -270.889 | 2.0574E-02 (2002,144,0000) | 1.5504E-02 (2002,343,0000) | 1.4992E-02 (2002,017,0000) | 1.4161E-02 (2002,306,0000) |
| 165 | -244.310 | -269.894 | 2.2065E-02 (2002,144,0000) | 1.5204E-02 (2002,017,0000) | 1.4430E-02 (2002,343,0000) | 1.3159E-02 (2002,306,0000) |
| 166 | -243.575 | -269.917 | 2.1855E-02 (2002,144,0000) | 1.5220E-02 (2002,017,0000) | 1.4746E-02 (2002,343,0000) | 1.3487E-02 (2002,306,0000) |
| 167 | -242.841 | -269.940 | 2.1576E-02 (2002,144,0000) | 1.5272E-02 (2002,017,0000) | 1.5063E-02 (2002,343,0000) | 1.3823E-02 (2002,306,0000) |
| 168 | -242.106 | -269.962 | 2.1237E-02 (2002,144,0000) | 1.5375E-02 (2002,343,0000) | 1.5343E-02 (2002,017,0000) | 1.4176E-02 (2002,306,0000) |
| 169 | -242.812 | -269.013 | 2.2265E-02 (2002,144,0000) | 1.5633E-02 (2002,017,0000) | 1.4916E-02 (2002,343,0000) | 1.3845E-02 (2002,306,0000) |
| 170 | -242.078 | -269.036 | 2.1941E-02 (2002,144,0000) | 1.5692E-02 (2002,017,0000) | 1.5237E-02 (2002,343,0000) | 1.4203E-02 (2002,306,0000) |
| 171 | -241.343 | -269.059 | 2.1557E-02 (2002,144,0000) | 1.5748E-02 (2002,017,0000) | 1.5557E-02 (2002,343,0000) | 1.4579E-02 (2002,306,0000) |
| 172 | -240.609 | -269.081 | 2.1108E-02 (2002,144,0000) | 1.5876E-02 (2002,343,0000) | 1.5804E-02 (2002,017,0000) | 1.4981E-02 (2002,306,0000) |
| 173 | -239.874 | -269.104 | 2.0592E-02 (2002,144,0000) | 1.6186E-02 (2002,343,0000) | 1.5894E-02 (2002,017,0000) | 1.5383E-02 (2002,306,0000) |
| 174 | -242.049 | -268.110 | 2.2640E-02 (2002,144,0000) | 1.6019E-02 (2002,017,0000) | 1.5088E-02 (2002,343,0000) | 1.4226E-02 (2002,306,0000) |
| 175 | -241.315 | -268.132 | 2.2278E-02 (2002,144,0000) | 1.6078E-02 (2002,017,0000) | 1.5417E-02 (2002,343,0000) | 1.4606E-02 (2002,306,0000) |
| 176 | -240.580 | -268.155 | 2.1856E-02 (2002,144,0000) | 1.6157E-02 (2002,017,0000) | 1.5740E-02 (2002,343,0000) | 1.5018E-02 (2002,306,0000) |
| 177 | -239.846 | -268.177 | 2.1347E-02 (2002,144,0000) | 1.6246E-02 (2002,017,0000) | 1.6058E-02 (2002,343,0000) | 1.5420E-02 (2002,306,0000) |
| 178 | -239.112 | -268.200 | 2.0780E-02 (2002,144,0000) | 1.6376E-02 (2002,343,0000) | 1.6340E-02 (2002,017,0000) | 1.5846E-02 (2002,306,0000) |
| 179 | -242.020 | -267.183 | 2.3368E-02 (2002,144,0000) | 1.6392E-02 (2002,017,0000) | 1.4937E-02 (2002,343,0000) | 1.4253E-02 (2002,306,0000) |
| 180 | -241.286 | -267.206 | 2.3042E-02 (2002,144,0000) | 1.6459E-02 (2002,017,0000) | 1.5267E-02 (2002,343,0000) | 1.4628E-02 (2002,306,0000) |
| 181 | -240.552 | -267.228 | 2.2629E-02 (2002,144,0000) | 1.6532E-02 (2002,017,0000) | 1.5597E-02 (2002,343,0000) | 1.5033E-02 (2002,306,0000) |
| 182 | -239.818 | -267.251 | 2.2141E-02 (2002,144,0000) | 1.6607E-02 (2002,017,0000) | 1.5929E-02 (2002,343,0000) | 1.5454E-02 (2002,306,0000) |
| 183 | -239.083 | -267.273 | 2.1586E-02 (2002,144,0000) | 1.6692E-02 (2002,017,0000) | 1.6251E-02 (2002,343,0000) | 1.5880E-02 (2002,306,0000) |
| 184 | -241.258 | -266.280 | 2.3791E-02 (2002,144,0000) | 1.6838E-02 (2002,017,0000) | 1.5116E-02 (2002,343,0000) | 1.4644E-02 (2002,306,0000) |
| 185 | -240.524 | -266.302 | 2.3403E-02 (2002,144,0000) | 1.6898E-02 (2002,017,0000) | 1.5454E-02 (2002,343,0000) | 1.5063E-02 (2002,306,0000) |
| 186 | -239.789 | -266.325 | 2.2941E-02 (2002,144,0000) | 1.6963E-02 (2002,017,0000) | 1.5789E-02 (2002,343,0000) | 1.5478E-02 (2002,306,0000) |
| 187 | -239.055 | -266.347 | 2.2393E-02 (2002,144,0000) | 1.7037E-02 (2002,017,0000) | 1.6125E-02 (2002,343,0000) | 1.5911E-02 (2002,306,0000) |
| 188 | -238.321 | -266.369 | 2.1779E-02 (2002,144,0000) | 1.7121E-02 (2002,017,0000) | 1.6452E-02 (2002,343,0000) | 1.6354E-02 (2002,306,0000) |
| 189 | -237.587 | -266.392 | 2.1099E-02 (2002,144,0000) | 1.7204E-02 (2002,017,0000) | 1.6835E-02 (2002,306,0000) | 1.6776E-02 (2002,343,0000) |
| 190 | -236.853 | -266.414 | 2.0374E-02 (2002,144,0000) | 1.7331E-02 (2002,306,0000) | 1.7297E-02 (2002,017,0000) | 1.7204E-02 (2002,031,0000) |
| 191 | -236.118 | -266.436 | 1.9591E-02 (2002,144,0000) | 1.7874E-02 (2002,031,0000) | 1.7850E-02 (2002,306,0000) | 1.7398E-02 (2002,343,0000) |
| 192 | -235.384 | -266.458 | 1.8771E-02 (2002,144,0000) | 1.8530E-02 (2002,031,0000) | 1.8394E-02 (2002,306,0000) | 1.7699E-02 (2002,343,0000) |
| 193 | -234.650 | -266.480 | 1.9171E-02 (2002,031,0000) | 1.8980E-02 (2002,306,0000) | 1.7984E-02 (2002,343,0000) | 1.7920E-02 (2002,144,0000) |
| 194 | -233.916 | -266.502 | 1.9784E-02 (2002,031,0000) | 1.9585E-02 (2002,306,0000) | 1.8259E-02 (2002,343,0000) | 1.7644E-02 (2002,017,0000) |
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| 196 | -232.447 | -266.545 | 2.0916E-02 (2002,031,0000) | 2.0867E-02 (2002,306,0000) | 1.8769E-02 (2002,343,0000) | 1.7838E-02 (2002,017,0000) |
| 197 | -231.713 | -266.567 | 2.1543E-02 (2002,306,0000) | 2.1423E-02 (2002,031,0000) | 1.9006E-02 (2002,343,0000) | 1.7925E-02 (2002,017,0000) |
| 198 | -241.229 | -265.353 | 2.4571E-02 (2002,144,0000) | 1.7238E-02 (2002,017,0000) | 1.4953E-02 (2002,343,0000) | 1.4693E-02 (2002,030,0000) |
| 199 | -240.495 | -265.376 | 2.4207E-02 (2002,144,0000) | 1.7281E-02 (2002,017,0000) | 1.5301E-02 (2002,343,0000) | 1.5075E-02 (2002,306,0000) |
| 200 | -239.761 | -265.398 | 2.3753E-02 (2002,144,0000) | 1.7335E-02 (2002,017,0000) | 1.5648E-02 (2002,343,0000) | 1.5507E-02 (2002,306,0000) |
| 201 | -239.027 | -265.421 | 2.3213E-02 (2002,144,0000) | 1.7397E-02 (2002,017,0000) | 1.5987E-02 (2002,343,0000) | 1.5937E-02 (2002,306,0000) |
| 202 | -238.293 | -265.443 | 2.2599E-02 (2002,144,0000) | 1.7466E-02 (2002,017,0000) | 1.6396E-02 (2002,306,0000) | 1.6323E-02 (2002,343,0000) |
| 203 | -237.559 | -265.465 | 2.1921E-02 (2002,144,0000) | 1.7531E-02 (2002,017,0000) | 1.6872E-02 (2002,306,0000) | 1.6655E-02 (2002,343,0000) |
| 204 | -236.825 | -265.487 | 2.1184E-02 (2002,144,0000) | 1.7599E-02 (2002,017,0000) | 1.7373E-02 (2002,306,0000) | 1.7158E-02 (2002,031,0000) |
| 205 | -236.090 | -265.509 | 2.0388E-02 (2002,144,0000) | 1.7899E-02 (2002,306,0000) | 1.7837E-02 (2002,031,0000) | 1.7669E-02 (2002,017,0000) |
| 206 | -235.356 | -265.532 | 1.9545E-02 (2002,144,0000) | 1.8503E-02 (2002,031,0000) | 1.8463E-02 (2002,306,0000) | 1.7723E-02 (2002,017,0000) |
| 207 | -234.622 | -265.553 | 1.9152E-02 (2002,031,0000) | 1.9048E-02 (2002,306,0000) | 1.8667E-02 (2002,144,0000) | 1.7907E-02 (2002,343,0000) |
| 208 | -233.888 | -265.575 | 1.9784E-02 (2002,031,0000) | 1.9664E-02 (2002,306,0000) | 1.8195E-02 (2002,343,0000) | 1.7874E-02 (2002,017,0000) |
| 209 | -233.154 | -265.597 | 2.0382E-02 (2002,031,0000) | 2.0307E-02 (2002,306,0000) | 1.8472E-02 (2002,343,0000) | 1.7969E-02 (2002,017,0000) |
| 210 | -232.420 | -265.619 | 2.0977E-02 (2002,306,0000) | 2.0941E-02 (2002,031,0000) | 1.8732E-02 (2002,343,0000) | 1.8062E-02 (2002,017,0000) |
| 211 | -231.686 | -265.641 | 2.1662E-02 (2002,306,0000) | 2.1454E-02 (2002,031,0000) | 1.8979E-02 (2002,343,0000) | 1.8146E-02 (2002,017,0000) |
| 212 | -240.467 | -264.449 | 2.4986E-02 (2002,144,0000) | 1.7677E-02 (2002,017,0000) | 1.5152E-02 (2002,030,0000) | 1.5136E-02 (2002,343,0000) |
| 213 | -239.733 | -264.472 | 2.4540E-02 (2002,144,0000) | 1.7716E-02 (2002,017,0000) | 1.5529E-02 (2002,306,0000) | 1.5488E-02 (2002,343,0000) |
| 214 | -238.999 | -264.494 | 2.4022E-02 (2002,144,0000) | 1.7761E-02 (2002,017,0000) | 1.5969E-02 (2002,306,0000) | 1.5840E-02 (2002,343,0000) |
| 215 | -238.265 | -264.517 | 2.3421E-02 (2002,144,0000) | 1.7804E-02 (2002,017,0000) | 1.6428E-02 (2002,306,0000) | 1.6184E-02 (2002,343,0000) |
| 216 | -237.531 | -264.539 | 2.2750E-02 (2002,144,0000) | 1.7845E-02 (2002,017,0000) | 1.6909E-02 (2002,306,0000) | 1.6529E-02 (2002,343,0000) |
| 217 | -236.797 | -264.561 | 2.2011E-02 (2002,144,0000) | 1.7885E-02 (2002,017,0000) | 1.7411E-02 (2002,306,0000) | 1.7119E-02 (2002,031,0000) |
| 218 | -236.063 | -264.583 | 2.1209E-02 (2002,144,0000) | 1.7948E-02 (2002,306,0000) | 1.7915E-02 (2002,017,0000) | 1.7808E-02 (2002,031,0000) |
| 219 | -235.329 | -264.605 | 2.0359E-02 (2002,144,0000) | 1.8513E-02 (2002,306,0000) | 1.8487E-02 (2002,031,0000) | 1.7969E-02 (2002,017,0000) |
| 220 | -234.595 | -264.627 | 1.9465E-02 (2002,144,0000) | 1.9151E-02 (2002,031,0000) | 1.9107E-02 (2002,306,0000) | 1.8046E-02 (2002,017,0000) |
| 221 | -233.860 | -264.649 | 1.9787E-02 (2002,031,0000) | 1.9737E-02 (2002,306,0000) | 1.8553E-02 (2002,144,0000) | 1.8126E-02 (2002,017,0000) |
| 222 | -233.126 | -264.671 | 2.0397E-02 (2002,031,0000) | 2.0389E-02 (2002,306,0000) | 1.8411E-02 (2002,343,0000) | 1.8203E-02 (2002,017,0000) |
| 223 | -232.392 | -264.693 | 2.1066E-02 (2002,306,0000) | 2.0971E-02 (2002,031,0000) | 1.8685E-02 (2002,343,0000) | 1.8276E-02 (2002,017,0000) |
| 224 | -231.658 | -264.714 | 2.1775E-02 (2002,306,0000) | 2.1493E-02 (2002,031,0000) | 1.8937E-02 (2002,343,0000) | 1.8349E-02 (2002,017,0000) |
| 225 | -238.971 | -263.568 | 2.4870E-02 (2002,144,0000) | 1.8101E-02 (2002,017,0000) | 1.5996E-02 (2002,306,0000) | 1.5769E-02 (2002,030,0000) |
| 226 | -238.237 | -263.590 | 2.4283E-02 (2002,144,0000) | 1.8116E-02 (2002,017,0000) | 1.6458E-02 (2002,306,0000) | 1.6040E-02 (2002,343,0000) |
| 227 | -237.503 | -263.613 | 2.3615E-02 (2002,144,0000) | 1.8129E-02 (2002,017,0000) | 1.6940E-02 (2002,306,0000) | 1.6390E-02 (2002,343,0000) |
| 228 | -236.769 | -263.635 | 2.2876E-02 (2002,144,0000) | 1.8147E-02 (2002,017,0000) | 1.7455E-02 (2002,306,0000) | 1.7083E-02 (2002,031,0000) |
| 229 | -236.035 | -263.657 | 2.2070E-02 (2002,144,0000) | 1.8188E-02 (2002,017,0000) | 1.8000E-02 (2002,306,0000) | 1.7782E-02 (2002,031,0000) |
| 230 | -235.301 | -263.679 | 2.1207E-02 (2002,144,0000) | 1.8565E-02 (2002,306,0000) | 1.8474E-02 (2002,031,0000) | 1.8242E-02 (2002,017,0000) |
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| 232 | -233.833 | -263.723 | 1.9805E-02 (2002,306,0000) | 1.9802E-02 (2002,031,0000) | 1.9360E-02 (2002,144,0000) | 1.8363E-02 (2002,017,0000) |
| 233 | -233.099 | -263.745 | 2.0471E-02 (2002,306,0000) | 2.0427E-02 (2002,031,0000) | 1.8421E-02 (2002,017,0000) | 1.8392E-02 (2002,144,0000) |
| 234 | -232.365 | -263.766 | 2.1172E-02 (2002,306,0000) | 2.1008E-02 (2002,031,0000) | 1.8625E-02 (2002,343,0000) | 1.8479E-02 (2002,017,0000) |
| 235 | -231.631 | -263.788 | 2.1903E-02 (2002,306,0000) | 2.1546E-02 (2002,031,0000) | 1.8895E-02 (2002,343,0000) | 1.8540E-02 (2002,017,0000) |
| 236 | -238.208 | -262.664 | 2.5158E-02 (2002,144,0000) | 1.8412E-02 (2002,017,0000) | 1.6485E-02 (2002,306,0000) | 1.6199E-02 (2002,030,0000) |
| 237 | -237.475 | -262.686 | 2.4504E-02 (2002,144,0000) | 1.8424E-02 (2002,017,0000) | 1.6974E-02 (2002,306,0000) | 1.6337E-02 (2002,031,0000) |
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| 239 | -236.007 | -262.731 | 2.2975E-02 (2002,144,0000) | 1.8478E-02 (2002,017,0000) | 1.8037E-02 (2002,306,0000) | 1.7761E-02 (2002,031,0000) |
| 240 | -235.273 | -262.753 | 2.2107E-02 (2002,144,0000) | 1.8622E-02 (2002,306,0000) | 1.8509E-02 (2002,017,0000) | 1.8467E-02 (2002,031,0000) |
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| 242 | -233.805 | -262.796 | 2.0216E-02 (2002,144,0000) | 1.9888E-02 (2002,306,0000) | 1.9823E-02 (2002,031,0000) | 1.8577E-02 (2002,017,0000) |
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| 244 | -232.338 | -262.840 | 2.1299E-02 (2002,306,0000) | 2.1053E-02 (2002,031,0000) | 1.8670E-02 (2002,017,0000) | 1.8554E-02 (2002,343,0000) |
| 245 | -238.180 | -261.738 | 2.6051E-02 (2002,144,0000) | 1.8735E-02 (2002,017,0000) | 1.6514E-02 (2002,306,0000) | 1.6490E-02 (2002,030,0000) |
| 246 | -237.447 | -261.760 | 2.5418E-02 (2002,144,0000) | 1.8729E-02 (2002,017,0000) | 1.7006E-02 (2002,306,0000) | 1.6607E-02 (2002,030,0000) |
| 247 | -236.713 | -261.782 | 2.4696E-02 (2002,144,0000) | 1.8730E-02 (2002,017,0000) | 1.7531E-02 (2002,306,0000) | 1.7025E-02 (2002,031,0000) |
| 248 | -235.979 | -261.804 | 2.3902E-02 (2002,144,0000) | 1.8736E-02 (2002,017,0000) | 1.8088E-02 (2002,306,0000) | 1.7746E-02 (2002,031,0000) |
| 249 | -235.245 | -261.826 | 2.3027E-02 (2002,144,0000) | 1.8754E-02 (2002,017,0000) | 1.8685E-02 (2002,306,0000) | 1.8465E-02 (2002,031,0000) |
| 250 | -234.511 | -261.848 | 2.2093E-02 (2002,144,0000) | 1.9319E-02 (2002,306,0000) | 1.9165E-02 (2002,031,0000) | 1.8775E-02 (2002,017,0000) |
| 251 | -233.778 | -261.870 | 2.1113E-02 (2002,144,0000) | 1.9983E-02 (2002,306,0000) | 1.9842E-02 (2002,031,0000) | 1.8796E-02 (2002,017,0000) |
| 252 | -233.044 | -261.892 | 2.0682E-02 (2002,306,0000) | 2.0497E-02 (2002,031,0000) | 2.0080E-02 (2002,144,0000) | 1.8823E-02 (2002,017,0000) |
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| 254 | -235.951 | -260.878 | 2.4851E-02 (2002,144,0000) | 1.8986E-02 (2002,017,0000) | 1.8133E-02 (2002,306,0000) | 1.7742E-02 (2002,031,0000) |
| 255 | -235.217 | -260.900 | 2.3977E-02 (2002,144,0000) | 1.8980E-02 (2002,017,0000) | 1.8746E-02 (2002,306,0000) | 1.8469E-02 (2002,031,0000) |
| 256 | -234.484 | -260.922 | 2.3031E-02 (2002,144,0000) | 1.9390E-02 (2002,306,0000) | 1.9189E-02 (2002,031,0000) | 1.8985E-02 (2002,017,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 257 | -233.750 | -260.944 | 2.2031E-02 (2002,144,0000) | 2.0065E-02 (2002,306,0000) | 1.9885E-02 (2002,031,0000) | 1.9000E-02 (2002,017,0000) |
| 258 | -233.016 | -260.966 | 2.0976E-02 (2002,144,0000) | 2.0773E-02 (2002,306,0000) | 2.0554E-02 (2002,031,0000) | 1.9016E-02 (2002,017,0000) |
| 259 | -232.283 | -260.987 | 2.1528E-02 (2002,306,0000) | 2.1180E-02 (2002,031,0000) | 1.9890E-02 (2002,144,0000) | 1.9036E-02 (2002,017,0000) |
| 260 | -231.549 | -261.009 | 2.2307E-02 (2002,306,0000) | 2.1761E-02 (2002,031,0000) | 1.9048E-02 (2002,017,0000) | 1.8774E-02 (2002,144,0000) |
| 261 | -230.815 | -261.031 | 2.3123E-02 (2002,306,0000) | 2.2286E-02 (2002,031,0000) | 1.9063E-02 (2002,017,0000) | 1.9005E-02 (2002,343,0000) |
| 262 | -235.923 | -259.952 | 2.5809E-02 (2002,144,0000) | 1.9237E-02 (2002,017,0000) | 1.8190E-02 (2002,306,0000) | 1.7733E-02 (2002,031,0000) |
| 263 | -235.190 | -259.974 | 2.4932E-02 (2002,144,0000) | 1.9216E-02 (2002,017,0000) | 1.8812E-02 (2002,306,0000) | 1.8480E-02 (2002,031,0000) |
| 264 | -234.456 | -259.996 | 2.3970E-02 (2002,144,0000) | 1.9457E-02 (2002,306,0000) | 1.9213E-02 (2002,031,0000) | 1.9204E-02 (2002,017,0000) |
| 265 | -233.723 | -260.018 | 2.2953E-02 (2002,144,0000) | 2.0146E-02 (2002,306,0000) | 1.9925E-02 (2002,031,0000) | 1.9203E-02 (2002,017,0000) |
| 266 | -232.989 | -260.039 | 2.1884E-02 (2002,144,0000) | 2.0886E-02 (2002,306,0000) | 2.0607E-02 (2002,031,0000) | 1.9190E-02 (2002,017,0000) |
| 267 | -232.255 | -260.061 | 2.1656E-02 (2002,306,0000) | 2.1256E-02 (2002,031,0000) | 2.0773E-02 (2002,144,0000) | 1.9184E-02 (2002,017,0000) |
| 268 | -231.522 | -260.083 | 2.2461E-02 (2002,306,0000) | 2.1847E-02 (2002,031,0000) | 1.9630E-02 (2002,144,0000) | 1.9186E-02 (2002,017,0000) |
| 269 | -230.788 | -260.104 | 2.3289E-02 (2002,306,0000) | 2.2384E-02 (2002,031,0000) | 1.9189E-02 (2002,017,0000) | 1.8945E-02 (2002,343,0000) |
| 270 | -230.054 | -260.126 | 2.4141E-02 (2002,306,0000) | 2.2864E-02 (2002,031,0000) | 1.9229E-02 (2002,343,0000) | 1.9181E-02 (2002,017,0000) |
| 271 | -235.895 | -259.025 | 2.6763E-02 (2002,144,0000) | 1.9488E-02 (2002,017,0000) | 1.8233E-02 (2002,306,0000) | 1.7735E-02 (2002,030,0000) |
| 272 | -235.162 | -259.047 | 2.5892E-02 (2002,144,0000) | 1.9444E-02 (2002,017,0000) | 1.8863E-02 (2002,306,0000) | 1.8492E-02 (2002,031,0000) |
| 273 | -234.428 | -259.069 | 2.4942E-02 (2002,144,0000) | 1.9537E-02 (2002,306,0000) | 1.9401E-02 (2002,017,0000) | 1.9242E-02 (2002,031,0000) |
| 274 | -233.695 | -259.091 | 2.3915E-02 (2002,144,0000) | 2.0254E-02 (2002,306,0000) | 1.9975E-02 (2002,031,0000) | 1.9370E-02 (2002,017,0000) |
| 275 | -232.961 | -259.113 | 2.2826E-02 (2002,144,0000) | 2.1009E-02 (2002,306,0000) | 2.0675E-02 (2002,031,0000) | 1.9345E-02 (2002,017,0000) |
| 276 | -232.228 | -259.135 | 2.1803E-02 (2002,306,0000) | 2.1682E-02 (2002,144,0000) | 2.1334E-02 (2002,031,0000) | 1.9325E-02 (2002,017,0000) |
| 277 | -231.494 | -259.156 | 2.2628E-02 (2002,306,0000) | 2.1944E-02 (2002,031,0000) | 2.0506E-02 (2002,144,0000) | 1.9309E-02 (2002,017,0000) |
| 278 | -230.761 | -259.178 | 2.3485E-02 (2002,306,0000) | 2.2497E-02 (2002,031,0000) | 1.9311E-02 (2002,144,0000) | 1.9295E-02 (2002,017,0000) |
| 279 | -230.027 | -259.200 | 2.4355E-02 (2002,306,0000) | 2.2991E-02 (2002,031,0000) | 1.9259E-02 (2002,017,0000) | 1.9184E-02 (2002,343,0000) |
| 280 | -229.294 | -259.221 | 2.5235E-02 (2002,306,0000) | 2.3412E-02 (2002,031,0000) | 1.9472E-02 (2002,343,0000) | 1.9225E-02 (2002,017,0000) |
| 281 | -235.134 | -258.121 | 2.6869E-02 (2002,144,0000) | 1.9641E-02 (2002,017,0000) | 1.8928E-02 (2002,306,0000) | 1.8510E-02 (2002,031,0000) |
| 282 | -234.401 | -258.143 | 2.5930E-02 (2002,144,0000) | 1.9607E-02 (2002,306,0000) | 1.9580E-02 (2002,017,0000) | 1.9280E-02 (2002,031,0000) |
| 283 | -233.667 | -258.165 | 2.4898E-02 (2002,144,0000) | 2.0348E-02 (2002,306,0000) | 2.0024E-02 (2002,031,0000) | 1.9532E-02 (2002,017,0000) |
| 284 | -232.934 | -258.187 | 2.3786E-02 (2002,144,0000) | 2.1128E-02 (2002,306,0000) | 2.0738E-02 (2002,031,0000) | 1.9491E-02 (2002,017,0000) |
| 285 | -232.200 | -258.208 | 2.2623E-02 (2002,144,0000) | 2.1944E-02 (2002,306,0000) | 2.1416E-02 (2002,031,0000) | 1.9444E-02 (2002,017,0000) |
| 286 | -231.467 | -258.230 | 2.2791E-02 (2002,306,0000) | 2.2048E-02 (2002,031,0000) | 2.1419E-02 (2002,144,0000) | 1.9404E-02 (2002,017,0000) |
| 287 | -230.734 | -258.252 | 2.3669E-02 (2002,306,0000) | 2.2623E-02 (2002,031,0000) | 2.0185E-02 (2002,144,0000) | 1.9369E-02 (2002,017,0000) |
| 288 | -230.000 | -258.273 | 2.4578E-02 (2002,306,0000) | 2.3132E-02 (2002,031,0000) | 1.9334E-02 (2002,017,0000) | 1.9125E-02 (2002,343,0000) |
| 289 | -229.267 | -258.295 | 2.5487E-02 (2002,306,0000) | 2.3566E-02 (2002,031,0000) | 1.9430E-02 (2002,343,0000) | 1.9290E-02 (2002,017,0000) |
| 290 | -234.373 | -257.217 | 2.6928E-02 (2002,144,0000) | 1.9752E-02 (2002,017,0000) | 1.9695E-02 (2002,306,0000) | 1.9318E-02 (2002,031,0000) |
| 291 | -233.640 | -257.239 | 2.5899E-02 (2002,144,0000) | 2.0442E-02 (2002,306,0000) | 2.0080E-02 (2002,031,0000) | 1.9671E-02 (2002,017,0000) |
| 292 | -232.906 | -257.260 | 2.4785E-02 (2002,144,0000) | 2.1238E-02 (2002,306,0000) | 2.0813E-02 (2002,031,0000) | 1.9597E-02 (2002,017,0000) |
| 293 | -232.173 | -257.282 | 2.3602E-02 (2002,144,0000) | 2.2076E-02 (2002,306,0000) | 2.1518E-02 (2002,031,0000) | 1.9538E-02 (2002,017,0000) |
| 294 | -231.440 | -257.304 | 2.2957E-02 (2002,306,0000) | 2.2352E-02 (2002,144,0000) | 2.2161E-02 (2002,031,0000) | 1.9492E-02 (2002,017,0000) |
| 295 | -230.706 | -257.326 | 2.3875E-02 (2002,306,0000) | 2.2751E-02 (2002,031,0000) | 2.1084E-02 (2002,144,0000) | 1.9443E-02 (2002,017,0000) |
| 296 | -229.973 | -257.347 | 2.4805E-02 (2002,306,0000) | 2.3273E-02 (2002,031,0000) | 1.9791E-02 (2002,144,0000) | 1.9398E-02 (2002,017,0000) |
| 297 | -229.240 | -257.369 | 2.5744E-02 (2002,306,0000) | 2.3722E-02 (2002,031,0000) | 1.9375E-02 (2002,343,0000) | 1.9334E-02 (2002,017,0000) |
| 298 | -232.879 | -256.334 | 2.5786E-02 (2002,144,0000) | 2.1359E-02 (2002,306,0000) | 2.0901E-02 (2002,031,0000) | 1.9705E-02 (2002,017,0000) |
| 299 | -232.146 | -256.356 | 2.4586E-02 (2002,144,0000) | 2.2233E-02 (2002,306,0000) | 2.1614E-02 (2002,031,0000) | 1.9633E-02 (2002,017,0000) |
| 300 | -231.412 | -256.378 | 2.3324E-02 (2002,144,0000) | 2.3139E-02 (2002,306,0000) | 2.2275E-02 (2002,031,0000) | 1.9567E-02 (2002,017,0000) |
| 301 | -230.679 | -256.399 | 2.4079E-02 (2002,306,0000) | 2.2879E-02 (2002,031,0000) | 2.2022E-02 (2002,144,0000) | 1.9510E-02 (2002,017,0000) |
| 302 | -229.946 | -256.421 | 2.5043E-02 (2002,306,0000) | 2.3417E-02 (2002,031,0000) | 2.0689E-02 (2002,144,0000) | 1.9442E-02 (2002,017,0000) |
| 303 | -229.213 | -256.442 | 2.6013E-02 (2002,306,0000) | 2.3884E-02 (2002,031,0000) | 1.9366E-02 (2002,017,0000) | 1.9347E-02 (2002,144,0000) |
| 304 | -232.118 | -255.430 | 2.5599E-02 (2002,144,0000) | 2.2402E-02 (2002,306,0000) | 2.1716E-02 (2002,031,0000) | 1.9712E-02 (2002,017,0000) |
| 305 | -231.385 | -255.451 | 2.4318E-02 (2002,144,0000) | 2.3342E-02 (2002,306,0000) | 2.2393E-02 (2002,031,0000) | 1.9630E-02 (2002,017,0000) |
| 306 | -230.652 | -255.473 | 2.4311E-02 (2002,306,0000) | 2.3016E-02 (2002,031,0000) | 2.2985E-02 (2002,144,0000) | 1.9547E-02 (2002,017,0000) |
| 307 | -229.919 | -255.494 | 2.5298E-02 (2002,306,0000) | 2.3568E-02 (2002,031,0000) | 2.1618E-02 (2002,144,0000) | 1.9460E-02 (2002,017,0000) |
| 308 | -229.185 | -255.516 | 2.6301E-02 (2002,306,0000) | 2.4051E-02 (2002,031,0000) | 2.0231E-02 (2002,144,0000) | 1.9377E-02 (2002,017,0000) |
| 309 | -228.452 | -255.537 | 2.7296E-02 (2002,306,0000) | 2.4453E-02 (2002,031,0000) | 1.9576E-02 (2002,343,0000) | 1.9272E-02 (2002,017,0000) |
| 310 | -227.719 | -255.559 | 2.8271E-02 (2002,306,0000) | 2.4774E-02 (2002,031,0000) | 1.9880E-02 (2002,343,0000) | 1.9144E-02 (2002,017,0000) |
| 311 | -232.091 | -254.503 | 2.6618E-02 (2002,144,0000) | 2.2560E-02 (2002,306,0000) | 2.1814E-02 (2002,031,0000) | 1.9773E-02 (2002,017,0000) |
| 312 | -231.358 | -254.525 | 2.5315E-02 (2002,144,0000) | 2.3522E-02 (2002,306,0000) | 2.2515E-02 (2002,031,0000) | 1.9660E-02 (2002,017,0000) |
| 313 | -230.625 | -254.547 | 2.4525E-02 (2002,306,0000) | 2.3957E-02 (2002,144,0000) | 2.3149E-02 (2002,031,0000) | 1.9559E-02 (2002,017,0000) |
| 314 | -229.891 | -254.568 | 2.5558E-02 (2002,306,0000) | 2.3730E-02 (2002,031,0000) | 2.2557E-02 (2002,144,0000) | 1.9454E-02 (2002,017,0000) |
| 315 | -229.158 | -254.590 | 2.6597E-02 (2002,306,0000) | 2.4221E-02 (2002,031,0000) | 2.1126E-02 (2002,144,0000) | 1.9342E-02 (2002,017,0000) |
| 316 | -228.425 | -254.611 | 2.7628E-02 (2002,306,0000) | 2.4641E-02 (2002,031,0000) | 1.9692E-02 (2002,144,0000) | 1.9519E-02 (2002,343,0000) |
| 317 | -227.692 | -254.632 | 2.8630E-02 (2002,306,0000) | 2.4970E-02 (2002,031,0000) | 1.9837E-02 (2002,343,0000) | 1.9097E-02 (2002,017,0000) |
| 318 | -232.063 | -253.577 | 2.7627E-02 (2002,144,0000) | 2.2717E-02 (2002,306,0000) | 2.1915E-02 (2002,031,0000) | 1.9802E-02 (2002,017,0000) |
| 319 | -231.330 | -253.599 | 2.6323E-02 (2002,144,0000) | 2.3721E-02 (2002,306,0000) | 2.2633E-02 (2002,031,0000) | 1.9667E-02 (2002,017,0000) |
| 320 | -230.597 | -253.620 | 2.4946E-02 (2002,144,0000) | 2.4764E-02 (2002,306,0000) | 2.3294E-02 (2002,031,0000) | 1.9533E-02 (2002,017,0000) |
| 321 | -229.864 | -253.642 | 2.5824E-02 (2002,306,0000) | 2.3877E-02 (2002,031,0000) | 2.3510E-02 (2002,144,0000) | 1.9419E-02 (2002,017,0000) |
| 322 | -229.131 | -253.663 | 2.6895E-02 (2002,306,0000) | 2.4386E-02 (2002,031,0000) | 2.2038E-02 (2002,144,0000) | 1.9300E-02 (2002,017,0000) |
| 323 | -228.398 | -253.685 | 2.7960E-02 (2002,306,0000) | 2.4810E-02 (2002,031,0000) | 2.0560E-02 (2002,144,0000) | 1.9453E-02 (2002,343,0000) |
| 324 | -227.665 | -253.706 | 2.8993E-02 (2002,306,0000) | 2.5145E-02 (2002,031,0000) | 1.9796E-02 (2002,343,0000) | 1.9098E-02 (2002,144,0000) |
| 325 | -229.837 | -252.716 | 2.6096E-02 (2002,306,0000) | 2.4465E-02 (2002,144,0000) | 2.4010E-02 (2002,031,0000) | 1.9373E-02 (2002,017,0000) |
| 326 | -229.104 | -252.737 | 2.7204E-02 (2002,306,0000) | 2.4518E-02 (2002,031,0000) | 2.2967E-02 (2002,144,0000) | 1.9232E-02 (2002,017,0000) |
| 327 | -228.371 | -252.759 | 2.8296E-02 (2002,306,0000) | 2.4941E-02 (2002,031,0000) | 2.1447E-02 (2002,144,0000) | 1.9385E-02 (2002,343,0000) |
| 328 | -227.638 | -252.780 | 2.9362E-02 (2002,306,0000) | 2.5286E-02 (2002,031,0000) | 1.9929E-02 (2002,144,0000) | 1.9743E-02 (2002,343,0000) |

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CALPOST Version 5.6394 Level 070622
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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 116 | -243.891 | -280.107 | 1.0329E-03 | 222 | -233.126 | -264.671 | 1.3278E-03 |
| 117 | -243.156 | -280.129 | 1.0420E-03 | 223 | -232.392 | -264.693 | 1.3390E-03 |
| 118 | -242.420 | -280.152 | 1.0513E-03 | 224 | -231.658 | -264.714 | 1.3484E-03 |
| 119 | -241.685 | -280.175 | 1.0604E-03 | 225 | -238.971 | -263.568 | 1.2563E-03 |
| 120 | -243.862 | -279.180 | 1.0396E-03 | 226 | -238.237 | -263.590 | 1.2678E-03 |
| 121 | -243.127 | -279.203 | 1.0490E-03 | 227 | -237.503 | -263.613 | 1.2787E-03 |
| 122 | -242.392 | -279.226 | 1.0584E-03 | 228 | -236.769 | -263.635 | 1.2895E-03 |
| 123 | -241.656 | -279.248 | 1.0677E-03 | 229 | -236.035 | -263.657 | 1.2999E-03 |
| 124 | -240.921 | -279.271 | 1.0768E-03 | 230 | -235.301 | -263.679 | 1.3101E-03 |
| 125 | -243.834 | -278.254 | 1.0462E-03 | 231 | -234.567 | -263.701 | 1.3204E-03 |
| 126 | -243.098 | -278.277 | 1.0559E-03 | 232 | -233.833 | -263.723 | 1.3308E-03 |
| 127 | -242.363 | -278.299 | 1.0654E-03 | 233 | -233.099 | -263.745 | 1.3409E-03 |
| 128 | -241.628 | -278.322 | 1.0747E-03 | 234 | -232.365 | -263.766 | 1.3516E-03 |
| 129 | -240.892 | -278.345 | 1.0839E-03 | 235 | -231.631 | -263.788 | 1.3621E-03 |
| 130 | -240.157 | -278.367 | 1.0931E-03 | 236 | -238.208 | -262.664 | 1.2799E-03 |
| 131 | -243.805 | -277.328 | 1.0529E-03 | 237 | -237.475 | -262.686 | 1.2914E-03 |
| 132 | -243.070 | -277.350 | 1.0630E-03 | 238 | -236.741 | -262.708 | 1.3023E-03 |
| 133 | -242.335 | -277.373 | 1.0727E-03 | 239 | -236.007 | -262.731 | 1.3130E-03 |
| 134 | -241.599 | -277.396 | 1.0821E-03 | 240 | -235.273 | -262.753 | 1.3235E-03 |
| 135 | -240.864 | -277.418 | 1.0916E-03 | 241 | -234.539 | -262.775 | 1.3338E-03 |
| 136 | -240.129 | -277.441 | 1.1009E-03 | 242 | -233.805 | -262.796 | 1.3442E-03 |
| 137 | -243.776 | -276.401 | 1.0599E-03 | 243 | -233.071 | -262.818 | 1.3548E-03 |
| 138 | -243.041 | -276.424 | 1.0702E-03 | 244 | -232.338 | -262.840 | 1.3655E-03 |
| 139 | -242.306 | -276.447 | 1.0802E-03 | 245 | -238.180 | -261.738 | 1.2925E-03 |
| 140 | -241.571 | -276.469 | 1.0899E-03 | 246 | -237.447 | -261.760 | 1.3042E-03 |
| 141 | -240.836 | -276.492 | 1.0994E-03 | 247 | -236.713 | -261.782 | 1.3154E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 142 | -240.101 | -276.514 | 1.1087E-03 | 248 | -235.979 | -261.804 | 1.3265E-03 |
| 143 | -243.747 | -275.475 | 1.0670E-03 | 249 | -235.245 | -261.826 | 1.3374E-03 |
| 144 | -243.012 | -275.498 | 1.0775E-03 | 250 | -234.511 | -261.848 | 1.3478E-03 |
| 145 | -242.277 | -275.520 | 1.0876E-03 | 251 | -233.778 | -261.870 | 1.3584E-03 |
| 146 | -241.542 | -275.543 | 1.0974E-03 | 252 | -233.044 | -261.892 | 1.3691E-03 |
| 147 | -240.807 | -275.565 | 1.1072E-03 | 253 | -232.310 | -261.914 | 1.3800E-03 |
| 148 | -240.072 | -275.588 | 1.1167E-03 | 254 | -235.951 | -260.878 | 1.3403E-03 |
| 149 | -244.454 | -274.526 | 1.0629E-03 | 255 | -235.217 | -260.900 | 1.3514E-03 |
| 150 | -243.719 | -274.548 | 1.0741E-03 | 256 | -234.484 | -260.922 | 1.3621E-03 |
| 151 | -242.984 | -274.571 | 1.0849E-03 | 257 | -233.750 | -260.944 | 1.3728E-03 |
| 152 | -244.425 | -273.599 | 1.0699E-03 | 258 | -233.016 | -260.966 | 1.3836E-03 |
| 153 | -243.690 | -273.622 | 1.0816E-03 | 259 | -232.283 | -260.987 | 1.3946E-03 |
| 154 | -242.955 | -273.645 | 1.0926E-03 | 260 | -231.549 | -261.009 | 1.4058E-03 |
| 155 | -244.396 | -272.673 | 1.0773E-03 | 261 | -230.815 | -261.031 | 1.4160E-03 |
| 156 | -243.661 | -272.696 | 1.0893E-03 | 262 | -235.923 | -259.952 | 1.3545E-03 |
| 157 | -242.927 | -272.719 | 1.1009E-03 | 263 | -235.190 | -259.974 | 1.3658E-03 |
| 158 | -244.367 | -271.747 | 1.0851E-03 | 264 | -234.456 | -259.996 | 1.3769E-03 |
| 159 | -243.633 | -271.769 | 1.0973E-03 | 265 | -233.723 | -260.018 | 1.3878E-03 |
| 160 | -242.898 | -271.792 | 1.1090E-03 | 266 | -232.989 | -260.039 | 1.3989E-03 |
| 161 | -244.339 | -270.820 | 1.0929E-03 | 267 | -232.255 | -260.061 | 1.4099E-03 |
| 162 | -243.604 | -270.843 | 1.1053E-03 | 268 | -231.522 | -260.083 | 1.4209E-03 |
| 163 | -242.869 | -270.866 | 1.1169E-03 | 269 | -230.788 | -260.104 | 1.4315E-03 |
| 164 | -242.135 | -270.889 | 1.1283E-03 | 270 | -230.054 | -260.126 | 1.4424E-03 |
| 165 | -244.310 | -269.894 | 1.1004E-03 | 271 | -235.895 | -259.025 | 1.3686E-03 |
| 166 | -243.575 | -269.917 | 1.1129E-03 | 272 | -235.162 | -259.047 | 1.3803E-03 |
| 167 | -242.841 | -269.940 | 1.1251E-03 | 273 | -234.428 | -259.069 | 1.3918E-03 |
| 168 | -242.106 | -269.962 | 1.1371E-03 | 274 | -233.695 | -259.091 | 1.4029E-03 |
| 169 | -242.812 | -269.013 | 1.1340E-03 | 275 | -232.961 | -259.113 | 1.4139E-03 |
| 170 | -242.078 | -269.036 | 1.1463E-03 | 276 | -232.228 | -259.135 | 1.4249E-03 |
| 171 | -241.343 | -269.059 | 1.1580E-03 | 277 | -231.494 | -259.156 | 1.4362E-03 |
| 172 | -240.609 | -269.081 | 1.1693E-03 | 278 | -230.761 | -259.178 | 1.4472E-03 |
| 173 | -239.874 | -269.104 | 1.1801E-03 | 279 | -230.027 | -259.200 | 1.4600E-03 |
| 174 | -242.049 | -268.110 | 1.1556E-03 | 280 | -229.294 | -259.221 | 1.4717E-03 |
| 175 | -241.315 | -268.132 | 1.1678E-03 | 281 | -235.134 | -258.121 | 1.3947E-03 |
| 176 | -240.580 | -268.155 | 1.1793E-03 | 282 | -234.401 | -258.143 | 1.4066E-03 |
| 177 | -239.846 | -268.177 | 1.1904E-03 | 283 | -233.667 | -258.165 | 1.4181E-03 |
| 178 | -239.112 | -268.200 | 1.2011E-03 | 284 | -232.934 | -258.187 | 1.4292E-03 |
| 179 | -242.020 | -267.183 | 1.1652E-03 | 285 | -232.200 | -258.208 | 1.4403E-03 |
| 180 | -241.286 | -267.206 | 1.1779E-03 | 286 | -231.467 | -258.230 | 1.4521E-03 |
| 181 | -240.552 | -267.228 | 1.1898E-03 | 287 | -230.734 | -258.252 | 1.4641E-03 |
| 182 | -239.818 | -267.251 | 1.2011E-03 | 288 | -230.000 | -258.273 | 1.4769E-03 |
| 183 | -239.083 | -267.273 | 1.2118E-03 | 289 | -229.267 | -258.295 | 1.4895E-03 |
| 184 | -241.258 | -266.280 | 1.1882E-03 | 290 | -234.373 | -257.217 | 1.4216E-03 |
| 185 | -240.524 | -266.302 | 1.2005E-03 | 291 | -233.640 | -257.239 | 1.4331E-03 |
| 186 | -239.789 | -266.325 | 1.2120E-03 | 292 | -232.906 | -257.260 | 1.4447E-03 |
| 187 | -239.055 | -266.347 | 1.2230E-03 | 293 | -232.173 | -257.282 | 1.4565E-03 |
| 188 | -238.321 | -266.369 | 1.2337E-03 | 294 | -231.440 | -257.304 | 1.4687E-03 |
| 189 | -237.587 | -266.392 | 1.2441E-03 | 295 | -230.706 | -257.326 | 1.4811E-03 |
| 190 | -236.853 | -266.414 | 1.2540E-03 | 296 | -229.973 | -257.347 | 1.4936E-03 |
| 191 | -236.118 | -266.436 | 1.2637E-03 | 297 | -229.240 | -257.369 | 1.5063E-03 |
| 192 | -235.384 | -266.458 | 1.2735E-03 | 298 | -232.879 | -256.334 | 1.4610E-03 |
| 193 | -234.650 | -266.480 | 1.2834E-03 | 299 | -232.146 | -256.356 | 1.4733E-03 |
| 194 | -233.916 | -266.502 | 1.2927E-03 | 300 | -231.412 | -256.378 | 1.4857E-03 |
| 195 | -233.181 | -266.524 | 1.3030E-03 | 301 | -230.679 | -256.399 | 1.4982E-03 |
| 196 | -232.447 | -266.545 | 1.3127E-03 | 302 | -229.946 | -256.421 | 1.5103E-03 |
| 197 | -231.713 | -266.567 | 1.3236E-03 | 303 | -229.213 | -256.442 | 1.5220E-03 |
| 198 | -241.229 | -265.353 | 1.1983E-03 | 304 | -232.118 | -255.430 | 1.4903E-03 |
| 199 | -240.495 | -265.376 | 1.2108E-03 | 305 | -231.385 | -255.451 | 1.5029E-03 |
| 200 | -239.761 | -265.398 | 1.2229E-03 | 306 | -230.652 | -255.473 | 1.5157E-03 |
| 201 | -239.027 | -265.421 | 1.2342E-03 | 307 | -229.919 | -255.494 | 1.5282E-03 |
| 202 | -238.293 | -265.443 | 1.2452E-03 | 308 | -229.185 | -255.516 | 1.5419E-03 |
| 203 | -237.559 | -265.465 | 1.2557E-03 | 309 | -228.452 | -255.537 | 1.5554E-03 |
| 204 | -236.825 | -265.487 | 1.2658E-03 | 310 | -227.719 | -255.559 | 1.5673E-03 |
| 205 | -236.090 | -265.509 | 1.2760E-03 | 311 | -232.091 | -254.503 | 1.5075E-03 |
| 206 | -235.356 | -265.532 | 1.2858E-03 | 312 | -231.358 | -254.525 | 1.5205E-03 |
| 207 | -234.622 | -265.553 | 1.2957E-03 | 313 | -230.625 | -254.547 | 1.5338E-03 |
| 208 | -233.888 | -265.575 | 1.3052E-03 | 314 | -229.891 | -254.568 | 1.5470E-03 |
| 209 | -233.154 | -265.597 | 1.3161E-03 | 315 | -229.158 | -254.590 | 1.5611E-03 |
| 210 | -232.420 | -265.619 | 1.3256E-03 | 316 | -228.425 | -254.611 | 1.5741E-03 |
| 211 | -231.686 | -265.641 | 1.3364E-03 | 317 | -227.692 | -254.632 | 1.5871E-03 |
| 212 | -240.467 | -264.449 | 1.2209E-03 | 318 | -232.063 | -253.577 | 1.5250E-03 |
| 213 | -239.733 | -264.472 | 1.2333E-03 | 319 | -231.330 | -253.599 | 1.5387E-03 |
| 214 | -238.999 | -264.494 | 1.2451E-03 | 320 | -230.597 | -253.620 | 1.5524E-03 |
| 215 | -238.265 | -264.517 | 1.2565E-03 | 321 | -229.864 | -253.642 | 1.5660E-03 |
| 216 | -237.531 | -264.539 | 1.2671E-03 | 322 | -229.131 | -253.663 | 1.5800E-03 |
| 217 | -236.797 | -264.561 | 1.2775E-03 | 323 | -228.398 | -253.685 | 1.5940E-03 |
| 218 | -236.063 | -264.583 | 1.2877E-03 | 324 | -227.665 | -253.706 | 1.6079E-03 |
| 219 | -235.329 | -264.605 | 1.2977E-03 | 325 | -229.837 | -252.716 | 1.5849E-03 |
| 220 | -234.595 | -264.627 | 1.3076E-03 | 326 | -229.104 | -252.737 | 1.5992E-03 |
| 221 | -233.860 | -264.649 | 1.3181E-03 | 327 | -228.371 | -252.759 | 1.6135E-03 |
| | | | | 328 | -227.638 | -252.780 | 1.6277E-03 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 328 | -227.638 | -252.780 | DISCRETE | 2.9362E-02 (2002,306,0000) | RANK | 1 | 24 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 2.5286E-02 (2002,031,0000) | RANK | 2 | 24 | HOUR |
| 325 | -229.837 | -252.716 | DISCRETE | 2.4010E-02 (2002,031,0000) | RANK | 3 | 24 | HOUR |
| 318 | -232.063 | -253.577 | DISCRETE | 1.9802E-02 (2002,017,0000) | RANK | 4 | 24 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 1.6277E-03 | RANK | 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Canyonlands

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  328*0, 506*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2002
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                        Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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| | | | | | | |
|---|---|---|---|---|---|---|
| 344 | -22.263 | -220.844 | 8.5401E-03 (2002,329,0000) | 6.4477E-03 (2002,356,0000) | 5.9234E-03 (2002,361,0000) | 5.5875E-03 (2002,307,0000) |
| 345 | -20.803 | -220.848 | 8.4175E-03 (2002,329,0000) | 6.4140E-03 (2002,356,0000) | 5.8789E-03 (2002,361,0000) | 5.5100E-03 (2002,307,0000) |
| 346 | -19.344 | -220.851 | 8.2714E-03 (2002,329,0000) | 6.3285E-03 (2002,356,0000) | 5.8311E-03 (2002,361,0000) | 5.4315E-03 (2002,307,0000) |
| 347 | -17.884 | -220.855 | 8.1087E-03 (2002,329,0000) | 6.1818E-03 (2002,356,0000) | 5.7811E-03 (2002,361,0000) | 5.3535E-03 (2002,307,0000) |
| 348 | -16.424 | -220.858 | 7.8510E-03 (2002,329,0000) | 5.8564E-03 (2002,356,0000) | 5.7289E-03 (2002,361,0000) | 5.2716E-03 (2002,307,0000) |
| 349 | -14.964 | -220.861 | 7.6806E-03 (2002,329,0000) | 5.6916E-03 (2002,356,0000) | 5.6738E-03 (2002,361,0000) | 5.2439E-03 (2002,014,0000) |
| 350 | -25.177 | -218.982 | 8.7930E-03 (2002,329,0000) | 6.9252E-03 (2002,356,0000) | 5.9024E-03 (2002,361,0000) | 5.8342E-03 (2002,307,0000) |
| 351 | -23.718 | -218.986 | 8.6467E-03 (2002,329,0000) | 6.8557E-03 (2002,356,0000) | 5.8646E-03 (2002,361,0000) | 5.7492E-03 (2002,307,0000) |
| 352 | -22.258 | -218.991 | 8.4250E-03 (2002,329,0000) | 6.5510E-03 (2002,356,0000) | 5.8252E-03 (2002,361,0000) | 5.6612E-03 (2002,307,0000) |
| 353 | -20.799 | -218.995 | 8.3044E-03 (2002,329,0000) | 6.5954E-03 (2002,356,0000) | 5.7836E-03 (2002,361,0000) | 5.5756E-03 (2002,307,0000) |
| 354 | -19.339 | -218.998 | 8.1518E-03 (2002,329,0000) | 6.5137E-03 (2002,356,0000) | 5.7371E-03 (2002,361,0000) | 5.4888E-03 (2002,307,0000) |
| 355 | -17.879 | -219.002 | 7.9115E-03 (2002,329,0000) | 6.1233E-03 (2002,356,0000) | 5.6892E-03 (2002,361,0000) | 5.3993E-03 (2002,307,0000) |
| 356 | -16.420 | -219.005 | 7.8075E-03 (2002,329,0000) | 6.2008E-03 (2002,356,0000) | 5.6398E-03 (2002,361,0000) | 5.3148E-03 (2002,307,0000) |
| 357 | -26.630 | -217.124 | 8.8598E-03 (2002,329,0000) | 7.1985E-03 (2002,356,0000) | 6.0049E-03 (2002,307,0000) | 5.8279E-03 (2002,361,0000) |
| 358 | -25.171 | -217.129 | 8.6742E-03 (2002,329,0000) | 6.9919E-03 (2002,356,0000) | 5.9097E-03 (2002,307,0000) | 5.7971E-03 (2002,361,0000) |
| 359 | -23.712 | -217.133 | 8.4962E-03 (2002,329,0000) | 6.7844E-03 (2002,356,0000) | 5.8122E-03 (2002,307,0000) | 5.7619E-03 (2002,361,0000) |
| 360 | -22.253 | -217.138 | 8.3541E-03 (2002,329,0000) | 6.8633E-03 (2002,356,0000) | 5.7245E-03 (2002,361,0000) | 5.7210E-03 (2002,307,0000) |
| 361 | -20.794 | -217.142 | 8.1991E-03 (2002,329,0000) | 6.8405E-03 (2002,356,0000) | 5.6826E-03 (2002,361,0000) | 5.6261E-03 (2002,307,0000) |
| 362 | -19.334 | -217.145 | 7.9888E-03 (2002,329,0000) | 6.5970E-03 (2002,356,0000) | 5.6401E-03 (2002,361,0000) | 5.5313E-03 (2002,307,0000) |
| 363 | -17.875 | -217.149 | 7.8035E-03 (2002,329,0000) | 6.3921E-03 (2002,356,0000) | 5.5949E-03 (2002,361,0000) | 5.4356E-03 (2002,307,0000) |
| 364 | -16.416 | -217.152 | 7.6221E-03 (2002,329,0000) | 6.1789E-03 (2002,356,0000) | 5.5465E-03 (2002,361,0000) | 5.3401E-03 (2002,307,0000) |
| 365 | -47.048 | -215.175 | 1.0656E-02 (2002,329,0000) | 7.4905E-03 (2002,019,0000) | 7.4267E-03 (2002,307,0000) | 6.7366E-03 (2002,356,0000) |
| 366 | -45.589 | -215.183 | 1.1224E-02 (2002,329,0000) | 8.7354E-03 (2002,356,0000) | 7.3781E-03 (2002,307,0000) | 7.2235E-03 (2002,019,0000) |
| 367 | -44.130 | -215.192 | 1.1039E-02 (2002,329,0000) | 8.7940E-03 (2002,356,0000) | 7.2905E-03 (2002,307,0000) | 6.9285E-03 (2002,019,0000) |
| 368 | -42.671 | -215.200 | 1.0858E-02 (2002,329,0000) | 8.7035E-03 (2002,356,0000) | 7.1946E-03 (2002,307,0000) | 6.6331E-03 (2002,019,0000) |
| 369 | -41.212 | -215.208 | 1.0658E-02 (2002,329,0000) | 8.6327E-03 (2002,356,0000) | 7.0975E-03 (2002,307,0000) | 6.3492E-03 (2002,019,0000) |
| 370 | -39.754 | -215.215 | 1.0465E-02 (2002,329,0000) | 8.5085E-03 (2002,356,0000) | 6.9985E-03 (2002,307,0000) | 6.0772E-03 (2002,008,0000) |
| 371 | -38.295 | -215.223 | 1.0267E-02 (2002,329,0000) | 8.3532E-03 (2002,356,0000) | 6.8969E-03 (2002,307,0000) | 5.9828E-03 (2002,008,0000) |
| 372 | -36.836 | -215.230 | 1.0083E-02 (2002,329,0000) | 8.3294E-03 (2002,356,0000) | 6.7985E-03 (2002,307,0000) | 5.8852E-03 (2002,008,0000) |
| 373 | -35.377 | -215.236 | 9.8810E-03 (2002,329,0000) | 8.1833E-03 (2002,356,0000) | 6.6955E-03 (2002,307,0000) | 5.8266E-03 (2002,361,0000) |
| 374 | -33.918 | -215.243 | 9.6971E-03 (2002,329,0000) | 8.0583E-03 (2002,356,0000) | 6.5922E-03 (2002,307,0000) | 5.8172E-03 (2002,361,0000) |
| 375 | -32.459 | -215.249 | 9.4950E-03 (2002,329,0000) | 7.8527E-03 (2002,356,0000) | 6.4862E-03 (2002,307,0000) | 5.8061E-03 (2002,361,0000) |
| 376 | -31.001 | -215.255 | 9.3084E-03 (2002,329,0000) | 7.7057E-03 (2002,356,0000) | 6.3823E-03 (2002,307,0000) | 5.7910E-03 (2002,361,0000) |
| 377 | -29.542 | -215.261 | 9.1230E-03 (2002,329,0000) | 7.5807E-03 (2002,356,0000) | 6.2780E-03 (2002,307,0000) | 5.7695E-03 (2002,361,0000) |
| 378 | -28.083 | -215.266 | 8.9744E-03 (2002,329,0000) | 7.6525E-03 (2002,356,0000) | 6.1770E-03 (2002,307,0000) | 5.7457E-03 (2002,361,0000) |
| 379 | -26.624 | -215.271 | 8.7488E-03 (2002,329,0000) | 7.3201E-03 (2002,356,0000) | 6.0694E-03 (2002,307,0000) | 5.7190E-03 (2002,361,0000) |
| 380 | -25.165 | -215.276 | 8.5631E-03 (2002,329,0000) | 7.0939E-03 (2002,356,0000) | 5.9634E-03 (2002,307,0000) | 5.6901E-03 (2002,361,0000) |
| 381 | -23.706 | -215.280 | 8.3820E-03 (2002,329,0000) | 6.9361E-03 (2002,356,0000) | 5.8601E-03 (2002,307,0000) | 5.6563E-03 (2002,361,0000) |
| 382 | -22.247 | -215.285 | 8.2304E-03 (2002,329,0000) | 7.0480E-03 (2002,356,0000) | 5.7620E-03 (2002,307,0000) | 5.6213E-03 (2002,361,0000) |
| 383 | -20.789 | -215.289 | 8.0198E-03 (2002,329,0000) | 6.6783E-03 (2002,356,0000) | 5.6545E-03 (2002,307,0000) | 5.5826E-03 (2002,361,0000) |
| 384 | -19.330 | -215.293 | 7.8629E-03 (2002,329,0000) | 6.7925E-03 (2002,356,0000) | 5.5580E-03 (2002,307,0000) | 5.5405E-03 (2002,361,0000) |
| 385 | -17.871 | -215.296 | 7.6853E-03 (2002,329,0000) | 6.6538E-03 (2002,356,0000) | 5.4978E-03 (2002,361,0000) | 5.4581E-03 (2002,307,0000) |
| 386 | -16.412 | -215.299 | 7.4914E-03 (2002,329,0000) | 6.2800E-03 (2002,356,0000) | 5.4510E-03 (2002,361,0000) | 5.3527E-03 (2002,307,0000) |
| 387 | -51.412 | -213.294 | 1.2067E-02 (2002,329,0000) | 9.4401E-03 (2002,356,0000) | 8.2538E-03 (2002,019,0000) | 8.0103E-03 (2002,307,0000) |
| 388 | -49.953 | -213.304 | 1.1852E-02 (2002,329,0000) | 9.2218E-03 (2002,356,0000) | 7.9112E-03 (2002,019,0000) | 7.8954E-03 (2002,307,0000) |
| 389 | -48.495 | -213.313 | 1.1637E-02 (2002,329,0000) | 8.6178E-03 (2002,356,0000) | 7.7717E-03 (2002,307,0000) | 7.5610E-03 (2002,019,0000) |
| 390 | -47.037 | -213.322 | 9.5384E-03 (2002,329,0000) | 7.5962E-03 (2002,307,0000) | 6.7819E-03 (2002,019,0000) | 6.6587E-03 (2002,007,0000) |
| 391 | -45.578 | -213.330 | 1.1220E-02 (2002,329,0000) | 8.4901E-03 (2002,356,0000) | 7.5630E-03 (2002,307,0000) | 6.9553E-03 (2002,019,0000) |
| 392 | -44.120 | -213.339 | 1.1018E-02 (2002,329,0000) | 8.7506E-03 (2002,356,0000) | 7.4608E-03 (2002,307,0000) | 6.6640E-03 (2002,019,0000) |
| 393 | -42.661 | -213.347 | 1.0813E-02 (2002,329,0000) | 8.1552E-03 (2002,356,0000) | 7.3362E-03 (2002,307,0000) | 6.3881E-03 (2002,008,0000) |
| 394 | -41.203 | -213.355 | 1.0614E-02 (2002,329,0000) | 8.5911E-03 (2002,356,0000) | 7.2420E-03 (2002,307,0000) | 6.2906E-03 (2002,008,0000) |
| 395 | -39.744 | -213.362 | 1.0412E-02 (2002,329,0000) | 8.5112E-03 (2002,356,0000) | 7.1308E-03 (2002,307,0000) | 6.1892E-03 (2002,008,0000) |
| 396 | -38.286 | -213.370 | 1.0203E-02 (2002,329,0000) | 8.3652E-03 (2002,356,0000) | 7.0159E-03 (2002,307,0000) | 6.0892E-03 (2002,008,0000) |
| 397 | -36.827 | -213.377 | 1.0010E-02 (2002,329,0000) | 8.3180E-03 (2002,356,0000) | 6.9067E-03 (2002,307,0000) | 5.9955E-03 (2002,008,0000) |
| 398 | -35.369 | -213.383 | 9.8049E-03 (2002,329,0000) | 8.1907E-03 (2002,356,0000) | 6.7922E-03 (2002,307,0000) | 5.8923E-03 (2002,008,0000) |
| 399 | -33.910 | -213.390 | 9.6049E-03 (2002,329,0000) | 8.0741E-03 (2002,356,0000) | 6.6776E-03 (2002,307,0000) | 5.7972E-03 (2002,008,0000) |
| 400 | -32.452 | -213.396 | 9.4078E-03 (2002,329,0000) | 7.9230E-03 (2002,356,0000) | 6.5650E-03 (2002,307,0000) | 5.7048E-03 (2002,008,0000) |
| 401 | -30.993 | -213.402 | 9.2312E-03 (2002,329,0000) | 8.0067E-03 (2002,356,0000) | 6.4557E-03 (2002,307,0000) | 5.6742E-03 (2002,361,0000) |
| 402 | -29.535 | -213.408 | 9.0159E-03 (2002,329,0000) | 7.6496E-03 (2002,356,0000) | 6.3374E-03 (2002,307,0000) | 5.6550E-03 (2002,361,0000) |
| 403 | -28.076 | -213.413 | 8.8344E-03 (2002,329,0000) | 7.6514E-03 (2002,356,0000) | 6.2276E-03 (2002,307,0000) | 5.6339E-03 (2002,361,0000) |
| 404 | -26.618 | -213.418 | 8.6409E-03 (2002,329,0000) | 7.4982E-03 (2002,356,0000) | 6.1145E-03 (2002,307,0000) | 5.6085E-03 (2002,361,0000) |
| 405 | -25.159 | -213.423 | 8.4461E-03 (2002,329,0000) | 7.2232E-03 (2002,356,0000) | 5.9991E-03 (2002,307,0000) | 5.5815E-03 (2002,361,0000) |
| 406 | -23.701 | -213.428 | 8.2560E-03 (2002,329,0000) | 7.0421E-03 (2002,356,0000) | 5.8875E-03 (2002,307,0000) | 5.5502E-03 (2002,361,0000) |
| 407 | -22.242 | -213.432 | 8.0736E-03 (2002,329,0000) | 6.9189E-03 (2002,356,0000) | 5.7781E-03 (2002,307,0000) | 5.5158E-03 (2002,361,0000) |
| 408 | -20.784 | -213.436 | 7.8833E-03 (2002,329,0000) | 6.8101E-03 (2002,356,0000) | 5.6705E-03 (2002,307,0000) | 5.4794E-03 (2002,361,0000) |
| 409 | -19.325 | -213.440 | 7.7047E-03 (2002,329,0000) | 6.7176E-03 (2002,356,0000) | 5.5643E-03 (2002,307,0000) | 5.4411E-03 (2002,361,0000) |
| 410 | -17.867 | -213.443 | 7.5380E-03 (2002,329,0000) | 6.7913E-03 (2002,356,0000) | 5.4645E-03 (2002,307,0000) | 5.3992E-03 (2002,361,0000) |
| 411 | -16.408 | -213.446 | 7.3546E-03 (2002,329,0000) | 6.5370E-03 (2002,356,0000) | 5.3576E-03 (2002,361,0000) | 5.3574E-03 (2002,307,0000) |
| 412 | -51.400 | -211.441 | 1.2096E-02 (2002,329,0000) | 9.4902E-03 (2002,356,0000) | 8.2108E-03 (2002,307,0000) | 7.9416E-03 (2002,019,0000) |
| 413 | -49.942 | -211.451 | 1.1874E-02 (2002,329,0000) | 9.3035E-03 (2002,356,0000) | 8.0859E-03 (2002,307,0000) | 7.6183E-03 (2002,019,0000) |
| 414 | -48.483 | -211.460 | 1.1655E-02 (2002,329,0000) | 9.3081E-03 (2002,356,0000) | 7.9728E-03 (2002,307,0000) | 7.3174E-03 (2002,019,0000) |
| 415 | -47.025 | -211.469 | 1.1430E-02 (2002,329,0000) | 9.0817E-03 (2002,356,0000) | 7.8444E-03 (2002,307,0000) | 6.9986E-03 (2002,019,0000) |
| 416 | -45.567 | -211.478 | 9.8029E-03 (2002,329,0000) | 7.6528E-03 (2002,307,0000) | 6.6485E-03 (2002,008,0000) | 6.5626E-03 (2002,007,0000) |
| 417 | -44.109 | -211.486 | 1.0487E-02 (2002,329,0000) | 7.9434E-03 (2002,356,0000) | 7.5749E-03 (2002,307,0000) | 6.6105E-03 (2002,008,0000) |
| 418 | -42.651 | -211.494 | 9.1020E-03 (2002,329,0000) | 7.4083E-03 (2002,307,0000) | 6.4408E-03 (2002,008,0000) | 6.1540E-03 (2002,007,0000) |
| 419 | -41.193 | -211.502 | 1.0556E-02 (2002,329,0000) | 8.3192E-03 (2002,356,0000) | 7.3464E-03 (2002,307,0000) | 6.4015E-03 (2002,008,0000) |
| 420 | -39.735 | -211.510 | 1.0336E-02 (2002,329,0000) | 8.1438E-03 (2002,356,0000) | 7.2202E-03 (2002,307,0000) | 6.2964E-03 (2002,008,0000) |
| 421 | -38.277 | -211.517 | 1.0126E-02 (2002,329,0000) | 8.1169E-03 (2002,356,0000) | 7.0995E-03 (2002,307,0000) | 6.1960E-03 (2002,008,0000) |
| 422 | -36.818 | -211.524 | 9.9223E-03 (2002,329,0000) | 8.3762E-03 (2002,356,0000) | 6.9828E-03 (2002,307,0000) | 6.0996E-03 (2002,008,0000) |
| 423 | -35.360 | -211.531 | 9.7164E-03 (2002,329,0000) | 8.2799E-03 (2002,356,0000) | 6.8606E-03 (2002,307,0000) | 5.9950E-03 (2002,008,0000) |
| 424 | -33.902 | -211.537 | 9.5016E-03 (2002,329,0000) | 8.1530E-03 (2002,356,0000) | 6.7369E-03 (2002,307,0000) | 5.8977E-03 (2002,008,0000) |
| 425 | -32.444 | -211.543 | 9.3064E-03 (2002,329,0000) | 8.0840E-03 (2002,356,0000) | 6.6166E-03 (2002,307,0000) | 5.8037E-03 (2002,008,0000) |
| 426 | -30.986 | -211.549 | 9.0961E-03 (2002,329,0000) | 7.8566E-03 (2002,356,0000) | 6.4900E-03 (2002,307,0000) | 5.7018E-03 (2002,008,0000) |
| 427 | -29.528 | -211.555 | 8.9070E-03 (2002,329,0000) | 7.9256E-03 (2002,356,0000) | 6.3768E-03 (2002,307,0000) | 5.6058E-03 (2002,008,0000) |
| 428 | -28.070 | -211.560 | 8.7052E-03 (2002,329,0000) | 7.6917E-03 (2002,356,0000) | 6.2527E-03 (2002,307,0000) | 5.5213E-03 (2002,361,0000) |
| 429 | -26.611 | -211.565 | 8.5112E-03 (2002,329,0000) | 7.5558E-03 (2002,356,0000) | 6.1329E-03 (2002,307,0000) | 5.4990E-03 (2002,361,0000) |
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| 434 | -19.321 | -211.587 | 7.5637E-03 (2002,329,0000) | 7.0069E-03 (2002,356,0000) | 5.5624E-03 (2002,307,0000) | 5.3406E-03 (2002,361,0000) |
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| 438 | -47.014 | -209.616 | 1.0895E-02 (2002,329,0000) | 8.5123E-03 (2002,356,0000) | 7.9375E-03 (2002,307,0000) | 6.9776E-03 (2002,007,0000) |
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| 441 | -42.641 | -209.641 | 1.0232E-02 (2002,329,0000) | 8.2194E-03 (2002,356,0000) | 7.5400E-03 (2002,307,0000) | 6.6197E-03 (2002,008,0000) |
| 442 | -41.183 | -209.649 | 8.6163E-03 (2002,329,0000) | 7.3522E-03 (2002,307,0000) | 6.4480E-03 (2002,008,0000) | 6.0339E-03 (2002,007,0000) |
| 443 | -39.725 | -209.657 | 9.2787E-03 (2002,329,0000) | 7.2477E-03 (2002,307,0000) | 6.5742E-03 (2002,356,0000) | 6.4075E-03 (2002,008,0000) |
| 444 | -38.267 | -209.664 | 1.0026E-02 (2002,329,0000) | 8.1049E-03 (2002,356,0000) | 7.1473E-03 (2002,307,0000) | 6.3043E-03 (2002,008,0000) |
| 445 | -36.810 | -209.671 | 9.3711E-03 (2002,329,0000) | 7.6382E-03 (2002,356,0000) | 7.0073E-03 (2002,307,0000) | 6.1992E-03 (2002,008,0000) |
| 446 | -35.352 | -209.678 | 9.6108E-03 (2002,329,0000) | 8.3824E-03 (2002,356,0000) | 6.8956E-03 (2002,307,0000) | 6.0997E-03 (2002,008,0000) |
| 447 | -33.894 | -209.684 | 9.3889E-03 (2002,329,0000) | 8.2054E-03 (2002,356,0000) | 6.7621E-03 (2002,307,0000) | 5.9989E-03 (2002,008,0000) |
| 448 | -32.436 | -209.690 | 9.1848E-03 (2002,329,0000) | 8.1469E-03 (2002,356,0000) | 6.6353E-03 (2002,307,0000) | 5.8991E-03 (2002,008,0000) |
| 449 | -30.978 | -209.696 | 8.9877E-03 (2002,329,0000) | 8.1239E-03 (2002,356,0000) | 6.5110E-03 (2002,307,0000) | 5.7991E-03 (2002,008,0000) |
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| 451 | -28.063 | -209.707 | 8.5742E-03 (2002,329,0000) | 7.7914E-03 (2002,356,0000) | 6.2554E-03 (2002,307,0000) | 5.6043E-03 (2002,008,0000) |
| 452 | -26.605 | -209.713 | 8.3713E-03 (2002,329,0000) | 7.6375E-03 (2002,356,0000) | 6.1296E-03 (2002,307,0000) | 5.5069E-03 (2002,008,0000) |
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| 454 | -23.689 | -209.722 | 7.9766E-03 (2002,329,0000) | 7.1647E-03 (2002,356,0000) | 5.8858E-03 (2002,307,0000) | 5.3354E-03 (2002,361,0000) |
| 455 | -22.232 | -209.726 | 7.7823E-03 (2002,329,0000) | 7.0662E-03 (2002,356,0000) | 5.7678E-03 (2002,307,0000) | 5.3210E-03 (2002,014,0000) |
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| 457 | -19.316 | -209.734 | 7.4053E-03 (2002,329,0000) | 6.8801E-03 (2002,356,0000) | 5.5381E-03 (2002,307,0000) | 5.3193E-03 (2002,014,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
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| 462 | -45.546 | -207.772 | 1.1089E-02 (2002,329,0000) | 8.7166E-03 (2002,356,0000) | 7.8745E-03 (2002,307,0000) | 6.9570E-03 (2002,008,0000) |
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| 465 | -41.173 | -207.796 | 1.0384E-02 (2002,329,0000) | 8.4707E-03 (2002,356,0000) | 7.4483E-03 (2002,307,0000) | 6.6219E-03 (2002,008,0000) |
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| 469 | -35.343 | -207.825 | 9.0652E-03 (2002,329,0000) | 7.7000E-03 (2002,356,0000) | 6.8810E-03 (2002,307,0000) | 6.2001E-03 (2002,008,0000) |
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| 472 | -30.971 | -207.844 | 8.8508E-03 (2002,329,0000) | 8.2654E-03 (2002,356,0000) | 6.5005E-03 (2002,307,0000) | 5.8972E-03 (2002,008,0000) |
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| 486 | -41.163 | -205.944 | 1.0283E-02 (2002,329,0000) | 9.0329E-03 (2002,356,0000) | 7.4509E-03 (2002,307,0000) | 6.7306E-03 (2002,008,0000) |
| 487 | -39.706 | -205.951 | 1.0036E-02 (2002,329,0000) | 8.5562E-03 (2002,356,0000) | 7.2959E-03 (2002,307,0000) | 6.6229E-03 (2002,008,0000) |
| 488 | -38.249 | -205.958 | 9.3705E-03 (2002,329,0000) | 8.2617E-03 (2002,356,0000) | 7.1382E-03 (2002,307,0000) | 6.5095E-03 (2002,008,0000) |
| 489 | -36.792 | -205.965 | 9.5761E-03 (2002,329,0000) | 8.3336E-03 (2002,356,0000) | 7.0041E-03 (2002,307,0000) | 6.4039E-03 (2002,008,0000) |
| 490 | -35.335 | -205.972 | 8.9424E-03 (2002,329,0000) | 7.8653E-03 (2002,356,0000) | 6.8530E-03 (2002,307,0000) | 6.2987E-03 (2002,008,0000) |
| 491 | -33.878 | -205.979 | 8.7375E-03 (2002,329,0000) | 7.7804E-03 (2002,356,0000) | 6.7138E-03 (2002,307,0000) | 6.1956E-03 (2002,008,0000) |
| 492 | -32.421 | -205.985 | 8.9175E-03 (2002,329,0000) | 8.1879E-03 (2002,356,0000) | 6.5928E-03 (2002,307,0000) | 6.0923E-03 (2002,008,0000) |
| 493 | -30.964 | -205.991 | 8.7047E-03 (2002,329,0000) | 8.0945E-03 (2002,356,0000) | 6.4567E-03 (2002,307,0000) | 5.9920E-03 (2002,008,0000) |
| 494 | -29.507 | -205.996 | 8.4839E-03 (2002,329,0000) | 7.9934E-03 (2002,356,0000) | 6.3241E-03 (2002,307,0000) | 5.8890E-03 (2002,008,0000) |
| 495 | -28.049 | -206.002 | 8.2737E-03 (2002,329,0000) | 7.8962E-03 (2002,356,0000) | 6.1943E-03 (2002,307,0000) | 5.7895E-03 (2002,008,0000) |
| 496 | -26.592 | -206.007 | 8.0708E-03 (2002,329,0000) | 7.7737E-03 (2002,356,0000) | 6.0636E-03 (2002,307,0000) | 5.6910E-03 (2002,008,0000) |
| 497 | -25.135 | -206.012 | 7.8670E-03 (2002,329,0000) | 7.5680E-03 (2002,356,0000) | 5.9332E-03 (2002,307,0000) | 5.5942E-03 (2002,008,0000) |
| 498 | -23.678 | -206.016 | 7.6606E-03 (2002,329,0000) | 7.4562E-03 (2002,356,0000) | 5.8106E-03 (2002,307,0000) | 5.5011E-03 (2002,008,0000) |
| 499 | -22.221 | -206.021 | 7.4669E-03 (2002,329,0000) | 7.3664E-03 (2002,356,0000) | 5.6892E-03 (2002,307,0000) | 5.4028E-03 (2002,008,0000) |
| 500 | -20.764 | -206.025 | 7.3923E-03 (2002,356,0000) | 7.2858E-03 (2002,329,0000) | 5.5763E-03 (2002,307,0000) | 5.3410E-03 (2002,014,0000) |
| 501 | -19.307 | -206.028 | 7.2822E-03 (2002,356,0000) | 7.0972E-03 (2002,329,0000) | 5.4613E-03 (2002,307,0000) | 5.3348E-03 (2002,014,0000) |
| 502 | -46.981 | -204.058 | 1.1178E-02 (2002,329,0000) | 9.7599E-03 (2002,356,0000) | 8.0342E-03 (2002,307,0000) | 7.3191E-03 (2002,007,0000) |
| 503 | -45.524 | -204.066 | 1.0918E-02 (2002,329,0000) | 9.5330E-03 (2002,356,0000) | 7.8703E-03 (2002,307,0000) | 7.1854E-03 (2002,008,0000) |
| 504 | -44.067 | -204.075 | 1.0659E-02 (2002,329,0000) | 9.4215E-03 (2002,356,0000) | 7.7134E-03 (2002,307,0000) | 7.0686E-03 (2002,008,0000) |
| 505 | -42.610 | -204.083 | 1.0415E-02 (2002,329,0000) | 9.2721E-03 (2002,356,0000) | 7.5542E-03 (2002,307,0000) | 6.9497E-03 (2002,008,0000) |
| 506 | -41.154 | -204.091 | 1.0171E-02 (2002,329,0000) | 9.2720E-03 (2002,356,0000) | 7.4082E-03 (2002,307,0000) | 6.8355E-03 (2002,008,0000) |
| 507 | -39.697 | -204.098 | 9.9152E-03 (2002,329,0000) | 8.8214E-03 (2002,356,0000) | 7.2512E-03 (2002,307,0000) | 6.7246E-03 (2002,008,0000) |
| 508 | -38.240 | -204.106 | 8.5973E-03 (2002,329,0000) | 7.0473E-03 (2002,307,0000) | 6.8717E-03 (2002,356,0000) | 6.6095E-03 (2002,008,0000) |
| 509 | -36.783 | -204.113 | 8.0604E-03 (2002,329,0000) | 6.8928E-03 (2002,307,0000) | 6.6193E-03 (2002,356,0000) | 6.4498E-03 (2002,008,0000) |
| 510 | -35.327 | -204.119 | 9.0880E-03 (2002,329,0000) | 8.3422E-03 (2002,356,0000) | 6.8005E-03 (2002,307,0000) | 6.3962E-03 (2002,008,0000) |
| 511 | -33.870 | -204.126 | 8.6171E-03 (2002,329,0000) | 8.1999E-03 (2002,356,0000) | 6.6556E-03 (2002,307,0000) | 6.2907E-03 (2002,008,0000) |
| 512 | -32.413 | -204.132 | 8.7657E-03 (2002,329,0000) | 8.3374E-03 (2002,356,0000) | 6.5303E-03 (2002,307,0000) | 6.1890E-03 (2002,008,0000) |
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| 514 | -29.500 | -204.144 | 8.3266E-03 (2002,329,0000) | 8.0710E-03 (2002,356,0000) | 6.2556E-03 (2002,307,0000) | 5.9830E-03 (2002,008,0000) |
| 515 | -28.043 | -204.149 | 8.1137E-03 (2002,329,0000) | 7.9743E-03 (2002,356,0000) | 6.1255E-03 (2002,307,0000) | 5.8845E-03 (2002,008,0000) |
| 516 | -26.586 | -204.154 | 7.9059E-03 (2002,329,0000) | 7.8749E-03 (2002,356,0000) | 5.9976E-03 (2002,307,0000) | 5.7818E-03 (2002,008,0000) |
| 517 | -25.129 | -204.159 | 7.7673E-03 (2002,356,0000) | 7.7045E-03 (2002,329,0000) | 5.8716E-03 (2002,307,0000) | 5.6857E-03 (2002,008,0000) |
| 518 | -23.673 | -204.164 | 7.6682E-03 (2002,356,0000) | 7.5028E-03 (2002,329,0000) | 5.7489E-03 (2002,307,0000) | 5.5903E-03 (2002,008,0000) |
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| 520 | -20.759 | -204.172 | 7.4914E-03 (2002,356,0000) | 7.1250E-03 (2002,329,0000) | 5.5119E-03 (2002,307,0000) | 5.4017E-03 (2002,008,0000) |
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| 525 | -42.600 | -202.230 | 1.0289E-02 (2002,329,0000) | 9.5061E-03 (2002,356,0000) | 7.4726E-03 (2002,307,0000) | 7.0556E-03 (2002,008,0000) |
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| 531 | -33.862 | -202.273 | 8.2307E-03 (2002,329,0000) | 7.5346E-03 (2002,356,0000) | 6.5545E-03 (2002,307,0000) | 6.3884E-03 (2002,008,0000) |
| 532 | -32.405 | -202.279 | 8.6078E-03 (2002,329,0000) | 8.4494E-03 (2002,356,0000) | 6.4388E-03 (2002,307,0000) | 6.2834E-03 (2002,008,0000) |
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| 534 | -29.493 | -202.291 | 8.2843E-03 (2002,356,0000) | 8.1658E-03 (2002,329,0000) | 6.1715E-03 (2002,307,0000) | 6.0782E-03 (2002,008,0000) |
| 535 | -28.036 | -202.296 | 7.8575E-03 (2002,356,0000) | 7.6393E-03 (2002,329,0000) | 6.0356E-03 (2002,307,0000) | 5.9793E-03 (2002,008,0000) |
| 536 | -26.580 | -202.301 | 8.0362E-03 (2002,356,0000) | 7.6476E-03 (2002,329,0000) | 5.9149E-03 (2002,307,0000) | 5.8754E-03 (2002,008,0000) |
| 537 | -25.123 | -202.306 | 7.9879E-03 (2002,356,0000) | 7.5411E-03 (2002,329,0000) | 5.7932E-03 (2002,307,0000) | 5.7763E-03 (2002,008,0000) |
| 538 | -23.667 | -202.311 | 7.8376E-03 (2002,356,0000) | 7.2583E-03 (2002,329,0000) | 5.6796E-03 (2002,008,0000) | 5.6698E-03 (2002,307,0000) |
| 539 | -22.210 | -202.315 | 7.7483E-03 (2002,356,0000) | 7.0706E-03 (2002,329,0000) | 5.5814E-03 (2002,008,0000) | 5.5529E-03 (2002,307,0000) |
| 540 | -46.958 | -200.352 | 1.0942E-02 (2002,329,0000) | 9.9769E-03 (2002,356,0000) | 7.8227E-03 (2002,307,0000) | 7.5305E-03 (2002,008,0000) |
| 541 | -45.502 | -200.361 | 1.0206E-02 (2002,329,0000) | 9.0327E-03 (2002,356,0000) | 7.6217E-03 (2002,307,0000) | 7.3988E-03 (2002,008,0000) |
| 542 | -44.046 | -200.369 | 1.0397E-02 (2002,329,0000) | 9.2342E-03 (2002,356,0000) | 7.4831E-03 (2002,307,0000) | 7.2784E-03 (2002,008,0000) |
| 543 | -42.590 | -200.377 | 1.0142E-02 (2002,329,0000) | 9.2184E-03 (2002,356,0000) | 7.3336E-03 (2002,307,0000) | 7.1617E-03 (2002,008,0000) |
| 544 | -41.134 | -200.385 | 9.8846E-03 (2002,329,0000) | 9.2197E-03 (2002,356,0000) | 7.1860E-03 (2002,307,0000) | 7.0414E-03 (2002,008,0000) |
| 545 | -39.678 | -200.393 | 9.4979E-03 (2002,329,0000) | 8.9415E-03 (2002,356,0000) | 7.0239E-03 (2002,307,0000) | 6.9236E-03 (2002,008,0000) |
| 546 | -38.222 | -200.400 | 8.9968E-03 (2002,329,0000) | 8.5347E-03 (2002,356,0000) | 6.8700E-03 (2002,307,0000) | 6.8129E-03 (2002,008,0000) |
| 547 | -36.766 | -200.407 | 9.0228E-03 (2002,329,0000) | 8.8147E-03 (2002,356,0000) | 6.7349E-03 (2002,307,0000) | 6.6988E-03 (2002,008,0000) |
| 548 | -35.310 | -200.414 | 7.7461E-03 (2002,329,0000) | 7.0926E-03 (2002,356,0000) | 6.5426E-03 (2002,307,0000) | 6.5379E-03 (2002,008,0000) |
| 549 | -33.854 | -200.420 | 8.3564E-03 (2002,356,0000) | 8.3374E-03 (2002,329,0000) | 6.4838E-03 (2002,008,0000) | 6.4514E-03 (2002,307,0000) |
| 550 | -32.398 | -200.427 | 7.8572E-03 (2002,329,0000) | 7.4471E-03 (2002,356,0000) | 6.3801E-03 (2002,008,0000) | 6.2965E-03 (2002,307,0000) |
| 551 | -30.942 | -200.432 | 8.5941E-03 (2002,356,0000) | 8.2217E-03 (2002,329,0000) | 6.2725E-03 (2002,008,0000) | 6.1978E-03 (2002,307,0000) |
| 552 | -29.486 | -200.438 | 8.5058E-03 (2002,356,0000) | 8.0060E-03 (2002,329,0000) | 6.1722E-03 (2002,008,0000) | 6.0673E-03 (2002,307,0000) |
| 553 | -28.030 | -200.444 | 7.3809E-03 (2002,356,0000) | 7.2681E-03 (2002,329,0000) | 6.0702E-03 (2002,008,0000) | 5.9160E-03 (2002,307,0000) |
| 554 | -26.573 | -200.449 | 8.2044E-03 (2002,356,0000) | 7.3076E-03 (2002,329,0000) | 5.9692E-03 (2002,008,0000) | 5.8138E-03 (2002,307,0000) |
| 555 | -25.117 | -200.453 | 7.6311E-03 (2002,356,0000) | 6.9819E-03 (2002,329,0000) | 5.8693E-03 (2002,008,0000) | 5.6873E-03 (2002,307,0000) |
| 556 | -23.661 | -200.458 | 8.0388E-03 (2002,356,0000) | 6.9445E-03 (2002,329,0000) | 5.7683E-03 (2002,008,0000) | 5.5772E-03 (2002,307,0000) |
| 557 | -46.947 | -198.500 | 1.0826E-02 (2002,329,0000) | 1.0409E-02 (2002,356,0000) | 7.6674E-03 (2002,307,0000) | 7.6366E-03 (2002,008,0000) |
| 558 | -45.491 | -198.508 | 1.0516E-02 (2002,329,0000) | 9.5623E-03 (2002,356,0000) | 7.5025E-03 (2002,008,0000) | 7.4750E-03 (2002,307,0000) |
| 559 | -44.036 | -198.517 | 1.0104E-02 (2002,329,0000) | 9.2273E-03 (2002,356,0000) | 7.3788E-03 (2002,008,0000) | 7.3047E-03 (2002,307,0000) |
| 560 | -42.580 | -198.525 | 9.8530E-03 (2002,329,0000) | 9.2138E-03 (2002,356,0000) | 7.2613E-03 (2002,008,0000) | 7.1587E-03 (2002,307,0000) |
| 561 | -41.124 | -198.533 | 9.7340E-03 (2002,329,0000) | 9.2466E-03 (2002,356,0000) | 7.1375E-03 (2002,008,0000) | 7.0154E-03 (2002,307,0000) |
| 562 | -39.669 | -198.540 | 9.4835E-03 (2002,329,0000) | 9.2208E-03 (2002,356,0000) | 7.0226E-03 (2002,008,0000) | 6.8721E-03 (2002,307,0000) |
| 563 | -38.213 | -198.547 | 8.8624E-03 (2002,329,0000) | 8.7435E-03 (2002,356,0000) | 6.9101E-03 (2002,008,0000) | 6.7191E-03 (2002,307,0000) |
| 564 | -36.757 | -198.554 | 8.0121E-03 (2002,329,0000) | 7.4749E-03 (2002,356,0000) | 6.7926E-03 (2002,008,0000) | 6.5397E-03 (2002,307,0000) |
| 565 | -35.301 | -198.561 | 7.9117E-03 (2002,329,0000) | 7.5372E-03 (2002,356,0000) | 6.6833E-03 (2002,008,0000) | 6.4109E-03 (2002,307,0000) |
| 566 | -33.846 | -198.568 | 8.1226E-03 (2002,356,0000) | 8.0041E-03 (2002,329,0000) | 6.5797E-03 (2002,008,0000) | 6.3064E-03 (2002,307,0000) |
| 567 | -32.390 | -198.574 | 8.8584E-03 (2002,356,0000) | 8.2904E-03 (2002,329,0000) | 6.4708E-03 (2002,008,0000) | 6.1943E-03 (2002,307,0000) |
| 568 | -30.934 | -198.580 | 7.0712E-03 (2002,356,0000) | 6.7163E-03 (2002,329,0000) | 6.3206E-03 (2002,008,0000) | 6.0023E-03 (2002,307,0000) |
| 569 | -29.479 | -198.585 | 7.1695E-03 (2002,356,0000) | 6.7566E-03 (2002,329,0000) | 6.2252E-03 (2002,008,0000) | 5.8894E-03 (2002,307,0000) |
| 570 | -28.023 | -198.591 | 7.4715E-03 (2002,356,0000) | 6.9623E-03 (2002,329,0000) | 6.1614E-03 (2002,008,0000) | 5.7900E-03 (2002,307,0000) |
| 571 | -26.567 | -198.596 | 8.1970E-03 (2002,356,0000) | 7.1637E-03 (2002,329,0000) | 6.0614E-03 (2002,008,0000) | 5.6983E-03 (2002,307,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 572 | -46.936 | -196.647 | 1.0660E-02 (2002,329,0000) | 9.7508E-03 (2002,356,0000) | 7.7328E-03 (2002,008,0000) | 7.5768E-03 (2002,007,0000) |
| 573 | -45.481 | -196.656 | 1.0387E-02 (2002,329,0000) | 1.0263E-02 (2002,356,0000) | 7.6031E-03 (2002,008,0000) | 7.4035E-03 (2002,007,0000) |
| 574 | -44.025 | -196.664 | 9.7088E-03 (2002,329,0000) | 9.3733E-03 (2002,356,0000) | 7.4762E-03 (2002,008,0000) | 7.0991E-03 (2002,307,0000) |
| 575 | -42.570 | -196.672 | 9.1519E-03 (2002,329,0000) | 8.3106E-03 (2002,356,0000) | 7.3533E-03 (2002,008,0000) | 6.9391E-03 (2002,307,0000) |
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| 578 | -38.204 | -196.695 | 8.9684E-03 (2002,356,0000) | 8.7250E-03 (2002,329,0000) | 7.0026E-03 (2002,008,0000) | 6.5422E-03 (2002,307,0000) |
| 579 | -36.748 | -196.702 | 8.5051E-03 (2002,356,0000) | 8.2947E-03 (2002,329,0000) | 6.8878E-03 (2002,008,0000) | 6.4011E-03 (2002,307,0000) |
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| 581 | -33.838 | -196.715 | 7.4830E-03 (2002,356,0000) | 7.1493E-03 (2002,329,0000) | 6.6242E-03 (2002,008,0000) | 6.1031E-03 (2002,307,0000) |
| 582 | -32.382 | -196.721 | 8.6827E-03 (2002,356,0000) | 7.8336E-03 (2002,329,0000) | 6.5619E-03 (2002,008,0000) | 6.0336E-03 (2002,307,0000) |
| 583 | -30.927 | -196.727 | 8.1899E-03 (2002,356,0000) | 7.4485E-03 (2002,329,0000) | 6.4576E-03 (2002,008,0000) | 5.9052E-03 (2002,307,0000) |
| 584 | -29.472 | -196.733 | 8.0913E-03 (2002,356,0000) | 7.2129E-03 (2002,329,0000) | 6.3526E-03 (2002,008,0000) | 5.7872E-03 (2002,307,0000) |
| 585 | -28.016 | -196.738 | 7.3543E-03 (2002,356,0000) | 6.4128E-03 (2002,329,0000) | 6.2128E-03 (2002,008,0000) | 5.6334E-03 (2002,307,0000) |
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| 591 | -41.105 | -194.827 | 9.6036E-03 (2002,356,0000) | 9.2939E-03 (2002,329,0000) | 7.3297E-03 (2002,008,0000) | 6.7678E-03 (2002,007,0000) |
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| 593 | -38.195 | -194.842 | 8.2896E-03 (2002,329,0000) | 8.2769E-03 (2002,356,0000) | 7.0964E-03 (2002,008,0000) | 6.3571E-03 (2002,007,0000) |
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| 600 | -28.009 | -194.885 | 7.5652E-03 (2002,356,0000) | 6.3061E-03 (2002,008,0000) | 6.2328E-03 (2002,329,0000) | 5.4813E-03 (2002,307,0000) |
| 601 | -26.554 | -194.890 | 8.3963E-03 (2002,356,0000) | 6.7550E-03 (2002,329,0000) | 6.2421E-03 (2002,008,0000) | 5.4268E-03 (2002,307,0000) |
| 602 | -45.459 | -192.950 | 9.7637E-03 (2002,356,0000) | 9.6958E-03 (2002,329,0000) | 7.7913E-03 (2002,008,0000) | 7.4649E-03 (2002,007,0000) |
| 603 | -44.004 | -192.959 | 9.1210E-03 (2002,329,0000) | 8.7211E-03 (2002,356,0000) | 7.6630E-03 (2002,008,0000) | 7.2276E-03 (2002,007,0000) |
| 604 | -42.550 | -192.967 | 8.8465E-03 (2002,329,0000) | 8.4605E-03 (2002,356,0000) | 7.5428E-03 (2002,008,0000) | 7.0028E-03 (2002,007,0000) |
| 605 | -41.095 | -192.975 | 8.6106E-03 (2002,329,0000) | 8.4729E-03 (2002,356,0000) | 7.4229E-03 (2002,008,0000) | 6.8142E-03 (2002,007,0000) |
| 606 | -39.640 | -192.982 | 9.4538E-03 (2002,356,0000) | 8.6847E-03 (2002,329,0000) | 7.3062E-03 (2002,008,0000) | 6.6537E-03 (2002,007,0000) |
| 607 | -38.186 | -192.989 | 8.0998E-03 (2002,356,0000) | 7.6775E-03 (2002,329,0000) | 7.1353E-03 (2002,008,0000) | 6.4191E-03 (2002,007,0000) |
| 608 | -36.731 | -192.996 | 8.0047E-03 (2002,356,0000) | 7.2870E-03 (2002,329,0000) | 7.0228E-03 (2002,008,0000) | 6.2443E-03 (2002,007,0000) |
| 609 | -35.276 | -193.003 | 7.9944E-03 (2002,356,0000) | 7.1073E-03 (2002,329,0000) | 6.9125E-03 (2002,008,0000) | 6.0834E-03 (2002,007,0000) |
| 610 | -33.822 | -193.010 | 8.7121E-03 (2002,356,0000) | 7.5397E-03 (2002,329,0000) | 6.8581E-03 (2002,008,0000) | 5.9514E-03 (2002,007,0000) |
| 611 | -32.367 | -193.016 | 9.6523E-03 (2002,356,0000) | 7.7981E-03 (2002,329,0000) | 6.7464E-03 (2002,008,0000) | 5.8021E-03 (2002,007,0000) |
| 612 | -30.912 | -193.022 | 9.5646E-03 (2002,356,0000) | 7.5703E-03 (2002,329,0000) | 6.6414E-03 (2002,008,0000) | 5.6465E-03 (2002,007,0000) |
| 613 | -29.457 | -193.027 | 8.5439E-03 (2002,356,0000) | 6.9452E-03 (2002,329,0000) | 6.5391E-03 (2002,008,0000) | 5.4909E-03 (2002,007,0000) |
| 614 | -28.003 | -193.033 | 8.4999E-03 (2002,356,0000) | 6.7636E-03 (2002,329,0000) | 6.4328E-03 (2002,008,0000) | 5.3686E-03 (2002,307,0000) |
| 615 | -26.548 | -193.038 | 7.7965E-03 (2002,356,0000) | 6.2997E-03 (2002,008,0000) | 6.1305E-03 (2002,329,0000) | 5.3361E-03 (2002,014,0000) |
| 616 | -25.093 | -193.043 | 8.3278E-03 (2002,356,0000) | 6.4155E-03 (2002,329,0000) | 6.2347E-03 (2002,008,0000) | 5.3513E-03 (2002,014,0000) |
| 617 | -41.085 | -191.122 | 1.0213E-02 (2002,356,0000) | 9.0812E-03 (2002,329,0000) | 7.5119E-03 (2002,008,0000) | 6.9337E-03 (2002,007,0000) |
| 618 | -39.631 | -191.129 | 8.5149E-03 (2002,356,0000) | 7.9423E-03 (2002,329,0000) | 7.3961E-03 (2002,008,0000) | 6.7005E-03 (2002,007,0000) |
| 619 | -38.176 | -191.137 | 8.7723E-03 (2002,356,0000) | 8.0204E-03 (2002,329,0000) | 7.2801E-03 (2002,008,0000) | 6.5304E-03 (2002,007,0000) |
| 620 | -36.722 | -191.144 | 8.8243E-03 (2002,356,0000) | 7.7997E-03 (2002,329,0000) | 7.1658E-03 (2002,008,0000) | 6.3616E-03 (2002,007,0000) |
| 621 | -35.268 | -191.150 | 1.0042E-02 (2002,356,0000) | 8.0853E-03 (2002,329,0000) | 7.0578E-03 (2002,008,0000) | 6.2144E-03 (2002,007,0000) |
| 622 | -33.813 | -191.157 | 9.9993E-03 (2002,356,0000) | 7.8600E-03 (2002,329,0000) | 6.9530E-03 (2002,008,0000) | 6.0517E-03 (2002,007,0000) |
| 623 | -32.359 | -191.163 | 1.0244E-02 (2002,356,0000) | 7.6368E-03 (2002,329,0000) | 6.8414E-03 (2002,008,0000) | 5.8982E-03 (2002,007,0000) |
| 624 | -30.905 | -191.169 | 9.9423E-03 (2002,356,0000) | 7.4116E-03 (2002,329,0000) | 6.7345E-03 (2002,008,0000) | 5.7411E-03 (2002,007,0000) |
| 625 | -29.450 | -191.175 | 8.9734E-03 (2002,356,0000) | 6.8551E-03 (2002,329,0000) | 6.6292E-03 (2002,008,0000) | 5.5812E-03 (2002,007,0000) |
| 626 | -27.996 | -191.180 | 8.8273E-03 (2002,356,0000) | 6.6697E-03 (2002,329,0000) | 6.5252E-03 (2002,008,0000) | 5.4403E-03 (2002,007,0000) |
| 627 | -26.542 | -191.185 | 8.4228E-03 (2002,356,0000) | 6.4391E-03 (2002,329,0000) | 6.4253E-03 (2002,008,0000) | 5.3501E-03 (2002,014,0000) |
| 628 | -25.087 | -191.190 | 8.7612E-03 (2002,356,0000) | 6.3286E-03 (2002,329,0000) | 6.3263E-03 (2002,008,0000) | 5.3481E-03 (2002,014,0000) |
| 629 | -39.621 | -189.277 | 8.6240E-03 (2002,356,0000) | 7.6869E-03 (2002,329,0000) | 7.4269E-03 (2002,008,0000) | 6.7757E-03 (2002,007,0000) |
| 630 | -38.167 | -189.284 | 1.0245E-02 (2002,356,0000) | 8.1556E-03 (2002,329,0000) | 7.3698E-03 (2002,008,0000) | 6.6360E-03 (2002,007,0000) |
| 631 | -36.713 | -189.291 | 9.8696E-03 (2002,356,0000) | 7.9212E-03 (2002,329,0000) | 7.2580E-03 (2002,008,0000) | 6.4649E-03 (2002,007,0000) |
| 632 | -35.259 | -189.298 | 8.9832E-03 (2002,356,0000) | 7.4556E-03 (2002,329,0000) | 7.1476E-03 (2002,008,0000) | 6.2800E-03 (2002,007,0000) |
| 633 | -33.805 | -189.304 | 1.0658E-02 (2002,356,0000) | 7.6997E-03 (2002,329,0000) | 7.0388E-03 (2002,008,0000) | 6.1554E-03 (2002,007,0000) |
| 634 | -32.351 | -189.310 | 1.0770E-02 (2002,356,0000) | 7.4839E-03 (2002,329,0000) | 6.9334E-03 (2002,008,0000) | 5.9986E-03 (2002,007,0000) |
| 635 | -30.897 | -189.316 | 9.9614E-03 (2002,356,0000) | 7.1802E-03 (2002,329,0000) | 6.8244E-03 (2002,008,0000) | 5.8252E-03 (2002,007,0000) |
| 636 | -29.443 | -189.322 | 9.3242E-03 (2002,356,0000) | 6.8611E-03 (2002,329,0000) | 6.7193E-03 (2002,008,0000) | 5.6752E-03 (2002,007,0000) |
| 637 | -27.989 | -189.327 | 8.5431E-03 (2002,356,0000) | 6.6193E-03 (2002,008,0000) | 6.2945E-03 (2002,329,0000) | 5.5325E-03 (2002,007,0000) |
| 638 | -26.535 | -189.332 | 8.6497E-03 (2002,356,0000) | 6.5168E-03 (2002,008,0000) | 6.3232E-03 (2002,329,0000) | 5.3900E-03 (2002,007,0000) |
| 639 | -25.081 | -189.337 | 8.1437E-03 (2002,356,0000) | 6.3854E-03 (2002,008,0000) | 5.6907E-03 (2002,329,0000) | 5.3126E-03 (2002,014,0000) |
| 640 | -23.628 | -189.342 | 8.5376E-03 (2002,356,0000) | 6.3183E-03 (2002,008,0000) | 6.0132E-03 (2002,329,0000) | 5.3168E-03 (2002,014,0000) |
| 641 | -22.173 | -189.346 | 8.4251E-03 (2002,356,0000) | 6.2220E-03 (2002,008,0000) | 5.8631E-03 (2002,329,0000) | 5.2969E-03 (2002,014,0000) |
| 642 | -41.066 | -187.417 | 9.7548E-03 (2002,356,0000) | 8.2898E-03 (2002,329,0000) | 7.8843E-03 (2002,240,0000) | 7.6892E-03 (2002,008,0000) |
| 643 | -39.612 | -187.424 | 8.8940E-03 (2002,356,0000) | 7.6022E-03 (2002,329,0000) | 7.5095E-03 (2002,008,0000) | 7.3962E-03 (2002,240,0000) |
| 644 | -38.158 | -187.431 | 9.8179E-03 (2002,356,0000) | 7.8302E-03 (2002,329,0000) | 7.4584E-03 (2002,008,0000) | 6.9695E-03 (2002,240,0000) |
| 645 | -36.705 | -187.438 | 1.0558E-02 (2002,356,0000) | 7.9124E-03 (2002,329,0000) | 7.3467E-03 (2002,008,0000) | 6.5614E-03 (2002,007,0000) |
| 646 | -35.251 | -187.445 | 1.0118E-02 (2002,356,0000) | 7.5577E-03 (2002,329,0000) | 7.2364E-03 (2002,008,0000) | 6.3874E-03 (2002,007,0000) |
| 647 | -33.797 | -187.452 | 1.0437E-02 (2002,356,0000) | 7.5332E-03 (2002,329,0000) | 7.1275E-03 (2002,008,0000) | 6.2284E-03 (2002,007,0000) |
| 648 | -32.344 | -187.458 | 1.0654E-02 (2002,356,0000) | 7.3205E-03 (2002,329,0000) | 7.0231E-03 (2002,008,0000) | 6.0825E-03 (2002,007,0000) |
| 649 | -30.890 | -187.464 | 1.1213E-02 (2002,356,0000) | 7.1118E-03 (2002,329,0000) | 6.9211E-03 (2002,008,0000) | 5.9465E-03 (2002,007,0000) |
| 650 | -29.436 | -187.469 | 1.0138E-02 (2002,356,0000) | 6.8426E-03 (2002,329,0000) | 6.8131E-03 (2002,008,0000) | 5.7738E-03 (2002,007,0000) |
| 651 | -27.983 | -187.475 | 9.9954E-03 (2002,356,0000) | 6.7122E-03 (2002,008,0000) | 6.5535E-03 (2002,329,0000) | 5.6309E-03 (2002,007,0000) |
| 652 | -26.529 | -187.480 | 9.9171E-03 (2002,356,0000) | 6.6122E-03 (2002,008,0000) | 6.4621E-03 (2002,329,0000) | 5.5009E-03 (2002,007,0000) |
| 653 | -25.076 | -187.485 | 9.7659E-03 (2002,356,0000) | 6.5103E-03 (2002,008,0000) | 6.2107E-03 (2002,329,0000) | 5.3717E-03 (2002,007,0000) |
| 654 | -23.622 | -187.489 | 8.7377E-03 (2002,356,0000) | 6.4135E-03 (2002,008,0000) | 5.9131E-03 (2002,329,0000) | 5.3020E-03 (2002,014,0000) |
| 655 | -22.168 | -187.494 | 8.6032E-03 (2002,356,0000) | 6.3205E-03 (2002,008,0000) | 5.7675E-03 (2002,329,0000) | 5.2813E-03 (2002,014,0000) |
| 656 | -41.056 | -185.564 | 9.0242E-03 (2002,356,0000) | 8.7693E-03 (2002,240,0000) | 7.7130E-03 (2002,008,0000) | 7.4862E-03 (2002,329,0000) |
| 657 | -39.602 | -185.572 | 9.3019E-03 (2002,356,0000) | 8.2910E-03 (2002,240,0000) | 7.6580E-03 (2002,008,0000) | 7.5873E-03 (2002,329,0000) |
| 658 | -38.149 | -185.579 | 9.8135E-03 (2002,356,0000) | 7.8306E-03 (2002,240,0000) | 7.6441E-03 (2002,329,0000) | 7.5483E-03 (2002,008,0000) |
| 659 | -36.696 | -185.586 | 9.7204E-03 (2002,356,0000) | 7.4369E-03 (2002,008,0000) | 7.4211E-03 (2002,329,0000) | 7.3645E-03 (2002,240,0000) |
| 660 | -35.243 | -185.593 | 1.0956E-02 (2002,356,0000) | 7.5948E-03 (2002,329,0000) | 7.3265E-03 (2002,008,0000) | 6.9086E-03 (2002,240,0000) |
| 661 | -33.789 | -185.599 | 1.0704E-02 (2002,356,0000) | 7.3749E-03 (2002,329,0000) | 7.2178E-03 (2002,008,0000) | 6.4744E-03 (2002,240,0000) |
| 662 | -32.336 | -185.605 | 1.1102E-02 (2002,356,0000) | 7.1680E-03 (2002,329,0000) | 7.1172E-03 (2002,008,0000) | 6.1753E-03 (2002,007,0000) |
| 663 | -30.883 | -185.611 | 1.1510E-02 (2002,356,0000) | 7.0119E-03 (2002,008,0000) | 6.9668E-03 (2002,329,0000) | 6.0440E-03 (2002,007,0000) |
| 664 | -29.429 | -185.617 | 1.0430E-02 (2002,356,0000) | 6.9059E-03 (2002,008,0000) | 6.7585E-03 (2002,329,0000) | 5.8743E-03 (2002,007,0000) |
| 665 | -27.976 | -185.622 | 9.8741E-03 (2002,356,0000) | 6.8076E-03 (2002,008,0000) | 6.4332E-03 (2002,329,0000) | 5.7287E-03 (2002,007,0000) |
| 666 | -26.523 | -185.627 | 9.7856E-03 (2002,356,0000) | 6.7028E-03 (2002,008,0000) | 6.2637E-03 (2002,329,0000) | 5.5959E-03 (2002,007,0000) |
| 667 | -25.070 | -185.632 | 9.0599E-03 (2002,356,0000) | 6.6076E-03 (2002,008,0000) | 5.9689E-03 (2002,329,0000) | 5.4566E-03 (2002,007,0000) |
| 668 | -23.616 | -185.637 | 8.4854E-03 (2002,356,0000) | 6.4824E-03 (2002,008,0000) | 5.4352E-03 (2002,329,0000) | 5.3270E-03 (2002,007,0000) |
| 669 | -22.163 | -185.641 | 8.6520E-03 (2002,356,0000) | 6.4157E-03 (2002,008,0000) | 5.5492E-03 (2002,329,0000) | 5.2544E-03 (2002,014,0000) |
| 670 | -42.499 | -183.704 | 1.0210E-02 (2002,240,0000) | 9.7393E-03 (2002,356,0000) | 8.1768E-03 (2002,329,0000) | 7.9775E-03 (2002,008,0000) |
| 671 | -41.046 | -183.711 | 9.6510E-03 (2002,240,0000) | 9.2807E-03 (2002,356,0000) | 7.7995E-03 (2002,008,0000) | 7.3891E-03 (2002,329,0000) |
| 672 | -39.593 | -183.719 | 9.3902E-03 (2002,356,0000) | 9.1565E-03 (2002,240,0000) | 7.6927E-03 (2002,008,0000) | 7.3734E-03 (2002,329,0000) |
| 673 | -38.140 | -183.726 | 9.2824E-03 (2002,356,0000) | 8.6514E-03 (2002,240,0000) | 7.5834E-03 (2002,008,0000) | 6.9993E-03 (2002,329,0000) |
| 674 | -36.687 | -183.733 | 9.5228E-03 (2002,356,0000) | 8.1695E-03 (2002,240,0000) | 7.5301E-03 (2002,008,0000) | 7.0621E-03 (2002,329,0000) |
| 675 | -35.234 | -183.740 | 1.0499E-02 (2002,356,0000) | 7.7104E-03 (2002,240,0000) | 7.4199E-03 (2002,008,0000) | 7.2859E-03 (2002,329,0000) |
| 676 | -33.781 | -183.746 | 1.1464E-02 (2002,356,0000) | 7.3168E-03 (2002,008,0000) | 7.2518E-03 (2002,240,0000) | 7.2343E-03 (2002,329,0000) |
| 677 | -32.328 | -183.753 | 1.1754E-02 (2002,356,0000) | 7.2173E-03 (2002,008,0000) | 7.0313E-03 (2002,329,0000) | 6.7999E-03 (2002,240,0000) |
| 678 | -30.875 | -183.759 | 1.0858E-02 (2002,356,0000) | 7.1065E-03 (2002,008,0000) | 6.8183E-03 (2002,329,0000) | 6.3736E-03 (2002,240,0000) |
| 679 | -29.422 | -183.764 | 1.0190E-02 (2002,356,0000) | 7.0043E-03 (2002,008,0000) | 6.4995E-03 (2002,329,0000) | 5.9670E-03 (2002,240,0000) |
| 680 | -27.969 | -183.770 | 1.0093E-02 (2002,356,0000) | 6.9031E-03 (2002,008,0000) | 6.3235E-03 (2002,329,0000) | 5.8282E-03 (2002,007,0000) |
| 681 | -26.517 | -183.775 | 9.3234E-03 (2002,356,0000) | 6.8013E-03 (2002,008,0000) | 6.0251E-03 (2002,329,0000) | 5.6833E-03 (2002,007,0000) |
| 682 | -25.064 | -183.779 | 9.0502E-03 (2002,356,0000) | 6.7073E-03 (2002,008,0000) | 5.7417E-03 (2002,329,0000) | 5.5550E-03 (2002,007,0000) |
| 683 | -23.611 | -183.784 | 8.6852E-03 (2002,356,0000) | 6.5828E-03 (2002,008,0000) | 5.4245E-03 (2002,007,0000) | 5.3858E-03 (2002,329,0000) |
| 684 | -22.158 | -183.788 | 9.0033E-03 (2002,356,0000) | 6.5160E-03 (2002,008,0000) | 5.6073E-03 (2002,329,0000) | 5.3061E-03 (2002,007,0000) |
| 685 | -20.705 | -183.792 | 8.8765E-03 (2002,356,0000) | 6.4223E-03 (2002,008,0000) | 5.4858E-03 (2002,329,0000) | 5.2106E-03 (2002,014,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 686 | -45.394 | -181.835 | 1.2013E-02 (2002,240,0000) | 9.4094E-03 (2002,356,0000) | 8.2301E-03 (2002,008,0000) | 7.9214E-03 (2002,329,0000) |
| 687 | -43.941 | -181.843 | 1.1508E-02 (2002,240,0000) | 9.7417E-03 (2002,356,0000) | 8.1819E-03 (2002,008,0000) | 8.0204E-03 (2002,329,0000) |
| 688 | -42.489 | -181.851 | 1.0992E-02 (2002,240,0000) | 9.5045E-03 (2002,356,0000) | 8.0056E-03 (2002,008,0000) | 7.5002E-03 (2002,329,0000) |
| 689 | -41.036 | -181.859 | 1.0500E-02 (2002,240,0000) | 1.0001E-02 (2002,356,0000) | 7.9525E-03 (2002,008,0000) | 7.8126E-03 (2002,329,0000) |
| 690 | -39.584 | -181.866 | 1.0262E-02 (2002,356,0000) | 9.9921E-03 (2002,240,0000) | 7.8397E-03 (2002,008,0000) | 7.6025E-03 (2002,329,0000) |
| 691 | -38.131 | -181.874 | 1.0101E-02 (2002,356,0000) | 9.4858E-03 (2002,240,0000) | 7.7318E-03 (2002,008,0000) | 7.3791E-03 (2002,329,0000) |
| 692 | -36.678 | -181.881 | 9.9050E-03 (2002,356,0000) | 8.9752E-03 (2002,240,0000) | 7.6215E-03 (2002,008,0000) | 7.1598E-03 (2002,329,0000) |
| 693 | -35.226 | -181.887 | 1.0106E-02 (2002,356,0000) | 8.4862E-03 (2002,240,0000) | 7.5165E-03 (2002,008,0000) | 6.9819E-03 (2002,329,0000) |
| 694 | -33.773 | -181.894 | 1.0649E-02 (2002,356,0000) | 8.0106E-03 (2002,240,0000) | 7.4129E-03 (2002,008,0000) | 6.9584E-03 (2002,329,0000) |
| 695 | -32.321 | -181.900 | 1.2059E-02 (2002,356,0000) | 7.5372E-03 (2002,240,0000) | 7.3102E-03 (2002,008,0000) | 6.8867E-03 (2002,329,0000) |
| 696 | -30.868 | -181.906 | 1.1561E-02 (2002,356,0000) | 7.2048E-03 (2002,008,0000) | 7.0875E-03 (2002,240,0000) | 6.6931E-03 (2002,329,0000) |
| 697 | -29.415 | -181.912 | 1.0404E-02 (2002,356,0000) | 7.1061E-03 (2002,008,0000) | 6.6546E-03 (2002,240,0000) | 6.3960E-03 (2002,329,0000) |
| 698 | -27.963 | -181.917 | 9.7469E-03 (2002,356,0000) | 7.0033E-03 (2002,008,0000) | 6.2275E-03 (2002,240,0000) | 6.0952E-03 (2002,329,0000) |
| 699 | -26.510 | -181.922 | 9.4944E-03 (2002,356,0000) | 6.9046E-03 (2002,008,0000) | 5.9404E-03 (2002,329,0000) | 5.8302E-03 (2002,240,0000) |
| 700 | -25.058 | -181.927 | 9.0536E-03 (2002,356,0000) | 6.7850E-03 (2002,008,0000) | 5.6536E-03 (2002,007,0000) | 5.5571E-03 (2002,329,0000) |
| 701 | -23.605 | -181.931 | 9.1530E-03 (2002,356,0000) | 6.7103E-03 (2002,008,0000) | 5.5494E-03 (2002,329,0000) | 5.5313E-03 (2002,007,0000) |
| 702 | -22.152 | -181.936 | 9.0406E-03 (2002,356,0000) | 6.6190E-03 (2002,008,0000) | 5.4304E-03 (2002,329,0000) | 5.4102E-03 (2002,007,0000) |
| 703 | -20.700 | -181.940 | 8.7312E-03 (2002,356,0000) | 6.5044E-03 (2002,008,0000) | 5.2862E-03 (2002,007,0000) | 5.2269E-03 (2002,329,0000) |
| 704 | -46.835 | -179.973 | 1.3222E-02 (2002,240,0000) | 9.8706E-03 (2002,356,0000) | 8.4958E-03 (2002,008,0000) | 8.3730E-03 (2002,329,0000) |
| 705 | -45.383 | -179.982 | 1.2725E-02 (2002,240,0000) | 9.7545E-03 (2002,356,0000) | 8.3148E-03 (2002,008,0000) | 8.0260E-03 (2002,329,0000) |
| 706 | -43.931 | -179.990 | 1.2228E-02 (2002,240,0000) | 9.9770E-03 (2002,356,0000) | 8.2668E-03 (2002,008,0000) | 7.8961E-03 (2002,329,0000) |
| 707 | -42.479 | -179.999 | 1.1727E-02 (2002,240,0000) | 1.0031E-02 (2002,356,0000) | 8.1494E-03 (2002,008,0000) | 7.6794E-03 (2002,329,0000) |
| 708 | -41.026 | -180.006 | 1.1217E-02 (2002,240,0000) | 1.0049E-02 (2002,356,0000) | 8.0390E-03 (2002,008,0000) | 7.4627E-03 (2002,329,0000) |
| 709 | -39.574 | -180.014 | 1.0732E-02 (2002,240,0000) | 1.0261E-02 (2002,356,0000) | 7.9303E-03 (2002,008,0000) | 7.4631E-03 (2002,329,0000) |
| 710 | -38.122 | -180.021 | 1.0498E-02 (2002,356,0000) | 1.0222E-02 (2002,240,0000) | 7.8246E-03 (2002,008,0000) | 7.2861E-03 (2002,110,0000) |
| 711 | -36.670 | -180.028 | 1.0757E-02 (2002,356,0000) | 9.7041E-03 (2002,240,0000) | 7.7188E-03 (2002,008,0000) | 7.2368E-03 (2002,329,0000) |
| 712 | -35.217 | -180.035 | 1.0756E-02 (2002,356,0000) | 9.2078E-03 (2002,240,0000) | 7.6148E-03 (2002,008,0000) | 7.0335E-03 (2002,329,0000) |
| 713 | -33.765 | -180.041 | 1.2041E-02 (2002,356,0000) | 8.7167E-03 (2002,240,0000) | 7.5145E-03 (2002,008,0000) | 6.9577E-03 (2002,329,0000) |
| 714 | -32.313 | -180.048 | 1.2099E-02 (2002,356,0000) | 8.2272E-03 (2002,240,0000) | 7.4117E-03 (2002,008,0000) | 6.7557E-03 (2002,329,0000) |
| 715 | -30.861 | -180.053 | 1.0701E-02 (2002,356,0000) | 7.7617E-03 (2002,240,0000) | 7.3076E-03 (2002,008,0000) | 6.4701E-03 (2002,329,0000) |
| 716 | -29.408 | -180.059 | 1.0225E-02 (2002,356,0000) | 7.3094E-03 (2002,240,0000) | 7.2107E-03 (2002,008,0000) | 6.1962E-03 (2002,329,0000) |
| 717 | -27.956 | -180.064 | 1.0011E-02 (2002,356,0000) | 7.1089E-03 (2002,008,0000) | 6.8627E-03 (2002,240,0000) | 6.0273E-03 (2002,007,0000) |
| 718 | -26.504 | -180.069 | 9.7217E-03 (2002,356,0000) | 7.0112E-03 (2002,008,0000) | 6.4417E-03 (2002,240,0000) | 5.8956E-03 (2002,007,0000) |
| 719 | -25.052 | -180.074 | 9.4529E-03 (2002,356,0000) | 6.9184E-03 (2002,008,0000) | 6.0277E-03 (2002,240,0000) | 5.7624E-03 (2002,007,0000) |
| 720 | -23.599 | -180.079 | 9.3458E-03 (2002,356,0000) | 6.8185E-03 (2002,008,0000) | 5.6377E-03 (2002,240,0000) | 5.6366E-03 (2002,007,0000) |
| 721 | -22.147 | -180.083 | 9.3726E-03 (2002,356,0000) | 6.7271E-03 (2002,008,0000) | 5.5120E-03 (2002,007,0000) | 5.4761E-03 (2002,329,0000) |
| 722 | -20.695 | -180.087 | 9.1069E-03 (2002,356,0000) | 6.6335E-03 (2002,008,0000) | 5.3939E-03 (2002,007,0000) | 5.2740E-03 (2002,329,0000) |
| 723 | -46.824 | -178.121 | 1.3747E-02 (2002,240,0000) | 1.0002E-02 (2002,356,0000) | 8.5034E-03 (2002,008,0000) | 8.2393E-03 (2002,007,0000) |
| 724 | -45.372 | -178.130 | 1.3266E-02 (2002,240,0000) | 9.8345E-03 (2002,356,0000) | 8.3923E-03 (2002,008,0000) | 8.0329E-03 (2002,007,0000) |
| 725 | -43.920 | -178.138 | 1.2816E-02 (2002,240,0000) | 1.0233E-02 (2002,356,0000) | 8.3431E-03 (2002,008,0000) | 7.8607E-03 (2002,007,0000) |
| 726 | -42.469 | -178.146 | 1.2322E-02 (2002,240,0000) | 1.0278E-02 (2002,356,0000) | 8.2369E-03 (2002,008,0000) | 7.6788E-03 (2002,007,0000) |
| 727 | -41.017 | -178.154 | 1.1830E-02 (2002,240,0000) | 1.0094E-02 (2002,356,0000) | 8.0762E-03 (2002,008,0000) | 7.4987E-03 (2002,007,0000) |
| 728 | -39.565 | -178.161 | 1.1351E-02 (2002,240,0000) | 1.0484E-02 (2002,356,0000) | 8.0241E-03 (2002,008,0000) | 7.9052E-03 (2002,110,0000) |
| 729 | -38.113 | -178.169 | 1.0843E-02 (2002,240,0000) | 1.0480E-02 (2002,356,0000) | 7.9170E-03 (2002,008,0000) | 7.7485E-03 (2002,110,0000) |
| 730 | -36.661 | -178.176 | 1.0666E-02 (2002,356,0000) | 1.0333E-02 (2002,240,0000) | 7.8158E-03 (2002,008,0000) | 7.7356E-03 (2002,110,0000) |
| 731 | -35.209 | -178.182 | 1.2395E-02 (2002,356,0000) | 9.8327E-03 (2002,240,0000) | 7.7148E-03 (2002,008,0000) | 7.5240E-03 (2002,110,0000) |
| 732 | -33.757 | -178.189 | 1.2399E-02 (2002,356,0000) | 9.3394E-03 (2002,240,0000) | 7.6112E-03 (2002,008,0000) | 7.2980E-03 (2002,110,0000) |
| 733 | -32.305 | -178.195 | 1.2294E-02 (2002,356,0000) | 8.8462E-03 (2002,240,0000) | 7.5133E-03 (2002,008,0000) | 7.0638E-03 (2002,110,0000) |
| 734 | -30.853 | -178.201 | 1.2174E-02 (2002,356,0000) | 8.3694E-03 (2002,240,0000) | 7.4152E-03 (2002,008,0000) | 6.8241E-03 (2002,110,0000) |
| 735 | -29.401 | -178.206 | 1.0712E-02 (2002,356,0000) | 7.9009E-03 (2002,240,0000) | 7.3152E-03 (2002,008,0000) | 6.5616E-03 (2002,110,0000) |
| 736 | -27.949 | -178.212 | 1.1359E-02 (2002,356,0000) | 7.4415E-03 (2002,240,0000) | 7.2145E-03 (2002,008,0000) | 6.3202E-03 (2002,110,0000) |
| 737 | -26.498 | -178.217 | 1.0590E-02 (2002,356,0000) | 7.1213E-03 (2002,008,0000) | 7.0063E-03 (2002,240,0000) | 6.0666E-03 (2002,110,0000) |
| 738 | -25.046 | -178.222 | 9.6426E-03 (2002,356,0000) | 7.0276E-03 (2002,008,0000) | 6.5771E-03 (2002,240,0000) | 5.8679E-03 (2002,007,0000) |
| 739 | -23.594 | -178.226 | 9.8484E-03 (2002,356,0000) | 6.9307E-03 (2002,008,0000) | 6.1707E-03 (2002,240,0000) | 5.7469E-03 (2002,007,0000) |
| 740 | -22.142 | -178.231 | 9.4073E-03 (2002,356,0000) | 6.8371E-03 (2002,008,0000) | 5.7817E-03 (2002,240,0000) | 5.6181E-03 (2002,007,0000) |
| 741 | -20.690 | -178.235 | 9.2103E-03 (2002,356,0000) | 6.7255E-03 (2002,008,0000) | 5.4959E-03 (2002,007,0000) | 5.4105E-03 (2002,240,0000) |
| 742 | -46.813 | -176.268 | 1.4142E-02 (2002,240,0000) | 1.0555E-02 (2002,356,0000) | 8.7270E-03 (2002,110,0000) | 8.6494E-03 (2002,008,0000) |
| 743 | -45.361 | -176.277 | 1.3673E-02 (2002,240,0000) | 1.0422E-02 (2002,356,0000) | 8.5396E-03 (2002,008,0000) | 8.1517E-03 (2002,007,0000) |
| 744 | -43.910 | -176.285 | 1.3219E-02 (2002,240,0000) | 1.0101E-02 (2002,356,0000) | 8.3690E-03 (2002,008,0000) | 7.9474E-03 (2002,007,0000) |
| 745 | -42.458 | -176.293 | 1.2783E-02 (2002,240,0000) | 1.0661E-02 (2002,356,0000) | 8.4137E-03 (2002,110,0000) | 8.3234E-03 (2002,008,0000) |
| 746 | -41.007 | -176.301 | 1.2307E-02 (2002,240,0000) | 1.0747E-02 (2002,356,0000) | 8.7101E-03 (2002,110,0000) | 8.2195E-03 (2002,008,0000) |
| 747 | -39.555 | -176.309 | 1.1825E-02 (2002,240,0000) | 1.0697E-02 (2002,356,0000) | 8.4821E-03 (2002,110,0000) | 8.1131E-03 (2002,008,0000) |
| 748 | -38.104 | -176.316 | 1.2238E-02 (2002,356,0000) | 1.1322E-02 (2002,240,0000) | 8.5391E-03 (2002,110,0000) | 8.0141E-03 (2002,008,0000) |
| 749 | -36.652 | -176.323 | 1.1066E-02 (2002,356,0000) | 1.0831E-02 (2002,240,0000) | 8.3122E-03 (2002,110,0000) | 7.9118E-03 (2002,008,0000) |
| 750 | -35.201 | -176.330 | 1.2560E-02 (2002,356,0000) | 1.0338E-02 (2002,240,0000) | 8.0891E-03 (2002,110,0000) | 7.8135E-03 (2002,008,0000) |
| 751 | -33.749 | -176.336 | 1.2442E-02 (2002,356,0000) | 9.8428E-03 (2002,240,0000) | 7.8507E-03 (2002,110,0000) | 7.7172E-03 (2002,008,0000) |
| 752 | -32.297 | -176.342 | 1.1724E-02 (2002,356,0000) | 9.3646E-03 (2002,240,0000) | 7.6163E-03 (2002,008,0000) | 7.5976E-03 (2002,110,0000) |
| 753 | -30.846 | -176.348 | 1.2454E-02 (2002,356,0000) | 8.8856E-03 (2002,240,0000) | 7.5225E-03 (2002,008,0000) | 7.3656E-03 (2002,110,0000) |
| 754 | -29.394 | -176.354 | 1.2258E-02 (2002,356,0000) | 8.4104E-03 (2002,240,0000) | 7.4238E-03 (2002,008,0000) | 7.1133E-03 (2002,110,0000) |
| 755 | -27.943 | -176.359 | 1.1520E-02 (2002,356,0000) | 7.9505E-03 (2002,240,0000) | 7.3252E-03 (2002,008,0000) | 6.8352E-03 (2002,110,0000) |
| 756 | -26.491 | -176.364 | 1.1320E-02 (2002,356,0000) | 7.5077E-03 (2002,240,0000) | 7.2344E-03 (2002,008,0000) | 6.5735E-03 (2002,110,0000) |
| 757 | -25.040 | -176.369 | 1.1095E-02 (2002,356,0000) | 7.1376E-03 (2002,008,0000) | 7.0748E-03 (2002,240,0000) | 6.3121E-03 (2002,110,0000) |
| 758 | -23.588 | -176.374 | 9.9338E-03 (2002,356,0000) | 7.0438E-03 (2002,008,0000) | 6.6533E-03 (2002,240,0000) | 6.0444E-03 (2002,110,0000) |
| 759 | -22.137 | -176.378 | 9.8794E-03 (2002,356,0000) | 6.9520E-03 (2002,008,0000) | 6.2562E-03 (2002,240,0000) | 5.7839E-03 (2002,110,0000) |
| 760 | -20.685 | -176.382 | 9.4430E-03 (2002,356,0000) | 6.8561E-03 (2002,008,0000) | 5.8667E-03 (2002,240,0000) | 5.6044E-03 (2002,007,0000) |
| 761 | -62.765 | -174.303 | 1.6565E-02 (2002,240,0000) | 1.2133E-02 (2002,110,0000) | 1.1742E-02 (2002,329,0000) | 1.1272E-02 (2002,356,0000) |
| 762 | -46.802 | -174.416 | 1.4292E-02 (2002,240,0000) | 1.2546E-02 (2002,356,0000) | 1.0199E-02 (2002,110,0000) | 8.7242E-03 (2002,008,0000) |
| 763 | -45.351 | -174.425 | 1.3877E-02 (2002,240,0000) | 1.0627E-02 (2002,356,0000) | 8.6143E-03 (2002,008,0000) | 8.2571E-03 (2002,007,0000) |
| 764 | -43.899 | -174.433 | 1.3448E-02 (2002,240,0000) | 1.0471E-02 (2002,356,0000) | 8.4586E-03 (2002,008,0000) | 8.0634E-03 (2002,007,0000) |
| 765 | -42.448 | -174.441 | 1.3041E-02 (2002,240,0000) | 1.0847E-02 (2002,356,0000) | 8.7157E-03 (2002,110,0000) | 8.4130E-03 (2002,008,0000) |
| 766 | -40.997 | -174.449 | 1.2596E-02 (2002,240,0000) | 1.0921E-02 (2002,356,0000) | 9.1154E-03 (2002,110,0000) | 8.3071E-03 (2002,008,0000) |
| 767 | -39.546 | -174.456 | 1.2430E-02 (2002,356,0000) | 1.2133E-02 (2002,240,0000) | 9.2316E-03 (2002,110,0000) | 8.2096E-03 (2002,008,0000) |
| 768 | -38.095 | -174.464 | 1.2795E-02 (2002,356,0000) | 1.1660E-02 (2002,240,0000) | 9.0135E-03 (2002,110,0000) | 8.1113E-03 (2002,008,0000) |
| 769 | -36.643 | -174.471 | 1.2705E-02 (2002,356,0000) | 1.1192E-02 (2002,240,0000) | 8.7888E-03 (2002,110,0000) | 8.0126E-03 (2002,008,0000) |
| 770 | -35.192 | -174.477 | 1.1989E-02 (2002,356,0000) | 1.0714E-02 (2002,240,0000) | 8.5518E-03 (2002,110,0000) | 7.9123E-03 (2002,008,0000) |
| 771 | -33.741 | -174.484 | 1.1351E-02 (2002,356,0000) | 1.0234E-02 (2002,240,0000) | 8.3103E-03 (2002,110,0000) | 7.8182E-03 (2002,008,0000) |
| 772 | -32.290 | -174.490 | 1.2501E-02 (2002,356,0000) | 9.7638E-03 (2002,240,0000) | 8.0665E-03 (2002,110,0000) | 7.7234E-03 (2002,008,0000) |
| 773 | -30.839 | -174.496 | 1.2390E-02 (2002,356,0000) | 9.2961E-03 (2002,240,0000) | 7.8160E-03 (2002,110,0000) | 7.6281E-03 (2002,008,0000) |
| 774 | -29.387 | -174.501 | 1.2369E-02 (2002,356,0000) | 8.8263E-03 (2002,240,0000) | 7.5581E-03 (2002,110,0000) | 7.5341E-03 (2002,008,0000) |
| 775 | -27.936 | -174.507 | 1.2201E-02 (2002,356,0000) | 8.3756E-03 (2002,240,0000) | 7.4423E-03 (2002,008,0000) | 7.2968E-03 (2002,110,0000) |
| 776 | -26.485 | -174.512 | 1.1524E-02 (2002,356,0000) | 7.9328E-03 (2002,240,0000) | 7.3479E-03 (2002,008,0000) | 7.0196E-03 (2002,110,0000) |
| 777 | -25.034 | -174.517 | 1.0290E-02 (2002,356,0000) | 7.4984E-03 (2002,240,0000) | 7.2528E-03 (2002,008,0000) | 6.7427E-03 (2002,110,0000) |
| 778 | -23.582 | -174.521 | 1.0034E-02 (2002,356,0000) | 7.1592E-03 (2002,008,0000) | 7.0747E-03 (2002,240,0000) | 6.4379E-03 (2002,110,0000) |
| 779 | -22.131 | -174.526 | 9.7351E-03 (2002,356,0000) | 7.0682E-03 (2002,008,0000) | 6.6754E-03 (2002,240,0000) | 5.8281E-03 (2002,007,0000) |
| 780 | -62.750 | -172.451 | 1.5877E-02 (2002,240,0000) | 1.2121E-02 (2002,110,0000) | 1.1471E-02 (2002,329,0000) | 1.1230E-02 (2002,007,0000) |
| 781 | -61.299 | -172.462 | 1.5961E-02 (2002,240,0000) | 1.1978E-02 (2002,110,0000) | 1.1564E-02 (2002,356,0000) | 1.1211E-02 (2002,329,0000) |
| 782 | -46.791 | -172.563 | 1.4236E-02 (2002,240,0000) | 1.0466E-02 (2002,356,0000) | 8.7352E-03 (2002,008,0000) | 8.5351E-03 (2002,007,0000) |
| 783 | -45.340 | -172.572 | 1.3879E-02 (2002,240,0000) | 1.0613E-02 (2002,356,0000) | 8.6419E-03 (2002,008,0000) | 8.3528E-03 (2002,007,0000) |
| 784 | -43.889 | -172.580 | 1.3533E-02 (2002,240,0000) | 1.1501E-02 (2002,356,0000) | 1.0152E-02 (2002,110,0000) | 8.6017E-03 (2002,008,0000) |
| 785 | -42.438 | -172.588 | 1.3132E-02 (2002,240,0000) | 1.2550E-02 (2002,356,0000) | 9.9712E-03 (2002,110,0000) | 8.5013E-03 (2002,008,0000) |
| 786 | -40.987 | -172.596 | 1.2723E-02 (2002,240,0000) | 1.1659E-02 (2002,356,0000) | 9.7770E-03 (2002,110,0000) | 8.4033E-03 (2002,008,0000) |
| 787 | -39.536 | -172.604 | 1.2282E-02 (2002,240,0000) | 1.1095E-02 (2002,356,0000) | 9.2925E-03 (2002,110,0000) | 8.3078E-03 (2002,008,0000) |
| 788 | -38.086 | -172.611 | 1.2816E-02 (2002,356,0000) | 1.1844E-02 (2002,240,0000) | 9.3629E-03 (2002,110,0000) | 8.2138E-03 (2002,008,0000) |
| 789 | -36.635 | -172.618 | 1.2740E-02 (2002,356,0000) | 1.1406E-02 (2002,240,0000) | 9.1454E-03 (2002,110,0000) | 8.1141E-03 (2002,008,0000) |
| 790 | -35.184 | -172.625 | 1.1358E-02 (2002,356,0000) | 1.0949E-02 (2002,240,0000) | 8.9112E-03 (2002,110,0000) | 8.0210E-03 (2002,008,0000) |
| 791 | -33.733 | -172.631 | 1.2519E-02 (2002,356,0000) | 1.0497E-02 (2002,240,0000) | 8.6766E-03 (2002,110,0000) | 7.9267E-03 (2002,008,0000) |
| 792 | -32.282 | -172.637 | 1.1534E-02 (2002,356,0000) | 1.0047E-02 (2002,240,0000) | 8.4257E-03 (2002,110,0000) | 7.8303E-03 (2002,008,0000) |
| 793 | -30.831 | -172.643 | 1.2574E-02 (2002,356,0000) | 9.5923E-03 (2002,240,0000) | 8.1794E-03 (2002,110,0000) | 7.7436E-03 (2002,008,0000) |
| 794 | -29.380 | -172.649 | 1.2269E-02 (2002,356,0000) | 9.1447E-03 (2002,240,0000) | 7.9174E-03 (2002,110,0000) | 7.6485E-03 (2002,008,0000) |
| 795 | -27.929 | -172.654 | 1.2260E-02 (2002,356,0000) | 8.7045E-03 (2002,240,0000) | 7.6538E-03 (2002,110,0000) | 7.5590E-03 (2002,008,0000) |
| 796 | -26.479 | -172.659 | 1.1935E-02 (2002,356,0000) | 8.2685E-03 (2002,240,0000) | 7.4649E-03 (2002,008,0000) | 7.3874E-03 (2002,110,0000) |
| 797 | -25.028 | -172.664 | 1.1335E-02 (2002,356,0000) | 7.8448E-03 (2002,240,0000) | 7.3737E-03 (2002,008,0000) | 7.1106E-03 (2002,110,0000) |
| 798 | -23.577 | -172.669 | 1.0206E-02 (2002,356,0000) | 7.4328E-03 (2002,240,0000) | 7.2794E-03 (2002,008,0000) | 6.8193E-03 (2002,110,0000) |
| 799 | -61.285 | -170.610 | 1.5205E-02 (2002,240,0000) | 1.1799E-02 (2002,110,0000) | 1.1586E-02 (2002,356,0000) | 1.1033E-02 (2002,007,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 800 | -46.780 | -170.711 | 1.4072E-02 (2002,240,0000) | 1.1851E-02 (2002,356,0000) | 1.0632E-02 (2002,110,0000) | 8.8757E-03 (2002,008,0000) |
| 801 | -45.329 | -170.720 | 1.3755E-02 (2002,240,0000) | 1.2789E-02 (2002,356,0000) | 1.0485E-02 (2002,110,0000) | 8.7819E-03 (2002,008,0000) |
| 802 | -43.879 | -170.728 | 1.3388E-02 (2002,240,0000) | 1.0801E-02 (2002,356,0000) | 8.6376E-03 (2002,008,0000) | 8.2693E-03 (2002,007,0000) |
| 803 | -42.428 | -170.736 | 1.3047E-02 (2002,240,0000) | 1.0993E-02 (2002,356,0000) | 8.5446E-03 (2002,008,0000) | 8.1013E-03 (2002,007,0000) |
| 804 | -40.977 | -170.744 | 1.2835E-02 (2002,356,0000) | 1.2681E-02 (2002,240,0000) | 9.9771E-03 (2002,110,0000) | 8.5018E-03 (2002,008,0000) |
| 805 | -39.527 | -170.751 | 1.2728E-02 (2002,356,0000) | 1.2288E-02 (2002,240,0000) | 9.7895E-03 (2002,110,0000) | 8.4084E-03 (2002,008,0000) |
| 806 | -38.076 | -170.759 | 1.2787E-02 (2002,356,0000) | 1.1893E-02 (2002,240,0000) | 9.5868E-03 (2002,110,0000) | 8.3123E-03 (2002,008,0000) |
| 807 | -36.626 | -170.766 | 1.1477E-02 (2002,240,0000) | 1.1185E-02 (2002,356,0000) | 9.1832E-03 (2002,110,0000) | 8.2215E-03 (2002,008,0000) |
| 808 | -35.175 | -170.772 | 1.2432E-02 (2002,356,0000) | 1.1054E-02 (2002,240,0000) | 9.1560E-03 (2002,110,0000) | 8.1321E-03 (2002,008,0000) |
| 809 | -33.725 | -170.779 | 1.1168E-02 (2002,356,0000) | 1.0636E-02 (2002,240,0000) | 8.9247E-03 (2002,110,0000) | 8.0365E-03 (2002,008,0000) |
| 810 | -32.274 | -170.785 | 1.2477E-02 (2002,356,0000) | 1.0209E-02 (2002,240,0000) | 8.6851E-03 (2002,110,0000) | 7.9503E-03 (2002,008,0000) |
| 811 | -30.824 | -170.791 | 1.1588E-02 (2002,356,0000) | 9.7806E-03 (2002,240,0000) | 8.4381E-03 (2002,110,0000) | 7.8602E-03 (2002,008,0000) |
| 812 | -29.373 | -170.796 | 1.2365E-02 (2002,356,0000) | 9.3602E-03 (2002,240,0000) | 8.1857E-03 (2002,110,0000) | 7.7701E-03 (2002,008,0000) |
| 813 | -27.923 | -170.802 | 1.2336E-02 (2002,356,0000) | 8.9385E-03 (2002,240,0000) | 7.9253E-03 (2002,110,0000) | 7.6802E-03 (2002,008,0000) |
| 814 | -26.472 | -170.807 | 1.1760E-02 (2002,356,0000) | 8.5242E-03 (2002,240,0000) | 7.6600E-03 (2002,110,0000) | 7.5857E-03 (2002,008,0000) |
| 815 | -25.022 | -170.812 | 1.0506E-02 (2002,356,0000) | 8.1146E-03 (2002,240,0000) | 7.4933E-03 (2002,008,0000) | 7.3862E-03 (2002,110,0000) |
| 816 | -59.820 | -168.769 | 1.4510E-02 (2002,240,0000) | 1.1875E-02 (2002,356,0000) | 1.1362E-02 (2002,110,0000) | 1.0815E-02 (2002,007,0000) |
| 817 | -43.868 | -168.875 | 1.3141E-02 (2002,240,0000) | 1.0936E-02 (2002,356,0000) | 8.7302E-03 (2002,008,0000) | 8.3828E-03 (2002,007,0000) |
| 818 | -42.418 | -168.884 | 1.2832E-02 (2002,240,0000) | 1.1200E-02 (2002,356,0000) | 8.6485E-03 (2002,008,0000) | 8.2114E-03 (2002,007,0000) |
| 819 | -40.968 | -168.891 | 1.2501E-02 (2002,240,0000) | 1.1260E-02 (2002,356,0000) | 8.6022E-03 (2002,008,0000) | 8.0429E-03 (2002,007,0000) |
| 820 | -39.518 | -168.899 | 1.2154E-02 (2002,240,0000) | 1.1236E-02 (2002,356,0000) | 8.5093E-03 (2002,008,0000) | 7.8761E-03 (2002,007,0000) |
| 821 | -38.067 | -168.906 | 1.1798E-02 (2002,240,0000) | 1.1203E-02 (2002,356,0000) | 8.4224E-03 (2002,008,0000) | 7.7876E-03 (2002,110,0000) |
| 822 | -36.617 | -168.913 | 1.1484E-02 (2002,356,0000) | 1.1425E-02 (2002,240,0000) | 9.4831E-03 (2002,110,0000) | 8.3365E-03 (2002,008,0000) |
| 823 | -35.167 | -168.920 | 1.1340E-02 (2002,356,0000) | 1.1044E-02 (2002,240,0000) | 9.2047E-03 (2002,110,0000) | 8.2469E-03 (2002,008,0000) |
| 824 | -33.717 | -168.926 | 1.2639E-02 (2002,356,0000) | 1.0663E-02 (2002,240,0000) | 9.0627E-03 (2002,110,0000) | 8.1576E-03 (2002,008,0000) |
| 825 | -32.267 | -168.932 | 1.2299E-02 (2002,356,0000) | 1.0264E-02 (2002,240,0000) | 8.8331E-03 (2002,110,0000) | 8.0705E-03 (2002,008,0000) |
| 826 | -30.816 | -168.938 | 1.2540E-02 (2002,356,0000) | 9.8701E-03 (2002,240,0000) | 8.5988E-03 (2002,110,0000) | 7.9815E-03 (2002,008,0000) |
| 827 | -29.366 | -168.944 | 1.2468E-02 (2002,356,0000) | 9.4773E-03 (2002,240,0000) | 8.3556E-03 (2002,110,0000) | 7.8950E-03 (2002,008,0000) |
| 828 | -27.916 | -168.949 | 1.2432E-02 (2002,356,0000) | 9.0822E-03 (2002,240,0000) | 8.1049E-03 (2002,110,0000) | 7.8051E-03 (2002,008,0000) |
| 829 | -26.466 | -168.954 | 1.2284E-02 (2002,356,0000) | 8.6873E-03 (2002,240,0000) | 7.8493E-03 (2002,110,0000) | 7.7139E-03 (2002,008,0000) |
| 830 | -25.016 | -168.959 | 1.1714E-02 (2002,356,0000) | 8.2993E-03 (2002,240,0000) | 7.6224E-03 (2002,008,0000) | 7.5885E-03 (2002,110,0000) |
| 831 | -45.307 | -167.015 | 1.3016E-02 (2002,240,0000) | 1.1106E-02 (2002,356,0000) | 8.9151E-03 (2002,008,0000) | 8.6708E-03 (2002,007,0000) |
| 832 | -43.858 | -167.023 | 1.2769E-02 (2002,240,0000) | 1.1209E-02 (2002,356,0000) | 8.8328E-03 (2002,008,0000) | 8.4954E-03 (2002,007,0000) |
| 833 | -42.408 | -167.031 | 1.3095E-02 (2002,356,0000) | 1.2514E-02 (2002,240,0000) | 1.0106E-02 (2002,110,0000) | 8.7926E-03 (2002,008,0000) |
| 834 | -25.010 | -167.107 | 1.1083E-02 (2002,356,0000) | 8.4112E-03 (2002,240,0000) | 7.7515E-03 (2002,008,0000) | 7.6950E-03 (2002,110,0000) |

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CALPOST Version 5.6394 Level 070622
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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 329 | -19.357 | -226.410 | 5.9886E-04 | 582 | -32.382 | -196.721 | 7.3289E-04 |
| 330 | -23.734 | -224.545 | 6.2475E-04 | 583 | -30.927 | -196.727 | 7.2026E-04 |
| 331 | -22.274 | -224.549 | 6.1509E-04 | 584 | -29.472 | -196.733 | 7.0985E-04 |
| 332 | -20.813 | -224.553 | 6.0756E-04 | 585 | -28.016 | -196.738 | 6.8879E-04 |
| 333 | -17.892 | -224.561 | 5.9179E-04 | 586 | -26.561 | -196.743 | 6.8132E-04 |
| 334 | -16.432 | -224.564 | 5.8594E-04 | 587 | -46.925 | -194.794 | 8.6186E-04 |
| 335 | -23.729 | -222.692 | 6.2565E-04 | 588 | -45.470 | -194.803 | 8.5089E-04 |
| 336 | -22.269 | -222.696 | 6.1891E-04 | 589 | -44.015 | -194.811 | 8.3815E-04 |
| 337 | -20.808 | -222.701 | 6.0989E-04 | 590 | -42.560 | -194.819 | 8.1797E-04 |
| 338 | -19.348 | -222.704 | 6.0234E-04 | 591 | -41.105 | -194.827 | 8.1123E-04 |
| 339 | -17.888 | -222.708 | 5.9483E-04 | 592 | -39.650 | -194.835 | 8.0138E-04 |
| 340 | -16.428 | -222.711 | 5.8827E-04 | 593 | -38.195 | -194.842 | 7.7849E-04 |
| 341 | -14.967 | -222.714 | 5.7930E-04 | 594 | -36.740 | -194.849 | 7.5706E-04 |
| 342 | -25.183 | -220.835 | 6.3723E-04 | 595 | -35.285 | -194.856 | 7.5138E-04 |
| 343 | -23.723 | -220.839 | 6.3025E-04 | 596 | -33.830 | -194.862 | 7.4641E-04 |
| 344 | -22.263 | -220.844 | 6.2063E-04 | 597 | -32.375 | -194.868 | 7.3967E-04 |
| 345 | -20.803 | -220.848 | 6.1378E-04 | 598 | -30.920 | -194.874 | 7.2922E-04 |
| 346 | -19.344 | -220.851 | 6.0663E-04 | 599 | -29.465 | -194.880 | 7.0306E-04 |
| 347 | -17.884 | -220.855 | 5.9929E-04 | 600 | -28.009 | -194.885 | 6.9393E-04 |
| 348 | -16.424 | -220.858 | 5.8898E-04 | 601 | -26.554 | -194.890 | 6.9728E-04 |
| 349 | -14.964 | -220.861 | 5.8147E-04 | 602 | -45.459 | -192.950 | 8.5745E-04 |
| 350 | -25.177 | -218.982 | 6.4002E-04 | 603 | -44.004 | -192.959 | 8.3851E-04 |
| 351 | -23.718 | -218.986 | 6.3273E-04 | 604 | -42.550 | -192.967 | 8.2250E-04 |
| 352 | -22.258 | -218.991 | 6.2250E-04 | 605 | -41.095 | -192.975 | 8.0958E-04 |
| 353 | -20.799 | -218.995 | 6.1639E-04 | 606 | -39.640 | -192.982 | 8.0443E-04 |
| 354 | -19.339 | -218.998 | 6.0918E-04 | 607 | -38.186 | -192.989 | 7.7567E-04 |
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| 369 | -41.212 | -215.208 | 7.5484E-04 | 622 | -33.813 | -191.157 | 7.6870E-04 |
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| 528 | -38.231 | -202.253 | 7.6213E-04 | 781 | -61.299 | -172.462 | 1.1319E-03 |
| 529 | -36.775 | -202.260 | 7.5015E-04 | 782 | -46.791 | -172.563 | 9.3437E-04 |
| 530 | -35.318 | -202.267 | 7.2065E-04 | 783 | -45.340 | -172.572 | 9.2514E-04 |
| 531 | -33.862 | -202.273 | 7.2281E-04 | 784 | -43.889 | -172.580 | 9.3871E-04 |
| 532 | -32.405 | -202.279 | 7.1804E-04 | 785 | -42.438 | -172.588 | 9.3140E-04 |
| 533 | -30.949 | -202.285 | 7.0789E-04 | 786 | -40.987 | -172.596 | 9.1376E-04 |
| 534 | -29.493 | -202.291 | 6.9807E-04 | 787 | -39.536 | -172.604 | 8.9205E-04 |
| 535 | -28.036 | -202.296 | 6.8607E-04 | 788 | -38.086 | -172.611 | 8.9692E-04 |
| 536 | -26.580 | -202.301 | 6.7824E-04 | 789 | -36.635 | -172.618 | 8.8386E-04 |
| 537 | -25.123 | -202.306 | 6.6956E-04 | 790 | -35.184 | -172.625 | 8.6003E-04 |
| 538 | -23.667 | -202.311 | 6.5988E-04 | 791 | -33.733 | -172.631 | 8.5749E-04 |
| 539 | -22.210 | -202.315 | 6.5097E-04 | 792 | -32.282 | -172.637 | 8.3708E-04 |
| 540 | -46.958 | -200.352 | 8.4842E-04 | 793 | -30.831 | -172.643 | 8.3663E-04 |
| 541 | -45.502 | -200.361 | 8.2736E-04 | 794 | -29.380 | -172.649 | 8.2105E-04 |
| 542 | -44.046 | -200.369 | 8.1710E-04 | 795 | -27.929 | -172.654 | 8.1121E-04 |
| 543 | -42.590 | -200.377 | 8.0455E-04 | 796 | -26.479 | -172.659 | 7.9594E-04 |
| 544 | -41.134 | -200.385 | 7.9244E-04 | 797 | -25.028 | -172.664 | 7.7694E-04 |
| 545 | -39.678 | -200.393 | 7.7842E-04 | 798 | -23.577 | -172.669 | 7.5832E-04 |
| 546 | -38.222 | -200.400 | 7.6450E-04 | 799 | -61.285 | -170.610 | 1.1303E-03 |
| 547 | -36.766 | -200.407 | 7.5516E-04 | 800 | -46.780 | -170.711 | 9.7322E-04 |
| 548 | -35.310 | -200.414 | 7.2852E-04 | 801 | -45.329 | -170.720 | 9.6433E-04 |
| 549 | -33.854 | -200.420 | 7.3139E-04 | 802 | -43.879 | -170.728 | 9.1544E-04 |
| 550 | -32.398 | -200.427 | 7.1589E-04 | 803 | -42.428 | -170.736 | 9.0874E-04 |
| 551 | -30.942 | -200.432 | 7.1328E-04 | 804 | -40.977 | -170.744 | 9.2502E-04 |
| 552 | -29.486 | -200.438 | 7.0332E-04 | 805 | -39.527 | -170.751 | 9.1083E-04 |
| 553 | -28.030 | -200.444 | 6.8695E-04 | 806 | -38.076 | -170.759 | 8.9949E-04 |
| 554 | -26.573 | -200.449 | 6.8243E-04 | 807 | -36.626 | -170.766 | 8.7233E-04 |
| 555 | -25.117 | -200.453 | 6.7106E-04 | 808 | -35.175 | -170.772 | 8.7060E-04 |
| 556 | -23.661 | -200.458 | 6.6415E-04 | 809 | -33.725 | -170.779 | 8.4965E-04 |
| 557 | -46.947 | -198.500 | 8.5820E-04 | 810 | -32.274 | -170.785 | 8.4867E-04 |
| 558 | -45.491 | -198.508 | 8.3828E-04 | 811 | -30.824 | -170.791 | 8.2970E-04 |
| 559 | -44.036 | -198.517 | 8.2225E-04 | 812 | -29.373 | -170.796 | 8.2586E-04 |
| 560 | -42.580 | -198.525 | 8.0952E-04 | 813 | -27.923 | -170.802 | 8.1583E-04 |
| 561 | -41.124 | -198.533 | 7.9782E-04 | 814 | -26.472 | -170.807 | 7.9629E-04 |
| 562 | -39.669 | -198.540 | 7.8562E-04 | 815 | -25.022 | -170.812 | 7.7568E-04 |
| 563 | -38.213 | -198.547 | 7.7083E-04 | 816 | -59.820 | -168.769 | 1.1134E-03 |
| 564 | -36.757 | -198.554 | 7.4695E-04 | 817 | -43.868 | -168.875 | 9.1778E-04 |
| 565 | -35.301 | -198.561 | 7.3721E-04 | 818 | -42.418 | -168.884 | 9.1355E-04 |
| 566 | -33.846 | -198.568 | 7.3506E-04 | 819 | -40.968 | -168.891 | 9.0334E-04 |
| 567 | -32.390 | -198.574 | 7.2913E-04 | 820 | -39.518 | -168.899 | 8.9130E-04 |
| 568 | -30.934 | -198.580 | 7.0081E-04 | 821 | -38.067 | -168.906 | 8.7920E-04 |
| 569 | -29.479 | -198.585 | 6.9321E-04 | 822 | -36.617 | -168.913 | 8.7968E-04 |
| 570 | -28.023 | -198.591 | 6.8874E-04 | 823 | -35.167 | -168.920 | 8.6534E-04 |
| 571 | -26.567 | -198.596 | 6.8705E-04 | 824 | -33.717 | -168.926 | 8.6477E-04 |
| 572 | -46.936 | -196.647 | 8.5962E-04 | 825 | -32.267 | -168.932 | 8.4846E-04 |
| 573 | -45.481 | -196.656 | 8.4895E-04 | 826 | -30.816 | -168.938 | 8.4174E-04 |
| 574 | -44.025 | -196.664 | 8.2827E-04 | 827 | -29.366 | -168.944 | 8.3051E-04 |
| 575 | -42.570 | -196.672 | 8.1050E-04 | 828 | -27.916 | -168.949 | 8.2073E-04 |
| 576 | -41.115 | -196.680 | 8.0253E-04 | 829 | -26.466 | -168.954 | 8.0912E-04 |
| 577 | -39.659 | -196.687 | 7.8656E-04 | 830 | -25.016 | -168.959 | 7.8888E-04 |
| 578 | -38.204 | -196.695 | 7.7751E-04 | 831 | -45.307 | -167.015 | 9.3312E-04 |
| 579 | -36.748 | -196.702 | 7.6376E-04 | 832 | -43.858 | -167.023 | 9.2425E-04 |
| 580 | -35.293 | -196.708 | 7.3893E-04 | 833 | -42.408 | -167.031 | 9.4334E-04 |
| 581 | -33.838 | -196.715 | 7.2857E-04 | 834 | -25.010 | -167.107 | 7.8829E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 761 | -62.765 | -174.303 | DISCRETE | 1.6565E-02 (2002,240,0000) | RANK 1 | 24 | HOUR |
| 801 | -45.329 | -170.720 | DISCRETE | 1.2789E-02 (2002,356,0000) | RANK 2 | 24 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 1.1742E-02 (2002,329,0000) | RANK 3 | 24 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 1.1272E-02 (2002,356,0000) | RANK 4 | 24 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 1.1473E-03 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Capitol Reef

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  834*0, 363*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 841 | -129.441 | -256.870 | 1.8945E-02 (2002,346,0000) | 1.4913E-02 (2002,223,0000) | 1.4567E-02 (2002,319,0000) | 1.4386E-02 (2002,085,0000) |
| 842 | -127.975 | -256.894 | 1.9843E-02 (2002,346,0000) | 1.4219E-02 (2002,319,0000) | 1.4168E-02 (2002,223,0000) | 1.4151E-02 (2002,085,0000) |
| 843 | -126.508 | -256.918 | 1.9661E-02 (2002,346,0000) | 1.3874E-02 (2002,018,0000) | 1.2949E-02 (2002,319,0000) | 1.2872E-02 (2002,036,0000) |
| 844 | -125.041 | -256.941 | 1.8800E-02 (2002,346,0000) | 1.3989E-02 (2002,018,0000) | 1.2696E-02 (2002,036,0000) | 1.1629E-02 (2002,319,0000) |
| 845 | -129.411 | -255.017 | 1.9438E-02 (2002,346,0000) | 1.5480E-02 (2002,223,0000) | 1.4559E-02 (2002,319,0000) | 1.4507E-02 (2002,085,0000) |
| 846 | -127.944 | -255.041 | 1.9470E-02 (2002,346,0000) | 1.3399E-02 (2002,319,0000) | 1.3263E-02 (2002,018,0000) | 1.3153E-02 (2002,036,0000) |
| 847 | -126.478 | -255.065 | 1.9294E-02 (2002,346,0000) | 1.3414E-02 (2002,018,0000) | 1.2988E-02 (2002,036,0000) | 1.2383E-02 (2002,319,0000) |
| 848 | -129.380 | -253.164 | 1.9655E-02 (2002,346,0000) | 1.5805E-02 (2002,223,0000) | 1.4325E-02 (2002,319,0000) | 1.4218E-02 (2002,085,0000) |
| 849 | -127.914 | -253.188 | 1.9930E-02 (2002,346,0000) | 1.3721E-02 (2002,223,0000) | 1.3426E-02 (2002,319,0000) | 1.3267E-02 (2002,036,0000) |
| 850 | -126.448 | -253.212 | 1.9055E-02 (2002,346,0000) | 1.3090E-02 (2002,036,0000) | 1.3036E-02 (2002,018,0000) | 1.1953E-02 (2002,319,0000) |
| 851 | -130.815 | -251.286 | 1.9299E-02 (2002,346,0000) | 1.7231E-02 (2002,223,0000) | 1.4810E-02 (2002,319,0000) | 1.4808E-02 (2002,085,0000) |
| 852 | -129.349 | -251.311 | 1.8918E-02 (2002,346,0000) | 1.3548E-02 (2002,036,0000) | 1.3325E-02 (2002,319,0000) | 1.3202E-02 (2002,223,0000) |
| 853 | -127.884 | -251.335 | 1.9539E-02 (2002,346,0000) | 1.3379E-02 (2002,036,0000) | 1.2872E-02 (2002,319,0000) | 1.2517E-02 (2002,018,0000) |
| 854 | -126.418 | -251.359 | 1.9233E-02 (2002,346,0000) | 1.3198E-02 (2002,036,0000) | 1.2661E-02 (2002,018,0000) | 1.1863E-02 (2002,319,0000) |
| 855 | -133.715 | -249.384 | 1.9435E-02 (2002,223,0000) | 1.7720E-02 (2002,346,0000) | 1.5604E-02 (2002,319,0000) | 1.5448E-02 (2002,085,0000) |
| 856 | -132.249 | -249.409 | 1.8907E-02 (2002,346,0000) | 1.8434E-02 (2002,223,0000) | 1.5296E-02 (2002,085,0000) | 1.5269E-02 (2002,319,0000) |
| 857 | -130.784 | -249.433 | 1.9080E-02 (2002,346,0000) | 1.5854E-02 (2002,223,0000) | 1.4146E-02 (2002,319,0000) | 1.3824E-02 (2002,036,0000) |
| 858 | -129.319 | -249.458 | 1.9556E-02 (2002,346,0000) | 1.4106E-02 (2002,223,0000) | 1.3662E-02 (2002,036,0000) | 1.3458E-02 (2002,319,0000) |
| 859 | -127.854 | -249.482 | 1.8877E-02 (2002,346,0000) | 1.3479E-02 (2002,036,0000) | 1.2105E-02 (2002,319,0000) | 1.2028E-02 (2002,018,0000) |
| 860 | -133.683 | -247.531 | 1.9819E-02 (2002,223,0000) | 1.8275E-02 (2002,346,0000) | 1.5654E-02 (2002,085,0000) | 1.5547E-02 (2002,319,0000) |
| 861 | -132.218 | -247.556 | 1.8535E-02 (2002,346,0000) | 1.6981E-02 (2002,223,0000) | 1.4418E-02 (2002,319,0000) | 1.4096E-02 (2002,036,0000) |
| 862 | -130.753 | -247.580 | 1.8218E-02 (2002,346,0000) | 1.3937E-02 (2002,036,0000) | 1.3113E-02 (2002,319,0000) | 1.2662E-02 (2002,223,0000) |
| 863 | -129.288 | -247.605 | 1.8795E-02 (2002,346,0000) | 1.3774E-02 (2002,036,0000) | 1.2617E-02 (2002,319,0000) | 1.1796E-02 (2002,223,0000) |
| 864 | -127.823 | -247.629 | 1.9379E-02 (2002,346,0000) | 1.3603E-02 (2002,036,0000) | 1.2218E-02 (2002,319,0000) | 1.1652E-02 (2002,018,0000) |
| 865 | -135.116 | -245.653 | 2.1138E-02 (2002,223,0000) | 1.7672E-02 (2002,346,0000) | 1.6009E-02 (2002,085,0000) | 1.5865E-02 (2002,319,0000) |
| 866 | -133.651 | -245.678 | 1.9271E-02 (2002,223,0000) | 1.8299E-02 (2002,346,0000) | 1.5034E-02 (2002,319,0000) | 1.4785E-02 (2002,085,0000) |
| 867 | -132.187 | -245.703 | 1.8732E-02 (2002,346,0000) | 1.6339E-02 (2002,223,0000) | 1.4214E-02 (2002,036,0000) | 1.4178E-02 (2002,319,0000) |
| 868 | -130.722 | -245.727 | 1.8685E-02 (2002,346,0000) | 1.4052E-02 (2002,036,0000) | 1.3152E-02 (2002,319,0000) | 1.3104E-02 (2002,223,0000) |
| 869 | -129.258 | -245.752 | 1.9019E-02 (2002,346,0000) | 1.3884E-02 (2002,036,0000) | 1.2516E-02 (2002,319,0000) | 1.1814E-02 (2002,223,0000) |
| 870 | -136.548 | -243.775 | 2.2286E-02 (2002,223,0000) | 1.7026E-02 (2002,346,0000) | 1.6226E-02 (2002,319,0000) | 1.6136E-02 (2002,085,0000) |
| 871 | -135.084 | -243.800 | 2.1278E-02 (2002,223,0000) | 1.8124E-02 (2002,346,0000) | 1.5863E-02 (2002,085,0000) | 1.5817E-02 (2002,319,0000) |
| 872 | -133.620 | -243.825 | 1.8535E-02 (2002,346,0000) | 1.8424E-02 (2002,223,0000) | 1.4792E-02 (2002,319,0000) | 1.4485E-02 (2002,036,0000) |
| 873 | -132.155 | -243.850 | 1.9344E-02 (2002,346,0000) | 1.6922E-02 (2002,223,0000) | 1.4329E-02 (2002,036,0000) | 1.4218E-02 (2002,319,0000) |
| 874 | -130.691 | -243.874 | 2.0313E-02 (2002,346,0000) | 1.6285E-02 (2002,223,0000) | 1.4167E-02 (2002,036,0000) | 1.3801E-02 (2002,319,0000) |
| 875 | -129.227 | -243.899 | 1.9207E-02 (2002,346,0000) | 1.3994E-02 (2002,036,0000) | 1.2393E-02 (2002,319,0000) | 1.1886E-02 (2002,223,0000) |
| 876 | -137.980 | -241.896 | 2.3579E-02 (2002,223,0000) | 1.6596E-02 (2002,319,0000) | 1.6340E-02 (2002,346,0000) | 1.6276E-02 (2002,085,0000) |
| 877 | -136.516 | -241.922 | 2.2595E-02 (2002,223,0000) | 1.7625E-02 (2002,346,0000) | 1.6249E-02 (2002,319,0000) | 1.6218E-02 (2002,085,0000) |
| 878 | -135.052 | -241.947 | 2.1439E-02 (2002,223,0000) | 1.8484E-02 (2002,346,0000) | 1.5617E-02 (2002,319,0000) | 1.5462E-02 (2002,085,0000) |
| 879 | -133.588 | -241.972 | 2.0452E-02 (2002,223,0000) | 1.9746E-02 (2002,346,0000) | 1.5298E-02 (2002,085,0000) | 1.5223E-02 (2002,319,0000) |
| 880 | -132.124 | -241.997 | 2.0159E-02 (2002,346,0000) | 1.8004E-02 (2002,223,0000) | 1.4444E-02 (2002,036,0000) | 1.4323E-02 (2002,319,0000) |
| 881 | -130.660 | -242.022 | 2.0219E-02 (2002,346,0000) | 1.5388E-02 (2002,223,0000) | 1.4277E-02 (2002,036,0000) | 1.3443E-02 (2002,319,0000) |
| 882 | -129.197 | -242.046 | 1.9829E-02 (2002,346,0000) | 1.4102E-02 (2002,036,0000) | 1.2724E-02 (2002,223,0000) | 1.2488E-02 (2002,319,0000) |
| 883 | -137.947 | -240.043 | 2.3758E-02 (2002,223,0000) | 1.6931E-02 (2002,346,0000) | 1.6704E-02 (2002,319,0000) | 1.6416E-02 (2002,085,0000) |
| 884 | -136.483 | -240.069 | 2.2678E-02 (2002,223,0000) | 1.7997E-02 (2002,346,0000) | 1.6227E-02 (2002,319,0000) | 1.6142E-02 (2002,085,0000) |
| 885 | -135.020 | -240.094 | 2.0322E-02 (2002,223,0000) | 1.8703E-02 (2002,346,0000) | 1.5315E-02 (2002,319,0000) | 1.4950E-02 (2002,085,0000) |
| 886 | -133.556 | -240.119 | 1.9377E-02 (2002,346,0000) | 1.8097E-02 (2002,223,0000) | 1.4721E-02 (2002,036,0000) | 1.4557E-02 (2002,319,0000) |
| 887 | -132.093 | -240.144 | 2.0435E-02 (2002,346,0000) | 1.7466E-02 (2002,223,0000) | 1.4561E-02 (2002,036,0000) | 1.4124E-02 (2002,319,0000) |
| 888 | -130.629 | -240.169 | 1.9479E-02 (2002,346,0000) | 1.4391E-02 (2002,036,0000) | 1.3239E-02 (2002,223,0000) | 1.2775E-02 (2002,319,0000) |
| 889 | -129.166 | -240.193 | 2.0532E-02 (2002,346,0000) | 1.4213E-02 (2002,036,0000) | 1.3640E-02 (2002,223,0000) | 1.2571E-02 (2002,319,0000) |
| 890 | -137.914 | -238.190 | 2.3794E-02 (2002,223,0000) | 1.7463E-02 (2002,346,0000) | 1.6623E-02 (2002,319,0000) | 1.6579E-02 (2002,085,0000) |
| 891 | -136.451 | -238.216 | 2.2589E-02 (2002,223,0000) | 1.8447E-02 (2002,346,0000) | 1.5925E-02 (2002,085,0000) | 1.5914E-02 (2002,319,0000) |
| 892 | -134.988 | -238.241 | 2.0383E-02 (2002,223,0000) | 1.9267E-02 (2002,346,0000) | 1.5137E-02 (2002,319,0000) | 1.5047E-02 (2002,085,0000) |
| 893 | -133.525 | -238.266 | 2.0054E-02 (2002,346,0000) | 1.8642E-02 (2002,223,0000) | 1.4837E-02 (2002,036,0000) | 1.4467E-02 (2002,319,0000) |
| 894 | -132.062 | -238.291 | 1.9014E-02 (2002,346,0000) | 1.4673E-02 (2002,036,0000) | 1.3665E-02 (2002,223,0000) | 1.3127E-02 (2002,035,0000) |
| 895 | -130.599 | -238.316 | 1.9659E-02 (2002,346,0000) | 1.4501E-02 (2002,036,0000) | 1.3260E-02 (2002,223,0000) | 1.3029E-02 (2002,035,0000) |
| 896 | -137.882 | -236.337 | 2.3761E-02 (2002,223,0000) | 1.8136E-02 (2002,346,0000) | 1.6716E-02 (2002,085,0000) | 1.6593E-02 (2002,319,0000) |
| 897 | -136.419 | -236.363 | 2.2570E-02 (2002,223,0000) | 1.9179E-02 (2002,346,0000) | 1.6188E-02 (2002,085,0000) | 1.5945E-02 (2002,319,0000) |
| 898 | -134.956 | -236.388 | 2.0265E-02 (2002,223,0000) | 1.9821E-02 (2002,346,0000) | 1.5122E-02 (2002,036,0000) | 1.5109E-02 (2002,085,0000) |
| 899 | -133.493 | -236.413 | 1.8638E-02 (2002,346,0000) | 1.4960E-02 (2002,036,0000) | 1.4316E-02 (2002,223,0000) | 1.3681E-02 (2002,035,0000) |
| 900 | -132.030 | -236.438 | 1.9863E-02 (2002,346,0000) | 1.4791E-02 (2002,223,0000) | 1.4787E-02 (2002,036,0000) | 1.3601E-02 (2002,035,0000) |
| 901 | -137.849 | -234.485 | 2.3658E-02 (2002,223,0000) | 1.8671E-02 (2002,346,0000) | 1.6774E-02 (2002,085,0000) | 1.6299E-02 (2002,319,0000) |
| 902 | -136.386 | -234.510 | 2.2366E-02 (2002,223,0000) | 1.9686E-02 (2002,346,0000) | 1.6109E-02 (2002,085,0000) | 1.5592E-02 (2002,319,0000) |
| 903 | -134.924 | -234.536 | 1.9552E-02 (2002,346,0000) | 1.8267E-02 (2002,223,0000) | 1.5239E-02 (2002,036,0000) | 1.4333E-02 (2002,319,0000) |
| 904 | -133.462 | -234.561 | 1.9413E-02 (2002,346,0000) | 1.5288E-02 (2002,223,0000) | 1.5075E-02 (2002,036,0000) | 1.4158E-02 (2002,035,0000) |
| 905 | -137.816 | -232.632 | 2.3280E-02 (2002,223,0000) | 1.9341E-02 (2002,346,0000) | 1.7056E-02 (2002,085,0000) | 1.6176E-02 (2002,319,0000) |
| 906 | -136.354 | -232.657 | 2.1997E-02 (2002,223,0000) | 2.0282E-02 (2002,346,0000) | 1.6179E-02 (2002,085,0000) | 1.5519E-02 (2002,036,0000) |
| 907 | -134.892 | -232.683 | 1.8886E-02 (2002,346,0000) | 1.5670E-02 (2002,223,0000) | 1.5355E-02 (2002,036,0000) | 1.4736E-02 (2002,035,0000) |
| 908 | -139.245 | -230.753 | 2.4032E-02 (2002,223,0000) | 1.8853E-02 (2002,346,0000) | 1.7464E-02 (2002,085,0000) | 1.6723E-02 (2002,319,0000) |
| 909 | -137.784 | -230.779 | 2.2810E-02 (2002,223,0000) | 2.0108E-02 (2002,346,0000) | 1.7195E-02 (2002,085,0000) | 1.6152E-02 (2002,319,0000) |
| 910 | -136.322 | -230.805 | 1.8967E-02 (2002,346,0000) | 1.7544E-02 (2002,223,0000) | 1.5639E-02 (2002,036,0000) | 1.5352E-02 (2002,035,0000) |
| 911 | -134.860 | -230.830 | 1.9791E-02 (2002,346,0000) | 1.6688E-02 (2002,223,0000) | 1.5472E-02 (2002,036,0000) | 1.5247E-02 (2002,035,0000) |
| 912 | -139.212 | -228.900 | 2.3586E-02 (2002,223,0000) | 1.9558E-02 (2002,346,0000) | 1.7744E-02 (2002,085,0000) | 1.6459E-02 (2002,319,0000) |
| 913 | -137.751 | -228.926 | 2.2383E-02 (2002,223,0000) | 2.0732E-02 (2002,346,0000) | 1.7444E-02 (2002,085,0000) | 1.6150E-02 (2002,035,0000) |
| 914 | -136.290 | -228.952 | 1.9277E-02 (2002,346,0000) | 1.7278E-02 (2002,223,0000) | 1.5856E-02 (2002,035,0000) | 1.5755E-02 (2002,036,0000) |
| 915 | -134.828 | -228.977 | 2.0842E-02 (2002,346,0000) | 1.7845E-02 (2002,223,0000) | 1.5779E-02 (2002,035,0000) | 1.5587E-02 (2002,036,0000) |
| 916 | -140.640 | -227.021 | 2.4267E-02 (2002,223,0000) | 1.8722E-02 (2002,346,0000) | 1.8306E-02 (2002,085,0000) | 1.6971E-02 (2002,035,0000) |
| 917 | -139.179 | -227.048 | 2.3067E-02 (2002,223,0000) | 2.0272E-02 (2002,346,0000) | 1.8178E-02 (2002,085,0000) | 1.6880E-02 (2002,035,0000) |
| 918 | -137.718 | -227.073 | 2.0694E-02 (2002,223,0000) | 2.0082E-02 (2002,346,0000) | 1.6560E-02 (2002,035,0000) | 1.6153E-02 (2002,085,0000) |
| 919 | -136.257 | -227.099 | 2.0299E-02 (2002,346,0000) | 1.8329E-02 (2002,223,0000) | 1.6406E-02 (2002,035,0000) | 1.5873E-02 (2002,036,0000) |
| 920 | -140.607 | -225.169 | 2.3636E-02 (2002,223,0000) | 1.9477E-02 (2002,346,0000) | 1.8092E-02 (2002,085,0000) | 1.7558E-02 (2002,035,0000) |
| 921 | -139.146 | -225.195 | 2.2406E-02 (2002,223,0000) | 2.0574E-02 (2002,346,0000) | 1.7785E-02 (2002,085,0000) | 1.7332E-02 (2002,035,0000) |
| 922 | -137.686 | -225.221 | 2.0221E-02 (2002,346,0000) | 1.9739E-02 (2002,223,0000) | 1.7068E-02 (2002,035,0000) | 1.6162E-02 (2002,036,0000) |
| 923 | -136.225 | -225.246 | 2.1344E-02 (2002,346,0000) | 1.9066E-02 (2002,223,0000) | 1.6964E-02 (2002,035,0000) | 1.5994E-02 (2002,036,0000) |
| 924 | -140.574 | -223.316 | 2.3077E-02 (2002,223,0000) | 2.0079E-02 (2002,346,0000) | 1.8298E-02 (2002,085,0000) | 1.8120E-02 (2002,035,0000) |
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| 931 | -139.080 | -221.489 | 1.9216E-02 (2002,346,0000) | 1.8690E-02 (2002,223,0000) | 1.8210E-02 (2002,035,0000) | 1.6576E-02 (2002,036,0000) |
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| 941 | -144.851 | -217.678 | 2.3988E-02 (2002,223,0000) | 2.0253E-02 (2002,035,0000) | 1.8973E-02 (2002,085,0000) | 1.7502E-02 (2002,346,0000) |
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| 945 | -139.014 | -217.784 | 1.9984E-02 (2002,346,0000) | 1.9318E-02 (2002,035,0000) | 1.8406E-02 (2002,223,0000) | 1.6833E-02 (2002,036,0000) |
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| 952 | -144.783 | -213.973 | 2.2049E-02 (2002,223,0000) | 2.1507E-02 (2002,035,0000) | 1.8930E-02 (2002,346,0000) | 1.8793E-02 (2002,085,0000) |
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| | | | | | | |
|---|---|---|---|---|---|---|
| 955 | -144.748 | -212.120 | 2.1975E-02 (2002,035,0000) | 2.1049E-02 (2002,223,0000) | 1.9739E-02 (2002,307,0000) | 1.9239E-02 (2002,346,0000) |
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| 960 | -143.256 | -210.295 | 2.2443E-02 (2002,307,0000) | 2.2231E-02 (2002,035,0000) | 2.0114E-02 (2002,346,0000) | 1.9142E-02 (2002,223,0000) |
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| 962 | -146.137 | -208.388 | 2.3398E-02 (2002,035,0000) | 2.3250E-02 (2002,307,0000) | 1.9902E-02 (2002,223,0000) | 1.9184E-02 (2002,346,0000) |
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| 995 | -145.929 | -197.273 | 2.6563E-02 (2002,307,0000) | 2.5588E-02 (2002,035,0000) | 1.9276E-02 (2002,036,0000) | 1.6735E-02 (2002,038,0000) |
| 996 | -144.473 | -197.300 | 2.4608E-02 (2002,035,0000) | 1.9570E-02 (2002,307,0000) | 1.9019E-02 (2002,036,0000) | 1.6658E-02 (2002,288,0000) |
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| 998 | -150.259 | -195.338 | 2.7552E-02 (2002,307,0000) | 2.6637E-02 (2002,035,0000) | 1.9996E-02 (2002,036,0000) | 1.7643E-02 (2002,093,0000) |
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| 1007 | -147.314 | -193.541 | 2.7385E-02 (2002,307,0000) | 2.6396E-02 (2002,035,0000) | 1.9780E-02 (2002,036,0000) | 1.7641E-02 (2002,038,0000) |
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| 1030 | -154.477 | -187.843 | 2.6921E-02 (2002,035,0000) | 2.2505E-02 (2002,307,0000) | 2.1156E-02 (2002,036,0000) | 1.7354E-02 (2002,038,0000) |
| 1031 | -153.024 | -187.872 | 2.8818E-02 (2002,307,0000) | 2.8161E-02 (2002,035,0000) | 2.1095E-02 (2002,036,0000) | 1.8575E-02 (2002,079,0000) |
| 1032 | -151.570 | -187.900 | 2.7447E-02 (2002,035,0000) | 2.7302E-02 (2002,307,0000) | 2.0867E-02 (2002,036,0000) | 1.8955E-02 (2002,038,0000) |
| 1033 | -150.116 | -187.928 | 2.7164E-02 (2002,035,0000) | 2.6630E-02 (2002,307,0000) | 2.0662E-02 (2002,036,0000) | 1.9583E-02 (2002,038,0000) |
| 1034 | -148.663 | -187.956 | 2.6369E-02 (2002,035,0000) | 2.3777E-02 (2002,307,0000) | 2.0402E-02 (2002,036,0000) | 1.9959E-02 (2002,038,0000) |
| 1035 | -147.209 | -187.984 | 2.6564E-02 (2002,035,0000) | 2.5119E-02 (2002,307,0000) | 2.0842E-02 (2002,038,0000) | 2.0224E-02 (2002,036,0000) |
| 1036 | -145.755 | -188.011 | 2.5252E-02 (2002,035,0000) | 2.0095E-02 (2002,307,0000) | 1.9894E-02 (2002,036,0000) | 1.9733E-02 (2002,038,0000) |
| 1037 | -144.301 | -188.039 | 2.4248E-02 (2002,035,0000) | 1.9577E-02 (2002,036,0000) | 1.9522E-02 (2002,038,0000) | 1.7651E-02 (2002,288,0000) |
| 1038 | -142.848 | -188.065 | 2.4167E-02 (2002,035,0000) | 1.9482E-02 (2002,038,0000) | 1.9340E-02 (2002,036,0000) | 1.8296E-02 (2002,288,0000) |
| 1039 | -141.394 | -188.092 | 2.3543E-02 (2002,035,0000) | 1.9320E-02 (2002,038,0000) | 1.9033E-02 (2002,036,0000) | 1.8472E-02 (2002,288,0000) |
| 1040 | -161.707 | -185.843 | 3.1099E-02 (2002,307,0000) | 3.0095E-02 (2002,035,0000) | 2.3386E-02 (2002,093,0000) | 2.2120E-02 (2002,036,0000) |
| 1041 | -160.254 | -185.873 | 3.0519E-02 (2002,307,0000) | 2.9853E-02 (2002,035,0000) | 2.2182E-02 (2002,093,0000) | 2.2036E-02 (2002,036,0000) |
| 1042 | -158.801 | -185.903 | 2.9894E-02 (2002,307,0000) | 2.9322E-02 (2002,035,0000) | 2.1920E-02 (2002,036,0000) | 2.0481E-02 (2002,093,0000) |
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| 1044 | -155.894 | -185.962 | 2.9143E-02 (2002,035,0000) | 2.9087E-02 (2002,307,0000) | 2.1656E-02 (2002,036,0000) | 1.8667E-02 (2002,079,0000) |
| 1045 | -154.441 | -185.991 | 2.9021E-02 (2002,035,0000) | 2.8528E-02 (2002,307,0000) | 2.1494E-02 (2002,036,0000) | 1.9166E-02 (2002,079,0000) |
| 1046 | -152.987 | -186.019 | 2.7686E-02 (2002,035,0000) | 2.6724E-02 (2002,307,0000) | 2.1228E-02 (2002,036,0000) | 1.9313E-02 (2002,038,0000) |
| 1047 | -151.534 | -186.048 | 2.6262E-02 (2002,035,0000) | 2.0935E-02 (2002,036,0000) | 2.0774E-02 (2002,307,0000) | 1.9475E-02 (2002,038,0000) |
| 1048 | -150.080 | -186.076 | 2.7403E-02 (2002,035,0000) | 2.5863E-02 (2002,307,0000) | 2.0857E-02 (2002,036,0000) | 2.0702E-02 (2002,038,0000) |
| 1049 | -148.627 | -186.104 | 2.7232E-02 (2002,035,0000) | 2.4954E-02 (2002,307,0000) | 2.1439E-02 (2002,038,0000) | 2.0648E-02 (2002,036,0000) |
| 1050 | -147.174 | -186.132 | 2.6010E-02 (2002,035,0000) | 2.2282E-02 (2002,307,0000) | 2.1430E-02 (2002,038,0000) | 2.0317E-02 (2002,036,0000) |
| 1051 | -145.720 | -186.159 | 2.4611E-02 (2002,035,0000) | 2.0705E-02 (2002,038,0000) | 1.9966E-02 (2002,036,0000) | 1.7687E-02 (2002,288,0000) |
| 1052 | -144.267 | -186.186 | 2.3926E-02 (2002,035,0000) | 2.0251E-02 (2002,038,0000) | 1.9674E-02 (2002,036,0000) | 1.7879E-02 (2002,288,0000) |
| 1053 | -142.813 | -186.213 | 2.3600E-02 (2002,035,0000) | 2.0296E-02 (2002,038,0000) | 1.9400E-02 (2002,036,0000) | 1.8330E-02 (2002,288,0000) |
| 1054 | -141.360 | -186.240 | 2.3059E-02 (2002,035,0000) | 1.9771E-02 (2002,038,0000) | 1.9092E-02 (2002,036,0000) | 1.8550E-02 (2002,288,0000) |
| 1055 | -161.669 | -183.991 | 3.0397E-02 (2002,035,0000) | 2.9798E-02 (2002,307,0000) | 2.2366E-02 (2002,036,0000) | 2.1737E-02 (2002,093,0000) |
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| 1057 | -158.763 | -184.051 | 3.0567E-02 (2002,035,0000) | 2.8842E-02 (2002,307,0000) | 2.2209E-02 (2002,036,0000) | 1.9408E-02 (2002,264,0000) |
| 1058 | -157.310 | -184.080 | 3.0257E-02 (2002,035,0000) | 2.8372E-02 (2002,307,0000) | 2.2065E-02 (2002,036,0000) | 1.9235E-02 (2002,264,0000) |
| 1059 | -155.857 | -184.109 | 2.9890E-02 (2002,035,0000) | 2.7780E-02 (2002,307,0000) | 2.1891E-02 (2002,036,0000) | 1.9443E-02 (2002,079,0000) |
| 1060 | -154.404 | -184.138 | 2.8503E-02 (2002,035,0000) | 2.6885E-02 (2002,307,0000) | 2.1668E-02 (2002,036,0000) | 2.0447E-02 (2002,038,0000) |
| 1061 | -152.951 | -184.167 | 2.9002E-02 (2002,035,0000) | 2.6271E-02 (2002,307,0000) | 2.1507E-02 (2002,036,0000) | 2.1292E-02 (2002,038,0000) |
| 1062 | -151.498 | -184.196 | 2.8328E-02 (2002,035,0000) | 2.5343E-02 (2002,307,0000) | 2.1660E-02 (2002,038,0000) | 2.1286E-02 (2002,036,0000) |
| 1063 | -150.045 | -184.224 | 2.7081E-02 (2002,035,0000) | 2.3948E-02 (2002,307,0000) | 2.1914E-02 (2002,038,0000) | 2.0993E-02 (2002,036,0000) |
| 1064 | -148.592 | -184.252 | 2.6158E-02 (2002,035,0000) | 2.1981E-02 (2002,038,0000) | 2.1664E-02 (2002,307,0000) | 2.0692E-02 (2002,036,0000) |
| 1065 | -147.139 | -184.279 | 2.4782E-02 (2002,035,0000) | 2.1956E-02 (2002,038,0000) | 2.0340E-02 (2002,036,0000) | 1.7562E-02 (2002,288,0000) |
| 1066 | -145.686 | -184.307 | 2.3946E-02 (2002,035,0000) | 2.1808E-02 (2002,038,0000) | 2.0036E-02 (2002,036,0000) | 1.7703E-02 (2002,288,0000) |
| 1067 | -144.233 | -184.334 | 2.3604E-02 (2002,035,0000) | 2.1523E-02 (2002,038,0000) | 1.9766E-02 (2002,036,0000) | 1.8169E-02 (2002,288,0000) |
| 1068 | -161.630 | -182.138 | 3.1093E-02 (2002,035,0000) | 2.8297E-02 (2002,307,0000) | 2.2672E-02 (2002,036,0000) | 2.0126E-02 (2002,264,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069 | -160.178 | -182.169 | 3.0867E-02 (2002,035,0000) | 2.7884E-02 (2002,307,0000) | 2.2573E-02 (2002,036,0000) | 2.0085E-02 (2002,264,0000) |
| 1070 | -158.725 | -182.198 | 3.0612E-02 (2002,035,0000) | 2.7414E-02 (2002,307,0000) | 2.2448E-02 (2002,036,0000) | 2.0032E-02 (2002,264,0000) |
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| 1072 | -155.820 | -182.257 | 2.9875E-02 (2002,035,0000) | 2.6162E-02 (2002,307,0000) | 2.2103E-02 (2002,036,0000) | 2.0768E-02 (2002,038,0000) |
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| 1075 | -151.462 | -182.343 | 2.8062E-02 (2002,035,0000) | 2.4201E-02 (2002,038,0000) | 2.3493E-02 (2002,307,0000) | 2.1453E-02 (2002,036,0000) |
| 1076 | -150.009 | -182.372 | 2.5980E-02 (2002,035,0000) | 2.3651E-02 (2002,038,0000) | 2.1041E-02 (2002,036,0000) | 2.0015E-02 (2002,307,0000) |
| 1077 | -148.556 | -182.399 | 2.5192E-02 (2002,035,0000) | 2.3497E-02 (2002,038,0000) | 2.0742E-02 (2002,036,0000) | 1.7923E-02 (2002,307,0000) |
| 1078 | -147.104 | -182.427 | 2.4182E-02 (2002,035,0000) | 2.3150E-02 (2002,038,0000) | 2.0417E-02 (2002,036,0000) | 1.7705E-02 (2002,288,0000) |
| 1079 | -145.651 | -182.454 | 2.3905E-02 (2002,035,0000) | 2.3370E-02 (2002,038,0000) | 2.0166E-02 (2002,036,0000) | 1.8256E-02 (2002,288,0000) |
| 1080 | -161.592 | -180.286 | 3.1103E-02 (2002,035,0000) | 2.6727E-02 (2002,307,0000) | 2.2910E-02 (2002,036,0000) | 2.0935E-02 (2002,264,0000) |
| 1081 | -160.139 | -180.316 | 3.0871E-02 (2002,035,0000) | 2.6328E-02 (2002,307,0000) | 2.2796E-02 (2002,036,0000) | 2.0812E-02 (2002,264,0000) |
| 1082 | -158.687 | -180.346 | 3.0557E-02 (2002,035,0000) | 2.5818E-02 (2002,307,0000) | 2.2672E-02 (2002,036,0000) | 2.0682E-02 (2002,264,0000) |
| 1083 | -157.235 | -180.376 | 3.0215E-02 (2002,035,0000) | 2.5207E-02 (2002,307,0000) | 2.2515E-02 (2002,036,0000) | 2.0738E-02 (2002,038,0000) |
| 1084 | -155.783 | -180.405 | 2.9849E-02 (2002,035,0000) | 2.4449E-02 (2002,307,0000) | 2.2339E-02 (2002,036,0000) | 2.2250E-02 (2002,038,0000) |
| 1085 | -154.330 | -180.434 | 2.9364E-02 (2002,035,0000) | 2.3696E-02 (2002,038,0000) | 2.3632E-02 (2002,307,0000) | 2.2107E-02 (2002,036,0000) |
| 1086 | -152.878 | -180.463 | 2.8030E-02 (2002,035,0000) | 2.5030E-02 (2002,038,0000) | 2.2628E-02 (2002,307,0000) | 2.1833E-02 (2002,036,0000) |
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| 1090 | -147.068 | -180.575 | 2.4445E-02 (2002,038,0000) | 2.3838E-02 (2002,035,0000) | 2.0524E-02 (2002,036,0000) | 1.8056E-02 (2002,288,0000) |
| 1091 | -145.616 | -180.602 | 2.4186E-02 (2002,038,0000) | 2.3564E-02 (2002,035,0000) | 2.0263E-02 (2002,036,0000) | 1.8648E-02 (2002,288,0000) |
| 1092 | -161.553 | -178.434 | 3.0977E-02 (2002,035,0000) | 2.5246E-02 (2002,307,0000) | 2.3164E-02 (2002,036,0000) | 2.1281E-02 (2002,264,0000) |
| 1093 | -160.101 | -178.464 | 3.0740E-02 (2002,035,0000) | 2.4787E-02 (2002,307,0000) | 2.3035E-02 (2002,036,0000) | 2.1007E-02 (2002,264,0000) |
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| 1097 | -154.293 | -178.582 | 2.8462E-02 (2002,035,0000) | 2.2589E-02 (2002,038,0000) | 2.2247E-02 (2002,036,0000) | 2.1990E-02 (2002,307,0000) |
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| 1101 | -148.485 | -178.695 | 2.4071E-02 (2002,038,0000) | 2.4062E-02 (2002,035,0000) | 2.0927E-02 (2002,036,0000) | 1.8029E-02 (2002,288,0000) |
| 1102 | -147.033 | -178.723 | 2.6320E-02 (2002,038,0000) | 2.5356E-02 (2002,035,0000) | 2.0884E-02 (2002,036,0000) | 1.9643E-02 (2002,288,0000) |
| 1103 | -145.581 | -178.750 | 2.4489E-02 (2002,038,0000) | 2.3930E-02 (2002,035,0000) | 2.0462E-02 (2002,036,0000) | 1.9644E-02 (2002,288,0000) |
| 1104 | -164.418 | -176.521 | 3.1187E-02 (2002,035,0000) | 2.4741E-02 (2002,307,0000) | 2.3617E-02 (2002,036,0000) | 2.2657E-02 (2002,264,0000) |
| 1105 | -162.966 | -176.552 | 3.1029E-02 (2002,035,0000) | 2.4397E-02 (2002,307,0000) | 2.3527E-02 (2002,036,0000) | 2.2206E-02 (2002,264,0000) |
| 1106 | -161.515 | -176.582 | 3.0796E-02 (2002,035,0000) | 2.3958E-02 (2002,307,0000) | 2.3414E-02 (2002,036,0000) | 2.1675E-02 (2002,264,0000) |
| 1107 | -160.063 | -176.612 | 3.0525E-02 (2002,035,0000) | 2.3443E-02 (2002,307,0000) | 2.3263E-02 (2002,036,0000) | 2.1175E-02 (2002,079,0000) |
| 1108 | -158.611 | -176.642 | 2.9650E-02 (2002,035,0000) | 2.3043E-02 (2002,036,0000) | 2.2804E-02 (2002,307,0000) | 2.1266E-02 (2002,079,0000) |
| 1109 | -157.160 | -176.671 | 2.8424E-02 (2002,035,0000) | 2.2804E-02 (2002,036,0000) | 2.1991E-02 (2002,307,0000) | 2.1262E-02 (2002,038,0000) |
| 1110 | -155.708 | -176.701 | 2.8684E-02 (2002,035,0000) | 2.2641E-02 (2002,036,0000) | 2.2171E-02 (2002,038,0000) | 2.1487E-02 (2002,307,0000) |
| 1111 | -154.257 | -176.730 | 2.7690E-02 (2002,035,0000) | 2.2965E-02 (2002,038,0000) | 2.2375E-02 (2002,036,0000) | 2.0636E-02 (2002,307,0000) |
| 1112 | -152.805 | -176.758 | 2.6432E-02 (2002,035,0000) | 2.3583E-02 (2002,038,0000) | 2.2001E-02 (2002,036,0000) | 1.9404E-02 (2002,307,0000) |
| 1113 | -151.353 | -176.787 | 2.5027E-02 (2002,035,0000) | 2.3788E-02 (2002,038,0000) | 2.1624E-02 (2002,036,0000) | 1.7566E-02 (2002,288,0000) |
| 1114 | -149.902 | -176.815 | 2.4072E-02 (2002,035,0000) | 2.3968E-02 (2002,038,0000) | 2.1300E-02 (2002,036,0000) | 1.7866E-02 (2002,288,0000) |
| 1115 | -148.450 | -176.843 | 2.4467E-02 (2002,035,0000) | 2.4316E-02 (2002,038,0000) | 2.1142E-02 (2002,036,0000) | 1.8931E-02 (2002,288,0000) |
| 1116 | -146.998 | -176.870 | 2.4534E-02 (2002,038,0000) | 2.3989E-02 (2002,035,0000) | 2.0853E-02 (2002,036,0000) | 1.9526E-02 (2002,288,0000) |
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| 1118 | -162.927 | -174.699 | 3.0814E-02 (2002,035,0000) | 2.3805E-02 (2002,036,0000) | 2.3458E-02 (2002,307,0000) | 2.2642E-02 (2002,264,0000) |
| 1119 | -161.476 | -174.730 | 3.0557E-02 (2002,035,0000) | 2.3672E-02 (2002,036,0000) | 2.2967E-02 (2002,307,0000) | 2.1870E-02 (2002,264,0000) |
| 1120 | -160.025 | -174.760 | 3.0274E-02 (2002,035,0000) | 2.3514E-02 (2002,036,0000) | 2.2411E-02 (2002,307,0000) | 2.1958E-02 (2002,079,0000) |
| 1121 | -158.574 | -174.790 | 2.9902E-02 (2002,035,0000) | 2.3316E-02 (2002,036,0000) | 2.1919E-02 (2002,079,0000) | 2.1798E-02 (2002,307,0000) |
| 1122 | -157.122 | -174.819 | 2.9072E-02 (2002,035,0000) | 2.3067E-02 (2002,036,0000) | 2.2054E-02 (2002,038,0000) | 2.1556E-02 (2002,079,0000) |
| 1123 | -155.671 | -174.848 | 2.8498E-02 (2002,035,0000) | 2.2941E-02 (2002,038,0000) | 2.2838E-02 (2002,036,0000) | 2.0903E-02 (2002,079,0000) |
| 1124 | -154.220 | -174.877 | 2.7329E-02 (2002,035,0000) | 2.3737E-02 (2002,038,0000) | 2.2552E-02 (2002,036,0000) | 1.9949E-02 (2002,019,0000) |
| 1125 | -152.768 | -174.906 | 2.5092E-02 (2002,035,0000) | 2.4100E-02 (2002,038,0000) | 2.2010E-02 (2002,036,0000) | 1.7378E-02 (2002,288,0000) |
| 1126 | -151.317 | -174.934 | 2.4844E-02 (2002,038,0000) | 2.4732E-02 (2002,035,0000) | 2.1743E-02 (2002,036,0000) | 1.8002E-02 (2002,288,0000) |
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| 1128 | -148.415 | -174.991 | 2.6150E-02 (2002,038,0000) | 2.4982E-02 (2002,035,0000) | 2.1371E-02 (2002,036,0000) | 1.9988E-02 (2002,288,0000) |
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| 1133 | -161.438 | -172.878 | 3.0252E-02 (2002,035,0000) | 2.3930E-02 (2002,036,0000) | 2.2554E-02 (2002,079,0000) | 2.2282E-02 (2002,307,0000) |
| 1134 | -159.987 | -172.908 | 2.9889E-02 (2002,035,0000) | 2.3724E-02 (2002,036,0000) | 2.2464E-02 (2002,079,0000) | 2.1651E-02 (2002,307,0000) |
| 1135 | -158.536 | -172.937 | 2.8811E-02 (2002,035,0000) | 2.3450E-02 (2002,036,0000) | 2.2134E-02 (2002,079,0000) | 2.2115E-02 (2002,038,0000) |
| 1136 | -157.085 | -172.967 | 2.7543E-02 (2002,035,0000) | 2.3154E-02 (2002,036,0000) | 2.2980E-02 (2002,038,0000) | 2.1092E-02 (2002,079,0000) |
| 1137 | -155.634 | -172.996 | 2.6338E-02 (2002,035,0000) | 2.3682E-02 (2002,038,0000) | 2.2776E-02 (2002,036,0000) | 1.8832E-02 (2002,307,0000) |
| 1138 | -154.183 | -173.025 | 2.5352E-02 (2002,035,0000) | 2.4464E-02 (2002,038,0000) | 2.2435E-02 (2002,036,0000) | 1.7309E-02 (2002,267,0000) |
| 1139 | -152.732 | -173.054 | 2.6463E-02 (2002,035,0000) | 2.5529E-02 (2002,038,0000) | 2.2434E-02 (2002,036,0000) | 1.9711E-02 (2002,019,0000) |
| 1140 | -151.281 | -173.082 | 2.5865E-02 (2002,038,0000) | 2.5761E-02 (2002,035,0000) | 2.2097E-02 (2002,036,0000) | 1.9280E-02 (2002,267,0000) |
| 1141 | -149.830 | -173.110 | 2.6136E-02 (2002,038,0000) | 2.5425E-02 (2002,035,0000) | 2.1837E-02 (2002,036,0000) | 2.0062E-02 (2002,288,0000) |
| 1142 | -148.379 | -173.138 | 2.5969E-02 (2002,038,0000) | 2.3940E-02 (2002,035,0000) | 2.1329E-02 (2002,036,0000) | 2.0175E-02 (2002,288,0000) |
| 1143 | -146.928 | -173.166 | 2.6097E-02 (2002,038,0000) | 2.3025E-02 (2002,035,0000) | 2.0947E-02 (2002,036,0000) | 2.0557E-02 (2002,288,0000) |
| 1144 | -165.751 | -170.934 | 3.0578E-02 (2002,035,0000) | 2.5204E-02 (2002,345,0000) | 2.4677E-02 (2002,264,0000) | 2.4552E-02 (2002,036,0000) |
| 1145 | -164.300 | -170.965 | 3.0419E-02 (2002,035,0000) | 2.4458E-02 (2002,036,0000) | 2.4328E-02 (2002,345,0000) | 2.3541E-02 (2002,264,0000) |
| 1146 | -162.850 | -170.995 | 3.0151E-02 (2002,035,0000) | 2.4314E-02 (2002,036,0000) | 2.3053E-02 (2002,345,0000) | 2.3006E-02 (2002,079,0000) |
| 1147 | -161.399 | -171.025 | 2.9708E-02 (2002,035,0000) | 2.4087E-02 (2002,036,0000) | 2.2990E-02 (2002,079,0000) | 2.1733E-02 (2002,307,0000) |
| 1148 | -159.948 | -171.056 | 2.8514E-02 (2002,035,0000) | 2.3845E-02 (2002,036,0000) | 2.2754E-02 (2002,079,0000) | 2.2147E-02 (2002,038,0000) |
| 1149 | -158.498 | -171.085 | 2.7064E-02 (2002,035,0000) | 2.3488E-02 (2002,036,0000) | 2.3114E-02 (2002,038,0000) | 2.1021E-02 (2002,079,0000) |
| 1150 | -157.047 | -171.115 | 2.6851E-02 (2002,035,0000) | 2.4199E-02 (2002,038,0000) | 2.3281E-02 (2002,036,0000) | 2.0317E-02 (2002,079,0000) |
| 1151 | -155.597 | -171.144 | 2.7397E-02 (2002,035,0000) | 2.5149E-02 (2002,038,0000) | 2.3166E-02 (2002,036,0000) | 2.0514E-02 (2002,019,0000) |
| 1152 | -154.146 | -171.173 | 2.6442E-02 (2002,035,0000) | 2.5721E-02 (2002,038,0000) | 2.2856E-02 (2002,036,0000) | 1.9661E-02 (2002,019,0000) |
| 1153 | -152.696 | -171.202 | 2.6212E-02 (2002,038,0000) | 2.6009E-02 (2002,035,0000) | 2.2570E-02 (2002,036,0000) | 2.0120E-02 (2002,267,0000) |
| 1154 | -151.245 | -171.230 | 2.6525E-02 (2002,038,0000) | 2.4778E-02 (2002,035,0000) | 2.2117E-02 (2002,036,0000) | 2.0672E-02 (2002,267,0000) |
| 1155 | -149.794 | -171.258 | 2.7432E-02 (2002,038,0000) | 2.5534E-02 (2002,035,0000) | 2.2035E-02 (2002,036,0000) | 2.1470E-02 (2002,267,0000) |
| 1156 | -148.344 | -171.286 | 2.6289E-02 (2002,038,0000) | 2.2072E-02 (2002,035,0000) | 2.1167E-02 (2002,036,0000) | 1.9788E-02 (2002,288,0000) |
| 1157 | -146.893 | -171.314 | 2.5870E-02 (2002,038,0000) | 2.1312E-02 (2002,035,0000) | 2.0790E-02 (2002,036,0000) | 2.0115E-02 (2002,288,0000) |
| 1158 | -162.811 | -169.143 | 2.9728E-02 (2002,035,0000) | 2.4559E-02 (2002,036,0000) | 2.3781E-02 (2002,079,0000) | 2.2123E-02 (2002,307,0000) |
| 1159 | -161.360 | -169.173 | 2.8377E-02 (2002,035,0000) | 2.4274E-02 (2002,036,0000) | 2.3499E-02 (2002,079,0000) | 2.2690E-02 (2002,038,0000) |
| 1160 | -159.910 | -169.203 | 2.7938E-02 (2002,035,0000) | 2.4066E-02 (2002,036,0000) | 2.3635E-02 (2002,038,0000) | 2.2990E-02 (2002,079,0000) |
| 1161 | -158.460 | -169.233 | 2.7690E-02 (2002,035,0000) | 2.4487E-02 (2002,038,0000) | 2.3851E-02 (2002,036,0000) | 2.2082E-02 (2002,079,0000) |
| 1162 | -157.010 | -169.263 | 2.7321E-02 (2002,035,0000) | 2.5277E-02 (2002,038,0000) | 2.3618E-02 (2002,036,0000) | 2.0719E-02 (2002,079,0000) |
| 1163 | -155.560 | -169.292 | 2.6281E-02 (2002,035,0000) | 2.6001E-02 (2002,038,0000) | 2.3272E-02 (2002,036,0000) | 2.0308E-02 (2002,267,0000) |
| 1164 | -154.109 | -169.321 | 2.7016E-02 (2002,038,0000) | 2.5951E-02 (2002,035,0000) | 2.3020E-02 (2002,036,0000) | 2.1073E-02 (2002,267,0000) |
| 1165 | -152.659 | -169.350 | 2.7492E-02 (2002,038,0000) | 2.5550E-02 (2002,035,0000) | 2.2725E-02 (2002,036,0000) | 2.1755E-02 (2002,267,0000) |
| 1166 | -151.209 | -169.378 | 2.7416E-02 (2002,038,0000) | 2.4095E-02 (2002,035,0000) | 2.2192E-02 (2002,036,0000) | 2.2139E-02 (2002,267,0000) |
| 1167 | -149.759 | -169.406 | 2.7523E-02 (2002,038,0000) | 2.4139E-02 (2002,035,0000) | 2.2615E-02 (2002,267,0000) | 2.1986E-02 (2002,036,0000) |
| 1168 | -148.308 | -169.434 | 2.7362E-02 (2002,038,0000) | 2.3610E-02 (2002,035,0000) | 2.2838E-02 (2002,267,0000) | 2.2115E-02 (2002,288,0000) |
| 1169 | -164.222 | -167.260 | 2.9625E-02 (2002,035,0000) | 2.5047E-02 (2002,036,0000) | 2.4765E-02 (2002,079,0000) | 2.2901E-02 (2002,309,0000) |
| 1170 | -162.772 | -167.291 | 2.9232E-02 (2002,035,0000) | 2.4797E-02 (2002,036,0000) | 2.4489E-02 (2002,079,0000) | 2.2858E-02 (2002,038,0000) |
| 1171 | -161.322 | -167.321 | 2.8722E-02 (2002,035,0000) | 2.4585E-02 (2002,036,0000) | 2.4066E-02 (2002,038,0000) | 2.3972E-02 (2002,079,0000) |
| 1172 | -159.872 | -167.351 | 2.8258E-02 (2002,035,0000) | 2.5155E-02 (2002,038,0000) | 2.4367E-02 (2002,036,0000) | 2.3018E-02 (2002,079,0000) |
| 1173 | -158.422 | -167.381 | 2.7253E-02 (2002,035,0000) | 2.6293E-02 (2002,038,0000) | 2.4075E-02 (2002,036,0000) | 2.1718E-02 (2002,267,0000) |
| 1174 | -156.972 | -167.411 | 2.6863E-02 (2002,038,0000) | 2.6767E-02 (2002,035,0000) | 2.3810E-02 (2002,036,0000) | 2.2265E-02 (2002,267,0000) |
| 1175 | -155.522 | -167.440 | 2.7354E-02 (2002,038,0000) | 2.6362E-02 (2002,035,0000) | 2.3545E-02 (2002,036,0000) | 2.2726E-02 (2002,267,0000) |
| 1176 | -154.072 | -167.469 | 2.7742E-02 (2002,038,0000) | 2.5938E-02 (2002,035,0000) | 2.3254E-02 (2002,036,0000) | 2.3177E-02 (2002,267,0000) |
| 1177 | -152.623 | -167.497 | 2.8012E-02 (2002,038,0000) | 2.5825E-02 (2002,035,0000) | 2.3738E-02 (2002,267,0000) | 2.2989E-02 (2002,036,0000) |
| 1178 | -164.182 | -165.408 | 2.9153E-02 (2002,035,0000) | 2.5687E-02 (2002,079,0000) | 2.5363E-02 (2002,036,0000) | 2.3534E-02 (2002,038,0000) |
| 1179 | -162.733 | -165.439 | 2.8477E-02 (2002,035,0000) | 2.5052E-02 (2002,036,0000) | 2.5003E-02 (2002,079,0000) | 2.4534E-02 (2002,038,0000) |
| 1180 | -161.283 | -165.469 | 2.7199E-02 (2002,035,0000) | 2.5420E-02 (2002,038,0000) | 2.4756E-02 (2002,036,0000) | 2.3979E-02 (2002,079,0000) |
| 1181 | -159.834 | -165.499 | 2.7030E-02 (2002,035,0000) | 2.6550E-02 (2002,038,0000) | 2.4543E-02 (2002,036,0000) | 2.2540E-02 (2002,079,0000) |
| 1182 | -158.384 | -165.529 | 2.7629E-02 (2002,038,0000) | 2.6629E-02 (2002,035,0000) | 2.4274E-02 (2002,036,0000) | 2.2600E-02 (2002,267,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1183 | -156.935 | -165.558 | 8.8369E-02 (2002,038,0000) | 2.4442E-02 (2002,035,0000) | 2.3628E-02 (2002,036,0000) | 2.2991E-02 (2002,267,0000) |
| 1184 | -155.485 | -165.588 | 2.9046E-02 (2002,038,0000) | 2.4737E-02 (2002,267,0000) | 2.4294E-02 (2002,035,0000) | 2.3389E-02 (2002,036,0000) |
| 1185 | -154.036 | -165.617 | 2.8709E-02 (2002,038,0000) | 2.3700E-02 (2002,267,0000) | 2.2781E-02 (2002,036,0000) | 2.2543E-02 (2002,035,0000) |
| 1186 | -152.586 | -165.645 | 2.8615E-02 (2002,038,0000) | 2.3655E-02 (2002,267,0000) | 2.2456E-02 (2002,036,0000) | 2.2190E-02 (2002,035,0000) |
| 1187 | -164.143 | -163.556 | 2.8675E-02 (2002,035,0000) | 2.6425E-02 (2002,079,0000) | 2.5677E-02 (2002,036,0000) | 2.4753E-02 (2002,038,0000) |
| 1188 | -162.694 | -163.587 | 2.8267E-02 (2002,035,0000) | 2.6036E-02 (2002,038,0000) | 2.5395E-02 (2002,036,0000) | 2.5245E-02 (2002,079,0000) |
| 1189 | -161.245 | -163.617 | 2.7486E-02 (2002,038,0000) | 2.6876E-02 (2002,035,0000) | 2.5027E-02 (2002,036,0000) | 2.3591E-02 (2002,079,0000) |
| 1190 | -159.796 | -163.647 | 2.8054E-02 (2002,038,0000) | 2.5775E-02 (2002,035,0000) | 2.4692E-02 (2002,036,0000) | 2.3409E-02 (2002,267,0000) |
| 1191 | -158.346 | -163.677 | 2.8645E-02 (2002,038,0000) | 2.5430E-02 (2002,035,0000) | 2.4418E-02 (2002,036,0000) | 2.4267E-02 (2002,267,0000) |
| 1192 | -156.897 | -163.706 | 2.9819E-02 (2002,038,0000) | 2.4801E-02 (2002,267,0000) | 2.4403E-02 (2002,035,0000) | 2.3912E-02 (2002,036,0000) |
| 1193 | -155.448 | -163.736 | 3.0221E-02 (2002,038,0000) | 2.5470E-02 (2002,267,0000) | 2.4584E-02 (2002,035,0000) | 2.3812E-02 (2002,036,0000) |
| 1194 | -153.999 | -163.765 | 3.0678E-02 (2002,038,0000) | 2.5373E-02 (2002,267,0000) | 2.3093E-02 (2002,036,0000) | 2.2869E-02 (2002,035,0000) |
| 1195 | -152.550 | -163.793 | 3.0216E-02 (2002,038,0000) | 2.4535E-02 (2002,267,0000) | 2.2518E-02 (2002,036,0000) | 2.1594E-02 (2002,035,0000) |
| 1196 | -159.757 | -161.795 | 3.0280E-02 (2002,038,0000) | 2.5959E-02 (2002,267,0000) | 2.5931E-02 (2002,035,0000) | 2.5018E-02 (2002,036,0000) |
| 1197 | -158.309 | -161.825 | 3.0598E-02 (2002,038,0000) | 2.6591E-02 (2002,267,0000) | 2.5457E-02 (2002,035,0000) | 2.4724E-02 (2002,036,0000) |

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CALPOST Version 5.6394 Level 070622

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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 835 | -122.223 | -264.400 | 1.6638E-03 | 1016 | -147.279 | -191.689 | 2.4601E-03 |
| 836 | -120.755 | -264.423 | 1.5689E-03 | 1017 | -145.824 | -191.716 | 2.3249E-03 |
| 837 | -123.662 | -262.524 | 1.7460E-03 | 1018 | -144.370 | -191.743 | 2.1006E-03 |
| 838 | -122.195 | -262.547 | 1.6235E-03 | 1019 | -155.968 | -189.666 | 2.9147E-03 |
| 839 | -123.633 | -260.671 | 1.6387E-03 | 1020 | -154.514 | -189.695 | 2.6682E-03 |
| 840 | -125.071 | -258.794 | 1.7335E-03 | 1021 | -153.060 | -189.724 | 2.3266E-03 |
| 841 | -129.441 | -256.870 | 2.0680E-03 | 1022 | -151.606 | -189.753 | 2.5567E-03 |
| 842 | -127.975 | -256.894 | 2.0443E-03 | 1023 | -150.152 | -189.781 | 2.2838E-03 |
| 843 | -126.508 | -256.918 | 1.9073E-03 | 1024 | -148.698 | -189.809 | 2.3824E-03 |
| 844 | -125.041 | -256.941 | 1.7202E-03 | 1025 | -147.244 | -189.836 | 2.0666E-03 |
| 845 | -129.411 | -255.017 | 2.0829E-03 | 1026 | -145.790 | -189.864 | 2.0524E-03 |
| 846 | -127.944 | -255.041 | 1.9588E-03 | 1027 | -144.336 | -189.891 | 2.0933E-03 |
| 847 | -126.478 | -255.065 | 1.8324E-03 | 1028 | -157.385 | -187.785 | 2.9182E-03 |
| 848 | -129.380 | -253.164 | 2.0708E-03 | 1029 | -155.931 | -187.814 | 2.7367E-03 |
| 849 | -127.914 | -253.188 | 1.9760E-03 | 1030 | -154.477 | -187.843 | 2.3505E-03 |
| 850 | -126.448 | -253.212 | 1.7734E-03 | 1031 | -153.024 | -187.872 | 2.6745E-03 |
| 851 | -130.815 | -251.286 | 2.1167E-03 | 1032 | -151.570 | -187.900 | 2.5526E-03 |
| 852 | -129.349 | -251.311 | 1.9308E-03 | 1033 | -150.116 | -187.928 | 2.5193E-03 |
| 853 | -127.884 | -251.335 | 1.8988E-03 | 1034 | -148.663 | -187.956 | 2.3768E-03 |
| 854 | -126.418 | -251.359 | 1.7763E-03 | 1035 | -147.209 | -187.984 | 2.4769E-03 |
| 855 | -133.715 | -249.384 | 2.1812E-03 | 1036 | -145.755 | -188.011 | 2.2271E-03 |
| 856 | -132.249 | -249.409 | 2.1611E-03 | 1037 | -144.301 | -188.039 | 2.0227E-03 |
| 857 | -130.784 | -249.433 | 2.0358E-03 | 1038 | -142.848 | -188.065 | 2.1088E-03 |
| 858 | -129.319 | -249.458 | 1.9691E-03 | 1039 | -141.394 | -188.092 | 2.0221E-03 |
| 859 | -127.854 | -249.482 | 1.7933E-03 | 1040 | -161.707 | -185.843 | 3.1754E-03 |
| 860 | -133.683 | -247.531 | 2.1921E-03 | 1041 | -160.254 | -185.873 | 3.0653E-03 |
| 861 | -132.218 | -247.556 | 2.0619E-03 | 1042 | -158.801 | -185.903 | 2.9328E-03 |
| 862 | -130.753 | -247.580 | 1.8894E-03 | 1043 | -157.347 | -185.932 | 2.7505E-03 |
| 863 | -129.288 | -247.605 | 1.8521E-03 | 1044 | -155.894 | -185.962 | 2.8157E-03 |
| 864 | -127.823 | -247.629 | 1.8348E-03 | 1045 | -154.441 | -185.991 | 2.7664E-03 |
| 865 | -135.116 | -245.653 | 2.2299E-03 | 1046 | -152.987 | -186.019 | 2.5788E-03 |
| 866 | -133.651 | -245.678 | 2.1367E-03 | 1047 | -151.534 | -186.048 | 2.2774E-03 |
| 867 | -132.187 | -245.703 | 2.0365E-03 | 1048 | -150.080 | -186.076 | 2.5720E-03 |
| 868 | -130.722 | -245.727 | 1.9120E-03 | 1049 | -148.627 | -186.104 | 2.5673E-03 |
| 869 | -129.258 | -245.752 | 1.8550E-03 | 1050 | -147.174 | -186.132 | 2.3967E-03 |
| 870 | -136.548 | -243.775 | 2.2654E-03 | 1051 | -145.720 | -186.159 | 2.1291E-03 |
| 871 | -135.084 | -243.800 | 2.2284E-03 | 1052 | -144.267 | -186.186 | 2.0205E-03 |
| 872 | -133.620 | -243.825 | 2.1079E-03 | 1053 | -142.813 | -186.213 | 2.0338E-03 |
| 873 | -132.155 | -243.850 | 2.0613E-03 | 1054 | -141.360 | -186.240 | 1.9746E-03 |
| 874 | -130.691 | -243.874 | 2.0456E-03 | 1055 | -161.669 | -183.991 | 3.1338E-03 |
| 875 | -129.227 | -243.899 | 1.8579E-03 | 1056 | -160.216 | -184.021 | 3.0226E-03 |
| 876 | -137.980 | -241.896 | 2.3029E-03 | 1057 | -158.763 | -184.051 | 2.9861E-03 |
| 877 | -136.516 | -241.922 | 2.2781E-03 | 1058 | -157.310 | -184.080 | 2.9015E-03 |
| 878 | -135.052 | -241.947 | 2.2126E-03 | 1059 | -155.857 | -184.109 | 2.8276E-03 |
| 879 | -133.588 | -241.972 | 2.1959E-03 | 1060 | -154.404 | -184.138 | 2.7031E-03 |
| 880 | -132.124 | -241.997 | 2.1041E-03 | 1061 | -152.951 | -184.167 | 2.7238E-03 |
| 881 | -130.660 | -242.022 | 2.0092E-03 | 1062 | -151.498 | -184.196 | 2.6707E-03 |
| 882 | -129.197 | -242.046 | 1.9018E-03 | 1063 | -150.045 | -184.224 | 2.5467E-03 |
| 883 | -137.947 | -240.043 | 2.3152E-03 | 1064 | -148.592 | -184.252 | 2.4252E-03 |
| 884 | -136.483 | -240.069 | 2.2698E-03 | 1065 | -147.139 | -184.279 | 2.1833E-03 |
| 885 | -135.020 | -240.094 | 2.1771E-03 | 1066 | -145.686 | -184.307 | 2.0471E-03 |
| 886 | -133.556 | -240.119 | 2.1067E-03 | 1067 | -144.233 | -184.334 | 2.0494E-03 |
| 887 | -132.093 | -240.144 | 2.0930E-03 | 1068 | -161.630 | -182.138 | 3.1292E-03 |
| 888 | -130.629 | -240.169 | 1.9257E-03 | 1069 | -160.178 | -182.169 | 3.0318E-03 |
| 889 | -129.166 | -240.193 | 1.9465E-03 | 1070 | -158.725 | -182.198 | 2.9497E-03 |
| 890 | -137.914 | -238.190 | 2.3205E-03 | 1071 | -157.272 | -182.228 | 2.8691E-03 |
| 891 | -136.451 | -238.216 | 2.2595E-03 | 1072 | -155.820 | -182.257 | 2.8100E-03 |
| 892 | -134.988 | -238.241 | 2.1867E-03 | 1073 | -154.367 | -182.286 | 2.7812E-03 |
| 893 | -133.525 | -238.266 | 2.1333E-03 | 1074 | -152.914 | -182.315 | 2.7381E-03 |
| 894 | -132.062 | -238.291 | 1.9443E-03 | 1075 | -151.462 | -182.343 | 2.6719E-03 |
| 895 | -130.599 | -238.316 | 1.9297E-03 | 1076 | -150.009 | -182.372 | 2.4009E-03 |
| 896 | -137.882 | -236.337 | 2.3341E-03 | 1077 | -148.556 | -182.399 | 2.2990E-03 |
| 897 | -136.419 | -236.363 | 2.2814E-03 | 1078 | -147.104 | -182.427 | 2.1426E-03 |
| 898 | -134.956 | -236.388 | 2.1951E-03 | 1079 | -145.651 | -182.454 | 2.1566E-03 |
| 899 | -133.493 | -236.413 | 1.9746E-03 | 1080 | -161.592 | -180.286 | 3.0824E-03 |
| 900 | -132.030 | -236.438 | 1.9999E-03 | 1081 | -160.139 | -180.316 | 2.9950E-03 |
| 901 | -137.849 | -234.485 | 2.3341E-03 | 1082 | -158.687 | -180.346 | 2.9257E-03 |
| 902 | -136.386 | -234.510 | 2.2782E-03 | 1083 | -157.235 | -180.376 | 2.8674E-03 |
| 903 | -134.924 | -234.536 | 2.1307E-03 | 1084 | -155.783 | -180.405 | 2.8267E-03 |
| 904 | -133.462 | -234.561 | 2.0245E-03 | 1085 | -154.330 | -180.434 | 2.7719E-03 |
| 905 | -137.816 | -232.632 | 2.3445E-03 | 1086 | -152.878 | -180.463 | 2.6896E-03 |
| 906 | -136.354 | -232.657 | 2.2864E-03 | 1087 | -151.426 | -180.491 | 2.4690E-03 |
| 907 | -134.892 | -232.683 | 2.0470E-03 | 1088 | -149.973 | -180.519 | 2.4132E-03 |
| 908 | -139.245 | -230.753 | 2.3971E-03 | 1089 | -148.521 | -180.547 | 2.2613E-03 |
| 909 | -137.784 | -230.779 | 2.3596E-03 | 1090 | -147.068 | -180.575 | 2.1790E-03 |
| 910 | -136.322 | -230.805 | 2.1264E-03 | 1091 | -145.616 | -180.602 | 2.1928E-03 |
| 911 | -134.860 | -230.830 | 2.1027E-03 | 1092 | -161.553 | -178.434 | 3.0447E-03 |
| 912 | -139.212 | -228.900 | 2.4071E-03 | 1093 | -160.101 | -178.464 | 2.9708E-03 |
| 913 | -137.751 | -228.926 | 2.3660E-03 | 1094 | -158.649 | -178.494 | 2.9075E-03 |
| 914 | -136.290 | -228.952 | 2.1308E-03 | 1095 | -157.197 | -178.523 | 2.8572E-03 |
| 915 | -134.828 | -228.977 | 2.1634E-03 | 1096 | -155.745 | -178.553 | 2.7992E-03 |
| 916 | -140.640 | -227.021 | 2.4411E-03 | 1097 | -154.293 | -178.582 | 2.7419E-03 |
| 917 | -139.179 | -227.048 | 2.4186E-03 | 1098 | -152.841 | -178.610 | 2.6724E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 918 | -137.718 | -227.073 | 2.2740E-03 | 1099 | -151.389 | -178.639 | 2.5454E-03 |
| 919 | -136.257 | -227.099 | 2.1904E-03 | 1100 | -149.937 | -178.667 | 2.2944E-03 |
| 920 | -140.607 | -225.169 | 2.4549E-03 | 1101 | -148.485 | -178.695 | 2.2606E-03 |
| 921 | -139.146 | -225.195 | 2.4035E-03 | 1102 | -147.033 | -178.723 | 2.5339E-03 |
| 922 | -137.686 | -225.221 | 2.2564E-03 | 1103 | -145.581 | -178.750 | 2.3592E-03 |
| 923 | -136.225 | -225.246 | 2.2468E-03 | 1104 | -164.418 | -176.521 | 3.2078E-03 |
| 924 | -140.574 | -223.316 | 2.4575E-03 | 1105 | -162.966 | -176.552 | 3.1084E-03 |
| 925 | -139.113 | -223.342 | 2.3018E-03 | 1106 | -161.515 | -176.582 | 3.0293E-03 |
| 926 | -137.653 | -223.368 | 2.2135E-03 | 1107 | -160.063 | -176.612 | 2.9573E-03 |
| 927 | -136.193 | -223.394 | 2.2262E-03 | 1108 | -158.611 | -176.642 | 2.8771E-03 |
| 928 | -143.460 | -221.410 | 2.5052E-03 | 1109 | -157.160 | -176.671 | 2.7766E-03 |
| 929 | -142.000 | -221.437 | 2.4918E-03 | 1110 | -155.708 | -176.701 | 2.7912E-03 |
| 930 | -140.540 | -221.463 | 2.4170E-03 | 1111 | -154.257 | -176.730 | 2.7151E-03 |
| 931 | -139.080 | -221.489 | 2.2370E-03 | 1112 | -152.805 | -176.758 | 2.5908E-03 |
| 932 | -137.620 | -221.515 | 2.1976E-03 | 1113 | -151.353 | -176.787 | 2.4153E-03 |
| 933 | -146.346 | -219.503 | 2.5641E-03 | 1114 | -149.902 | -176.815 | 2.3036E-03 |
| 934 | -144.886 | -219.531 | 2.5467E-03 | 1115 | -148.450 | -176.843 | 2.4191E-03 |
| 935 | -143.426 | -219.558 | 2.5234E-03 | 1116 | -146.998 | -176.870 | 2.3936E-03 |
| 936 | -141.967 | -219.584 | 2.4841E-03 | 1117 | -164.379 | -174.669 | 3.1863E-03 |
| 937 | -140.507 | -219.611 | 2.3222E-03 | 1118 | -162.927 | -174.699 | 3.1043E-03 |
| 938 | -139.047 | -219.637 | 2.2306E-03 | 1119 | -161.476 | -174.730 | 3.0373E-03 |
| 939 | -137.588 | -219.663 | 2.1638E-03 | 1120 | -160.025 | -174.760 | 2.9797E-03 |
| 940 | -146.311 | -217.651 | 2.5742E-03 | 1121 | -158.574 | -174.790 | 2.9229E-03 |
| 941 | -144.851 | -217.678 | 2.5477E-03 | 1122 | -157.122 | -174.819 | 2.8600E-03 |
| 942 | -143.392 | -217.705 | 2.5258E-03 | 1123 | -155.671 | -174.848 | 2.8148E-03 |
| 943 | -141.933 | -217.732 | 2.4590E-03 | 1124 | -154.220 | -174.877 | 2.7289E-03 |
| 944 | -140.474 | -217.758 | 2.2686E-03 | 1125 | -152.768 | -174.906 | 2.4677E-03 |
| 945 | -139.014 | -217.784 | 2.2759E-03 | 1126 | -151.317 | -174.934 | 2.4486E-03 |
| 946 | -137.555 | -217.810 | 2.1534E-03 | 1127 | -149.866 | -174.963 | 2.4128E-03 |
| 947 | -146.276 | -215.798 | 2.5696E-03 | 1128 | -148.415 | -174.991 | 2.5615E-03 |
| 948 | -144.817 | -215.825 | 2.5569E-03 | 1129 | -167.241 | -172.755 | 3.3819E-03 |
| 949 | -143.358 | -215.852 | 2.4443E-03 | 1130 | -165.790 | -172.786 | 3.2774E-03 |
| 950 | -141.899 | -215.879 | 2.3157E-03 | 1131 | -164.339 | -172.817 | 3.1831E-03 |
| 951 | -146.241 | -213.946 | 2.5991E-03 | 1132 | -162.888 | -172.847 | 3.1172E-03 |
| 952 | -144.783 | -213.973 | 2.5666E-03 | 1133 | -161.438 | -172.878 | 3.0624E-03 |
| 953 | -143.324 | -214.000 | 2.4948E-03 | 1134 | -159.987 | -172.908 | 2.9928E-03 |
| 954 | -146.207 | -212.093 | 2.5474E-03 | 1135 | -158.536 | -172.937 | 2.9104E-03 |
| 955 | -144.748 | -212.120 | 2.5506E-03 | 1136 | -157.085 | -172.967 | 2.7972E-03 |
| 956 | -143.290 | -212.147 | 2.4906E-03 | 1137 | -155.634 | -172.996 | 2.6694E-03 |
| 957 | -141.832 | -212.174 | 2.4066E-03 | 1138 | -154.183 | -173.025 | 2.5553E-03 |
| 958 | -146.172 | -210.241 | 2.6072E-03 | 1139 | -152.732 | -173.054 | 2.7012E-03 |
| 959 | -144.714 | -210.268 | 2.5650E-03 | 1140 | -151.281 | -173.082 | 2.6458E-03 |
| 960 | -143.256 | -210.295 | 2.4823E-03 | 1141 | -149.830 | -173.110 | 2.6324E-03 |
| 961 | -141.798 | -210.321 | 2.4444E-03 | 1142 | -148.379 | -173.138 | 2.4953E-03 |
| 962 | -146.137 | -208.388 | 2.5947E-03 | 1143 | -146.928 | -173.166 | 2.4168E-03 |
| 963 | -144.680 | -208.415 | 2.5639E-03 | 1144 | -165.751 | -170.934 | 3.2898E-03 |
| 964 | -143.222 | -208.442 | 2.5139E-03 | 1145 | -164.300 | -170.965 | 3.2130E-03 |
| 965 | -141.764 | -208.469 | 2.4219E-03 | 1146 | -162.850 | -170.995 | 3.1345E-03 |
| 966 | -140.307 | -208.495 | 2.2814E-03 | 1147 | -161.399 | -171.025 | 3.0512E-03 |
| 967 | -146.102 | -206.535 | 2.5866E-03 | 1148 | -159.948 | -171.056 | 2.9637E-03 |
| 968 | -144.645 | -206.563 | 2.5493E-03 | 1149 | -158.498 | -171.085 | 2.8198E-03 |
| 969 | -143.188 | -206.590 | 2.5061E-03 | 1150 | -157.047 | -171.115 | 2.7855E-03 |
| 970 | -141.731 | -206.616 | 2.3784E-03 | 1151 | -155.597 | -171.144 | 2.8239E-03 |
| 971 | -146.068 | -204.683 | 2.5530E-03 | 1152 | -154.146 | -171.173 | 2.7418E-03 |
| 972 | -144.611 | -204.710 | 2.5334E-03 | 1153 | -152.696 | -171.202 | 2.7097E-03 |
| 973 | -143.154 | -204.737 | 2.4779E-03 | 1154 | -151.245 | -171.230 | 2.6042E-03 |
| 974 | -141.697 | -204.764 | 2.3976E-03 | 1155 | -149.794 | -171.258 | 2.7060E-03 |
| 975 | -148.946 | -202.775 | 2.6858E-03 | 1156 | -148.344 | -171.286 | 2.3195E-03 |
| 976 | -147.489 | -202.803 | 2.6164E-03 | 1157 | -146.893 | -171.314 | 2.2543E-03 |
| 977 | -146.033 | -202.831 | 2.5757E-03 | 1158 | -162.811 | -169.143 | 3.1493E-03 |
| 978 | -144.576 | -202.858 | 2.4949E-03 | 1159 | -161.360 | -169.173 | 3.0339E-03 |
| 979 | -143.120 | -202.885 | 2.4800E-03 | 1160 | -159.910 | -169.203 | 2.9714E-03 |
| 980 | -141.663 | -202.911 | 2.3033E-03 | 1161 | -158.460 | -169.233 | 2.9268E-03 |
| 981 | -148.910 | -200.923 | 2.6515E-03 | 1162 | -157.010 | -169.263 | 2.8797E-03 |
| 982 | -147.454 | -200.951 | 2.5190E-03 | 1163 | -155.560 | -169.292 | 2.7803E-03 |
| 983 | -145.998 | -200.978 | 2.5703E-03 | 1164 | -154.109 | -169.321 | 2.7571E-03 |
| 984 | -144.542 | -201.005 | 2.4224E-03 | 1165 | -152.659 | -169.350 | 2.7358E-03 |
| 985 | -143.086 | -201.032 | 2.3583E-03 | 1166 | -151.209 | -169.378 | 2.6111E-03 |
| 986 | -141.630 | -201.059 | 2.1730E-03 | 1167 | -149.759 | -169.406 | 2.6484E-03 |
| 987 | -148.875 | -199.071 | 2.4760E-03 | 1168 | -148.308 | -169.434 | 2.6319E-03 |
| 988 | -147.419 | -199.098 | 2.6159E-03 | 1169 | -164.222 | -167.260 | 3.2634E-03 |
| 989 | -145.963 | -199.126 | 2.4100E-03 | 1170 | -162.772 | -167.291 | 3.1558E-03 |
| 990 | -144.508 | -199.153 | 2.4761E-03 | 1171 | -161.322 | -167.321 | 3.0831E-03 |
| 991 | -151.751 | -197.162 | 2.7946E-03 | 1172 | -159.872 | -167.351 | 3.0230E-03 |
| 992 | -150.295 | -197.190 | 2.6610E-03 | 1173 | -158.422 | -167.381 | 2.9461E-03 |
| 993 | -148.840 | -197.218 | 2.4372E-03 | 1174 | -156.972 | -167.411 | 2.8994E-03 |
| 994 | -147.384 | -197.246 | 2.3584E-03 | 1175 | -155.522 | -167.440 | 2.8640E-03 |
| 995 | -145.929 | -197.273 | 2.4166E-03 | 1176 | -154.072 | -167.469 | 2.8359E-03 |
| 996 | -144.473 | -197.300 | 2.1063E-03 | 1177 | -152.623 | -167.497 | 2.8373E-03 |
| 997 | -151.714 | -195.310 | 2.7444E-03 | 1178 | -164.182 | -165.408 | 3.2856E-03 |
| 998 | -150.259 | -195.338 | 2.5314E-03 | 1179 | -162.733 | -165.439 | 3.1591E-03 |
| 999 | -148.804 | -195.366 | 2.6573E-03 | 1180 | -161.283 | -165.469 | 3.0494E-03 |
| 1000 | -147.349 | -195.393 | 2.5984E-03 | 1181 | -159.834 | -165.499 | 3.0081E-03 |
| 1001 | -145.894 | -195.421 | 2.4369E-03 | 1182 | -158.384 | -165.529 | 2.9640E-03 |
| 1002 | -144.439 | -195.448 | 2.2035E-03 | 1183 | -156.935 | -165.558 | 2.7618E-03 |
| 1003 | -153.133 | -193.429 | 2.8025E-03 | 1184 | -155.485 | -165.588 | 2.7702E-03 |
| 1004 | -151.678 | -193.457 | 2.4718E-03 | 1185 | -154.036 | -165.617 | 2.5809E-03 |
| 1005 | -150.224 | -193.485 | 2.5917E-03 | 1186 | -152.586 | -165.645 | 2.5669E-03 |
| 1006 | -148.769 | -193.513 | 2.6413E-03 | 1187 | -164.143 | -163.556 | 3.3057E-03 |
| 1007 | -147.314 | -193.541 | 2.4688E-03 | 1188 | -162.694 | -163.587 | 3.2029E-03 |
| 1008 | -145.859 | -193.568 | 2.3410E-03 | 1189 | -161.245 | -163.617 | 3.0889E-03 |
| 1009 | -144.404 | -193.596 | 2.1015E-03 | 1190 | -159.796 | -163.647 | 2.9838E-03 |
| 1010 | -156.005 | -191.519 | 2.9634E-03 | 1191 | -158.346 | -163.677 | 2.9542E-03 |
| 1011 | -154.551 | -191.548 | 2.8749E-03 | 1192 | -156.897 | -163.706 | 2.8692E-03 |
| 1012 | -153.097 | -191.576 | 2.6477E-03 | 1193 | -155.448 | -163.736 | 2.9178E-03 |
| 1013 | -151.642 | -191.605 | 2.4941E-03 | 1194 | -153.999 | -163.765 | 2.7617E-03 |
| 1014 | -150.188 | -191.633 | 2.4128E-03 | 1195 | -152.550 | -163.793 | 2.6309E-03 |
| 1015 | -148.733 | -191.661 | 2.5515E-03 | 1196 | -159.757 | -161.795 | 3.1091E-03 |
| | | | | 1197 | -158.309 | -161.825 | 3.0808E-03 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1104 | -164.418 | -176.521 | DISCRETE | 3.1187E-02 (2002,035,0000) | RANK 1 | 24 | HOUR |
| 1040 | -161.707 | -185.843 | DISCRETE | 3.0095E-02 (2002,035,0000) | RANK 2 | 24 | HOUR |
| 1196 | -159.757 | -161.795 | DISCRETE | 2.5931E-02 (2002,035,0000) | RANK 3 | 24 | HOUR |
| 1188 | -162.694 | -163.587 | DISCRETE | 2.5245E-02 (2002,079,0000) | RANK 4 | 24 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 3.3819E-03 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Grand Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1197*0, 791*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
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*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

```
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2002\2002_GRAND_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_GC.DAT

*****************************************************************************************************************************************
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*****************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)            1 RANK                      2 RANK                      3 RANK                      4 RANK
   1198     -355.887  -464.319   4.9778E-03 (2002,037,0000)  2.7313E-03 (2002,321,0000)  2.6727E-03 (2002,359,0000)  2.2516E-03 (2002,325,0000)
   1199     -353.629  -464.418   4.8750E-03 (2002,037,0000)  2.6829E-03 (2002,321,0000)  2.5684E-03 (2002,359,0000)  2.2205E-03 (2002,339,0000)
   1200     -351.371  -464.517   4.7716E-03 (2002,037,0000)  2.6300E-03 (2002,321,0000)  2.4671E-03 (2002,359,0000)  2.2848E-03 (2002,339,0000)
   1201     -362.536  -461.234   5.4942E-03 (2002,037,0000)  3.0941E-03 (2002,359,0000)  2.8914E-03 (2002,321,0000)  2.4984E-03 (2002,325,0000)
   1202     -360.279  -461.336   5.3905E-03 (2002,037,0000)  2.9819E-03 (2002,359,0000)  2.8643E-03 (2002,321,0000)  2.4416E-03 (2002,325,0000)
   1203     -358.021  -461.436   5.2863E-03 (2002,037,0000)  2.8711E-03 (2002,359,0000)  2.8293E-03 (2002,321,0000)  2.3812E-03 (2002,325,0000)
   1204     -355.764  -461.536   5.1796E-03 (2002,037,0000)  2.7875E-03 (2002,321,0000)  2.7609E-03 (2002,359,0000)  2.3186E-03 (2002,325,0000)
   1205     -353.507  -461.636   5.0719E-03 (2002,037,0000)  2.7393E-03 (2002,321,0000)  2.6520E-03 (2002,359,0000)  2.2551E-03 (2002,339,0000)
   1206     -351.249  -461.735   4.9634E-03 (2002,037,0000)  2.6857E-03 (2002,321,0000)  2.5448E-03 (2002,359,0000)  2.3208E-03 (2002,339,0000)
   1207     -348.992  -461.833   4.8544E-03 (2002,037,0000)  2.6285E-03 (2002,321,0000)  2.4400E-03 (2002,359,0000)  2.3873E-03 (2002,339,0000)
   1208     -366.923  -458.247   5.9177E-03 (2002,037,0000)  3.4278E-03 (2002,359,0000)  2.9628E-03 (2002,321,0000)  2.4858E-03 (2002,325,0000)
   1209     -364.667  -458.350   5.8169E-03 (2002,037,0000)  3.3126E-03 (2002,359,0000)  2.9536E-03 (2002,321,0000)  2.5833E-03 (2002,325,0000)
   1210     -362.410  -458.452   5.7129E-03 (2002,037,0000)  3.1951E-03 (2002,359,0000)  2.9359E-03 (2002,321,0000)  2.5237E-03 (2002,325,0000)
   1211     -360.154  -458.553   5.6061E-03 (2002,037,0000)  3.0784E-03 (2002,359,0000)  2.9101E-03 (2002,321,0000)  2.4724E-03 (2002,325,0000)
   1212     -357.897  -458.654   5.4971E-03 (2002,037,0000)  2.9615E-03 (2002,359,0000)  2.8763E-03 (2002,321,0000)  2.4059E-03 (2002,325,0000)
   1213     -355.641  -458.754   5.3866E-03 (2002,037,0000)  2.8457E-03 (2002,359,0000)  2.8347E-03 (2002,321,0000)  2.3394E-03 (2002,325,0000)
   1214     -353.384  -458.853   5.2740E-03 (2002,037,0000)  2.7864E-03 (2002,321,0000)  2.7323E-03 (2002,359,0000)  2.3087E-03 (2002,078,0000)
   1215     -351.128  -458.952   5.1612E-03 (2002,037,0000)  2.7327E-03 (2002,321,0000)  2.6214E-03 (2002,359,0000)  2.4160E-03 (2002,078,0000)
   1216     -348.871  -459.050   5.0472E-03 (2002,037,0000)  2.6748E-03 (2002,321,0000)  2.5139E-03 (2002,078,0000)  2.5124E-03 (2002,359,0000)
   1217     -346.614  -459.148   4.9330E-03 (2002,037,0000)  2.6131E-03 (2002,321,0000)  2.4945E-03 (2002,339,0000)  2.4061E-03 (2002,359,0000)
   1218     -373.563  -455.154   6.4385E-03 (2002,037,0000)  3.8885E-03 (2002,359,0000)  2.9688E-03 (2002,321,0000)  2.7424E-03 (2002,325,0000)
   1219     -366.796  -455.465   6.1471E-03 (2002,037,0000)  3.5361E-03 (2002,359,0000)  2.9934E-03 (2002,321,0000)  2.6065E-03 (2002,325,0000)
   1220     -364.541  -455.568   6.0432E-03 (2002,037,0000)  3.4158E-03 (2002,359,0000)  2.9860E-03 (2002,321,0000)  2.6078E-03 (2002,325,0000)
   1221     -362.285  -455.670   5.9364E-03 (2002,037,0000)  3.2933E-03 (2002,359,0000)  2.9705E-03 (2002,321,0000)  2.5549E-03 (2002,325,0000)
   1222     -360.029  -455.771   5.8268E-03 (2002,037,0000)  3.1708E-03 (2002,359,0000)  2.9459E-03 (2002,321,0000)  2.4937E-03 (2002,325,0000)
   1223     -357.774  -455.872   5.7131E-03 (2002,037,0000)  3.0493E-03 (2002,359,0000)  2.9133E-03 (2002,321,0000)  2.4259E-03 (2002,325,0000)
   1224     -355.518  -455.972   5.5982E-03 (2002,037,0000)  2.9291E-03 (2002,359,0000)  2.8722E-03 (2002,321,0000)  2.3558E-03 (2002,325,0000)
   1225     -353.262  -456.071   5.4822E-03 (2002,037,0000)  2.8243E-03 (2002,321,0000)  2.8109E-03 (2002,359,0000)  2.3943E-03 (2002,078,0000)
   1226     -351.006  -456.170   5.3637E-03 (2002,037,0000)  2.7702E-03 (2002,321,0000)  2.6949E-03 (2002,359,0000)  2.4992E-03 (2002,078,0000)
   1227     -348.750  -456.268   5.2454E-03 (2002,037,0000)  2.7123E-03 (2002,321,0000)  2.5818E-03 (2002,359,0000)  2.5701E-03 (2002,078,0000)
   1228     -346.494  -456.366   5.1258E-03 (2002,037,0000)  2.6503E-03 (2002,321,0000)  2.5327E-03 (2002,339,0000)  2.4721E-03 (2002,359,0000)
   1229     -375.689  -452.267   6.7657E-03 (2002,037,0000)  4.1229E-03 (2002,359,0000)  2.9572E-03 (2002,321,0000)  2.5043E-03 (2002,325,0000)
   1230     -373.434  -452.372   6.6766E-03 (2002,037,0000)  4.0084E-03 (2002,359,0000)  2.9819E-03 (2002,321,0000)  2.7655E-03 (2002,325,0000)
   1231     -371.179  -452.476   6.5818E-03 (2002,037,0000)  3.8878E-03 (2002,359,0000)  2.9999E-03 (2002,321,0000)  2.5090E-03 (2002,325,0000)
   1232     -368.924  -452.580   6.4837E-03 (2002,037,0000)  3.7664E-03 (2002,359,0000)  3.0105E-03 (2002,321,0000)  2.7211E-03 (2002,325,0000)
   1233     -366.670  -452.683   6.3812E-03 (2002,037,0000)  3.6415E-03 (2002,359,0000)  3.0135E-03 (2002,321,0000)  2.6830E-03 (2002,325,0000)
   1234     -364.415  -452.786   6.2731E-03 (2002,037,0000)  3.5148E-03 (2002,359,0000)  3.0081E-03 (2002,321,0000)  2.6201E-03 (2002,325,0000)
   1235     -362.160  -452.888   6.1634E-03 (2002,037,0000)  3.3867E-03 (2002,359,0000)  2.9940E-03 (2002,321,0000)  2.5762E-03 (2002,325,0000)
   1236     -359.905  -452.989   6.0506E-03 (2002,037,0000)  3.2597E-03 (2002,359,0000)  2.9711E-03 (2002,321,0000)  2.5055E-03 (2002,325,0000)
   1237     -357.650  -453.089   5.9331E-03 (2002,037,0000)  3.1333E-03 (2002,359,0000)  2.9393E-03 (2002,321,0000)  2.4432E-03 (2002,325,0000)
   1238     -353.140  -453.289   5.6941E-03 (2002,037,0000)  2.8859E-03 (2002,359,0000)  2.8517E-03 (2002,321,0000)  2.4769E-03 (2002,078,0000)
   1239     -350.885  -453.388   5.5715E-03 (2002,037,0000)  2.7976E-03 (2002,321,0000)  2.7659E-03 (2002,359,0000)  2.5885E-03 (2002,078,0000)
   1240     -348.630  -453.486   5.4475E-03 (2002,037,0000)  2.7395E-03 (2002,321,0000)  2.6929E-03 (2002,078,0000)  2.6497E-03 (2002,359,0000)
   1241     -346.375  -453.583   5.3236E-03 (2002,037,0000)  2.7994E-03 (2002,078,0000)  2.6778E-03 (2002,321,0000)  2.5707E-03 (2002,339,0000)
   1242     -377.813  -449.379   7.0903E-03 (2002,037,0000)  4.3564E-03 (2002,359,0000)  2.9227E-03 (2002,321,0000)  2.6306E-03 (2002,343,0000)
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| 1349 | -381.526 | -432.477 | 8.6228E-03 (2002,037,0000) | 5.2380E-03 (2002,359,0000) | 3.4796E-03 (2002,343,0000) | 2.8024E-03 (2002,325,0000) |
| 1350 | -379.277 | -432.584 | 8.5576E-03 (2002,037,0000) | 5.1116E-03 (2002,359,0000) | 3.4794E-03 (2002,343,0000) | 2.8371E-03 (2002,325,0000) |
| 1351 | -377.028 | -432.690 | 8.4847E-03 (2002,037,0000) | 4.9767E-03 (2002,359,0000) | 3.4766E-03 (2002,343,0000) | 2.8557E-03 (2002,325,0000) |
| 1352 | -374.779 | -432.795 | 8.4047E-03 (2002,037,0000) | 4.8351E-03 (2002,359,0000) | 3.4703E-03 (2002,343,0000) | 2.8722E-03 (2002,325,0000) |
| 1353 | -372.529 | -432.900 | 8.3180E-03 (2002,037,0000) | 4.6884E-03 (2002,359,0000) | 3.4622E-03 (2002,343,0000) | 2.8760E-03 (2002,325,0000) |
| 1354 | -368.031 | -433.108 | 8.1228E-03 (2002,037,0000) | 4.3855E-03 (2002,359,0000) | 3.4395E-03 (2002,343,0000) | 2.8336E-03 (2002,325,0000) |
| 1355 | -365.781 | -433.211 | 8.0133E-03 (2002,037,0000) | 4.2318E-03 (2002,359,0000) | 3.4247E-03 (2002,343,0000) | 2.7853E-03 (2002,325,0000) |
| 1356 | -363.532 | -433.313 | 7.9013E-03 (2002,037,0000) | 4.0763E-03 (2002,359,0000) | 3.4075E-03 (2002,343,0000) | 2.7853E-03 (2002,321,0000) |
| 1357 | -361.282 | -433.415 | 7.7819E-03 (2002,037,0000) | 3.9219E-03 (2002,359,0000) | 3.3872E-03 (2002,343,0000) | 2.7797E-03 (2002,321,0000) |
| 1358 | -359.033 | -433.516 | 7.6558E-03 (2002,037,0000) | 3.7694E-03 (2002,359,0000) | 3.3650E-03 (2002,343,0000) | 2.7651E-03 (2002,321,0000) |
| 1359 | -354.534 | -433.716 | 7.3887E-03 (2002,037,0000) | 3.4685E-03 (2002,359,0000) | 3.3153E-03 (2002,343,0000) | 2.9064E-03 (2002,078,0000) |
| 1360 | -352.284 | -433.815 | 7.2472E-03 (2002,037,0000) | 3.3228E-03 (2002,359,0000) | 3.2821E-03 (2002,343,0000) | 3.0626E-03 (2002,078,0000) |
| 1361 | -350.035 | -433.914 | 7.1035E-03 (2002,037,0000) | 3.2537E-03 (2002,343,0000) | 3.2205E-03 (2002,078,0000) | 3.1808E-03 (2002,359,0000) |
| 1362 | -347.785 | -434.012 | 6.9528E-03 (2002,037,0000) | 3.3647E-03 (2002,078,0000) | 3.1135E-03 (2002,343,0000) | 3.0440E-03 (2002,359,0000) |
| 1363 | -246.527 | -437.763 | 8.0569E-03 (2002,339,0000) | 6.1896E-03 (2002,011,0000) | 5.9523E-03 (2002,031,0000) | 5.1799E-03 (2002,340,0000) |
| 1364 | -244.276 | -437.832 | 8.1791E-03 (2002,339,0000) | 6.4851E-03 (2002,011,0000) | 6.1617E-03 (2002,031,0000) | 5.2449E-03 (2002,340,0000) |
| 1365 | -242.026 | -437.900 | 8.2999E-03 (2002,339,0000) | 6.7661E-03 (2002,011,0000) | 6.3406E-03 (2002,031,0000) | 5.3110E-03 (2002,340,0000) |
| 1366 | -239.775 | -437.967 | 8.4168E-03 (2002,339,0000) | 7.0288E-03 (2002,011,0000) | 6.4925E-03 (2002,031,0000) | 5.3754E-03 (2002,340,0000) |
| 1367 | -237.524 | -438.034 | 8.5295E-03 (2002,339,0000) | 7.2677E-03 (2002,011,0000) | 6.6207E-03 (2002,031,0000) | 5.4402E-03 (2002,340,0000) |
| 1368 | -235.273 | -438.101 | 8.6402E-03 (2002,339,0000) | 7.4711E-03 (2002,011,0000) | 6.7233E-03 (2002,031,0000) | 5.5031E-03 (2002,340,0000) |
| 1369 | -233.022 | -438.166 | 8.7452E-03 (2002,339,0000) | 7.6429E-03 (2002,011,0000) | 6.8075E-03 (2002,031,0000) | 5.5644E-03 (2002,340,0000) |
| 1370 | -230.772 | -438.231 | 8.8465E-03 (2002,339,0000) | 7.7873E-03 (2002,011,0000) | 6.8696E-03 (2002,031,0000) | 5.6251E-03 (2002,340,0000) |
| 1371 | -228.521 | -438.296 | 8.9420E-03 (2002,339,0000) | 7.8081E-03 (2002,011,0000) | 6.5612E-03 (2002,031,0000) | 5.6838E-03 (2002,340,0000) |
| 1372 | -226.270 | -438.360 | 9.0318E-03 (2002,339,0000) | 7.8389E-03 (2002,011,0000) | 6.5746E-03 (2002,031,0000) | 5.7405E-03 (2002,340,0000) |
| 1373 | -224.019 | -438.423 | 9.1165E-03 (2002,339,0000) | 7.8464E-03 (2002,011,0000) | 6.5627E-03 (2002,031,0000) | 5.7960E-03 (2002,340,0000) |
| 1374 | -221.768 | -438.485 | 9.1862E-03 (2002,339,0000) | 7.6855E-03 (2002,011,0000) | 6.4899E-03 (2002,031,0000) | 5.8489E-03 (2002,340,0000) |
| 1375 | -219.517 | -438.547 | 9.2603E-03 (2002,339,0000) | 7.6426E-03 (2002,011,0000) | 6.5203E-03 (2002,031,0000) | 5.9000E-03 (2002,340,0000) |
| 1376 | -217.267 | -438.609 | 9.3377E-03 (2002,339,0000) | 7.7132E-03 (2002,011,0000) | 6.6795E-03 (2002,031,0000) | 5.9476E-03 (2002,340,0000) |
| 1377 | -215.016 | -438.669 | 9.3975E-03 (2002,339,0000) | 7.6550E-03 (2002,011,0000) | 6.7875E-03 (2002,031,0000) | 5.9929E-03 (2002,340,0000) |
| 1378 | -212.765 | -438.729 | 9.4513E-03 (2002,339,0000) | 7.5115E-03 (2002,011,0000) | 6.7847E-03 (2002,031,0000) | 6.0359E-03 (2002,340,0000) |
| 1379 | -210.514 | -438.789 | 9.4986E-03 (2002,339,0000) | 7.3996E-03 (2002,011,0000) | 6.9381E-03 (2002,031,0000) | 6.0739E-03 (2002,340,0000) |
| 1380 | -208.263 | -438.847 | 9.5370E-03 (2002,339,0000) | 7.2104E-03 (2002,011,0000) | 6.9216E-03 (2002,031,0000) | 6.1099E-03 (2002,340,0000) |
| 1381 | -206.012 | -438.905 | 9.5662E-03 (2002,339,0000) | 7.0085E-03 (2002,011,0000) | 6.8776E-03 (2002,031,0000) | 6.1423E-03 (2002,340,0000) |
| 1382 | -203.761 | -438.963 | 9.5888E-03 (2002,339,0000) | 6.8220E-03 (2002,031,0000) | 6.7940E-03 (2002,011,0000) | 6.1706E-03 (2002,340,0000) |
| 1383 | -401.629 | -428.708 | 8.9412E-03 (2002,037,0000) | 5.8712E-03 (2002,359,0000) | 3.4353E-03 (2002,343,0000) | 3.2502E-03 (2002,358,0000) |
| 1384 | -399.380 | -428.820 | 9.0115E-03 (2002,037,0000) | 5.8841E-03 (2002,359,0000) | 3.4903E-03 (2002,343,0000) | 3.0108E-03 (2002,358,0000) |
| 1385 | -397.132 | -428.932 | 9.0162E-03 (2002,037,0000) | 5.8768E-03 (2002,359,0000) | 3.5173E-03 (2002,343,0000) | 2.7837E-03 (2002,358,0000) |
| 1386 | -392.636 | -429.153 | 8.9482E-03 (2002,037,0000) | 5.7984E-03 (2002,359,0000) | 3.5063E-03 (2002,343,0000) | 2.3637E-03 (2002,358,0000) |
| 1387 | -390.387 | -429.263 | 8.9351E-03 (2002,037,0000) | 5.7341E-03 (2002,359,0000) | 3.5196E-03 (2002,343,0000) | 2.2910E-03 (2002,045,0000) |
| 1388 | -388.139 | -429.372 | 8.9142E-03 (2002,037,0000) | 5.6561E-03 (2002,359,0000) | 3.5401E-03 (2002,343,0000) | 2.5528E-03 (2002,325,0000) |
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| 1390 | -383.642 | -429.589 | 8.8776E-03 (2002,037,0000) | 5.4503E-03 (2002,359,0000) | 3.6069E-03 (2002,343,0000) | 2.7291E-03 (2002,325,0000) |
| 1391 | -381.394 | -429.696 | 8.8236E-03 (2002,037,0000) | 5.3297E-03 (2002,359,0000) | 3.6111E-03 (2002,343,0000) | 2.7710E-03 (2002,325,0000) |
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| 1394 | -374.649 | -430.014 | 8.6132E-03 (2002,037,0000) | 4.9164E-03 (2002,359,0000) | 3.6093E-03 (2002,343,0000) | 2.8427E-03 (2002,325,0000) |
| 1395 | -367.903 | -430.327 | 8.3404E-03 (2002,037,0000) | 4.4573E-03 (2002,359,0000) | 3.5833E-03 (2002,343,0000) | 2.8482E-03 (2002,325,0000) |
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| 1397 | -358.908 | -430.734 | 7.8777E-03 (2002,037,0000) | 3.8316E-03 (2002,359,0000) | 3.5176E-03 (2002,343,0000) | 2.6780E-03 (2002,321,0000) |
| 1398 | -352.162 | -431.034 | 7.4688E-03 (2002,037,0000) | 3.4423E-03 (2002,343,0000) | 3.3770E-03 (2002,359,0000) | 3.1539E-03 (2002,078,0000) |
| 1399 | -349.913 | -431.132 | 7.3230E-03 (2002,037,0000) | 3.4130E-03 (2002,343,0000) | 3.3191E-03 (2002,078,0000) | 3.2336E-03 (2002,359,0000) |
| 1400 | -347.664 | -431.230 | 7.1711E-03 (2002,037,0000) | 3.4655E-03 (2002,078,0000) | 3.3167E-03 (2002,343,0000) | 3.0940E-03 (2002,359,0000) |
| 1401 | -248.691 | -434.910 | 8.0885E-03 (2002,339,0000) | 5.9093E-03 (2002,031,0000) | 5.8250E-03 (2002,011,0000) | 5.1948E-03 (2002,340,0000) |
| 1402 | -246.441 | -434.980 | 8.2174E-03 (2002,339,0000) | 6.1564E-03 (2002,011,0000) | 6.1394E-03 (2002,031,0000) | 5.2638E-03 (2002,340,0000) |
| 1403 | -244.191 | -435.049 | 8.3459E-03 (2002,339,0000) | 6.4805E-03 (2002,011,0000) | 6.3602E-03 (2002,031,0000) | 5.3346E-03 (2002,340,0000) |
| 1404 | -241.942 | -435.117 | 8.4698E-03 (2002,339,0000) | 6.7904E-03 (2002,011,0000) | 6.5590E-03 (2002,031,0000) | 5.4034E-03 (2002,340,0000) |
| 1405 | -239.692 | -435.184 | 8.5914E-03 (2002,339,0000) | 7.0806E-03 (2002,011,0000) | 6.7217E-03 (2002,031,0000) | 5.4720E-03 (2002,340,0000) |
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| 1407 | -235.192 | -435.318 | 8.8241E-03 (2002,339,0000) | 7.5736E-03 (2002,011,0000) | 6.9765E-03 (2002,031,0000) | 5.6064E-03 (2002,340,0000) |
| 1408 | -232.942 | -435.383 | 8.9341E-03 (2002,339,0000) | 7.7773E-03 (2002,011,0000) | 7.0162E-03 (2002,031,0000) | 5.6725E-03 (2002,340,0000) |
| 1409 | -230.692 | -435.448 | 9.0381E-03 (2002,339,0000) | 7.8685E-03 (2002,011,0000) | 6.8071E-03 (2002,031,0000) | 5.7367E-03 (2002,340,0000) |
| 1410 | -228.442 | -435.513 | 9.1389E-03 (2002,339,0000) | 7.9117E-03 (2002,011,0000) | 6.6892E-03 (2002,031,0000) | 5.7988E-03 (2002,340,0000) |
| 1411 | -226.192 | -435.577 | 9.2346E-03 (2002,339,0000) | 8.0008E-03 (2002,011,0000) | 6.7868E-03 (2002,031,0000) | 5.8611E-03 (2002,340,0000) |

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|---|---|---|---|---|---|---|
| 1412 | -223.941 | -435.640 | 9.3132E-03 (2002,339,0000) | 7.9418E-03 (2002,011,0000) | 6.7303E-03 (2002,031,0000) | 5.9202E-03 (2002,340,0000) |
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| 1415 | -217.191 | -435.825 | 9.5561E-03 (2002,339,0000) | 7.9473E-03 (2002,011,0000) | 6.9887E-03 (2002,031,0000) | 6.0851E-03 (2002,340,0000) |
| 1416 | -214.941 | -435.886 | 9.6029E-03 (2002,339,0000) | 7.6338E-03 (2002,011,0000) | 6.7679E-03 (2002,031,0000) | 6.1339E-03 (2002,340,0000) |
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| 1418 | -210.441 | -436.005 | 9.7258E-03 (2002,339,0000) | 7.5675E-03 (2002,011,0000) | 7.0870E-03 (2002,031,0000) | 6.2241E-03 (2002,340,0000) |
| 1419 | -208.190 | -436.064 | 9.7685E-03 (2002,339,0000) | 7.3932E-03 (2002,011,0000) | 7.2019E-03 (2002,031,0000) | 6.2646E-03 (2002,340,0000) |
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| 1421 | -203.690 | -436.179 | 9.8263E-03 (2002,339,0000) | 7.1091E-03 (2002,031,0000) | 6.9623E-03 (2002,011,0000) | 6.3335E-03 (2002,340,0000) |
| 1422 | -401.489 | -425.927 | 9.0647E-03 (2002,037,0000) | 5.9743E-03 (2002,359,0000) | 3.5405E-03 (2002,343,0000) | 3.4084E-03 (2002,358,0000) |
| 1423 | -399.242 | -426.039 | 9.1505E-03 (2002,037,0000) | 5.9878E-03 (2002,359,0000) | 3.6028E-03 (2002,343,0000) | 3.1586E-03 (2002,358,0000) |
| 1424 | -396.994 | -426.151 | 9.1116E-03 (2002,037,0000) | 5.9801E-03 (2002,359,0000) | 3.5974E-03 (2002,343,0000) | 2.9228E-03 (2002,358,0000) |
| 1425 | -394.747 | -426.262 | 9.1062E-03 (2002,037,0000) | 5.9498E-03 (2002,359,0000) | 3.6043E-03 (2002,343,0000) | 2.6971E-03 (2002,358,0000) |
| 1426 | -392.499 | -426.372 | 9.1740E-03 (2002,037,0000) | 5.9057E-03 (2002,359,0000) | 3.6789E-03 (2002,343,0000) | 2.4832E-03 (2002,358,0000) |
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| 1428 | -388.004 | -426.591 | 9.1358E-03 (2002,037,0000) | 5.7520E-03 (2002,359,0000) | 3.7135E-03 (2002,343,0000) | 2.5642E-03 (2002,325,0000) |
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| 1430 | -383.509 | -426.808 | 9.0614E-03 (2002,037,0000) | 5.5390E-03 (2002,359,0000) | 3.7356E-03 (2002,343,0000) | 2.6752E-03 (2002,325,0000) |
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| 1432 | -379.014 | -427.022 | 8.9541E-03 (2002,037,0000) | 5.2820E-03 (2002,359,0000) | 3.7455E-03 (2002,343,0000) | 2.7775E-03 (2002,325,0000) |
| 1433 | -376.766 | -427.128 | 8.8889E-03 (2002,037,0000) | 5.1415E-03 (2002,359,0000) | 3.7480E-03 (2002,343,0000) | 2.8447E-03 (2002,325,0000) |
| 1434 | -374.519 | -427.233 | 8.8148E-03 (2002,037,0000) | 4.9941E-03 (2002,359,0000) | 3.7465E-03 (2002,343,0000) | 2.8421E-03 (2002,325,0000) |
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| 1437 | -347.544 | -428.448 | 7.3883E-03 (2002,037,0000) | 3.5692E-03 (2002,078,0000) | 3.5418E-03 (2002,343,0000) | 3.1435E-03 (2002,359,0000) |
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| 1439 | -250.854 | -432.057 | 8.1071E-03 (2002,339,0000) | 5.8298E-03 (2002,031,0000) | 5.3922E-03 (2002,011,0000) | 5.1991E-03 (2002,340,0000) |
| 1440 | -248.605 | -432.128 | 8.2440E-03 (2002,339,0000) | 6.0698E-03 (2002,031,0000) | 5.7501E-03 (2002,011,0000) | 5.2734E-03 (2002,340,0000) |
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| 1443 | -241.858 | -432.334 | 8.6311E-03 (2002,339,0000) | 6.5096E-03 (2002,011,0000) | 5.9869E-03 (2002,031,0000) | 5.4933E-03 (2002,340,0000) |
| 1444 | -239.608 | -432.401 | 8.7657E-03 (2002,339,0000) | 6.9983E-03 (2002,011,0000) | 6.3612E-03 (2002,031,0000) | 5.5656E-03 (2002,340,0000) |
| 1445 | -237.359 | -432.468 | 8.8891E-03 (2002,339,0000) | 7.3749E-03 (2002,011,0000) | 6.8669E-03 (2002,031,0000) | 5.6375E-03 (2002,340,0000) |
| 1446 | -235.110 | -432.535 | 9.0074E-03 (2002,339,0000) | 7.5113E-03 (2002,011,0000) | 6.6068E-03 (2002,031,0000) | 5.7084E-03 (2002,340,0000) |
| 1447 | -232.861 | -432.600 | 9.1224E-03 (2002,339,0000) | 7.8120E-03 (2002,011,0000) | 6.9492E-03 (2002,031,0000) | 5.7778E-03 (2002,340,0000) |
| 1448 | -230.612 | -432.665 | 9.2323E-03 (2002,339,0000) | 7.9107E-03 (2002,011,0000) | 6.8468E-03 (2002,031,0000) | 5.8474E-03 (2002,340,0000) |
| 1449 | -228.362 | -432.730 | 9.3236E-03 (2002,339,0000) | 7.8264E-03 (2002,011,0000) | 6.7405E-03 (2002,031,0000) | 5.9144E-03 (2002,340,0000) |
| 1450 | -226.113 | -432.793 | 9.4362E-03 (2002,339,0000) | 8.1413E-03 (2002,011,0000) | 7.0080E-03 (2002,031,0000) | 5.9794E-03 (2002,340,0000) |
| 1451 | -223.864 | -432.857 | 9.5312E-03 (2002,339,0000) | 8.2510E-03 (2002,011,0000) | 7.1727E-03 (2002,031,0000) | 6.0438E-03 (2002,340,0000) |
| 1452 | -221.614 | -432.919 | 9.6188E-03 (2002,339,0000) | 8.2518E-03 (2002,011,0000) | 7.2046E-03 (2002,031,0000) | 6.1047E-03 (2002,340,0000) |
| 1453 | -219.365 | -432.981 | 9.7019E-03 (2002,339,0000) | 8.3318E-03 (2002,011,0000) | 7.4994E-03 (2002,031,0000) | 6.1638E-03 (2002,340,0000) |
| 1454 | -217.116 | -433.042 | 9.7751E-03 (2002,339,0000) | 8.1589E-03 (2002,011,0000) | 7.3007E-03 (2002,031,0000) | 6.2213E-03 (2002,340,0000) |
| 1455 | -214.866 | -433.103 | 9.8189E-03 (2002,339,0000) | 7.7274E-03 (2002,011,0000) | 6.9794E-03 (2002,031,0000) | 6.2747E-03 (2002,340,0000) |
| 1456 | -212.617 | -433.163 | 9.8792E-03 (2002,339,0000) | 7.5384E-03 (2002,011,0000) | 6.9250E-03 (2002,031,0000) | 6.3262E-03 (2002,340,0000) |
| 1457 | -210.368 | -433.222 | 9.9390E-03 (2002,339,0000) | 7.5154E-03 (2002,011,0000) | 7.0433E-03 (2002,031,0000) | 6.3752E-03 (2002,340,0000) |
| 1458 | -208.118 | -433.281 | 1.0000E-02 (2002,339,0000) | 7.5031E-03 (2002,011,0000) | 7.2501E-03 (2002,031,0000) | 6.4192E-03 (2002,340,0000) |
| 1459 | -205.869 | -433.339 | 1.0038E-02 (2002,339,0000) | 7.4612E-03 (2002,031,0000) | 7.3551E-03 (2002,011,0000) | 6.4602E-03 (2002,340,0000) |
| 1460 | -203.619 | -433.396 | 1.0065E-02 (2002,339,0000) | 7.3905E-03 (2002,031,0000) | 7.1216E-03 (2002,011,0000) | 6.4972E-03 (2002,340,0000) |
| 1461 | -401.350 | -423.146 | 9.1636E-03 (2002,037,0000) | 6.0638E-03 (2002,359,0000) | 3.6338E-03 (2002,343,0000) | 3.5733E-03 (2002,358,0000) |
| 1462 | -399.103 | -423.258 | 9.2138E-03 (2002,037,0000) | 6.0826E-03 (2002,359,0000) | 3.6795E-03 (2002,343,0000) | 3.3146E-03 (2002,358,0000) |
| 1463 | -396.857 | -423.370 | 9.2291E-03 (2002,037,0000) | 6.0714E-03 (2002,359,0000) | 3.6973E-03 (2002,343,0000) | 3.0691E-03 (2002,358,0000) |
| 1464 | -394.610 | -423.481 | 9.3221E-03 (2002,037,0000) | 6.0461E-03 (2002,359,0000) | 3.7716E-03 (2002,343,0000) | 2.8337E-03 (2002,358,0000) |
| 1465 | -392.363 | -423.592 | 9.3232E-03 (2002,037,0000) | 5.9974E-03 (2002,359,0000) | 3.7959E-03 (2002,343,0000) | 2.6083E-03 (2002,358,0000) |
| 1466 | -390.117 | -423.701 | 9.3132E-03 (2002,037,0000) | 5.9282E-03 (2002,359,0000) | 3.8168E-03 (2002,343,0000) | 2.4753E-03 (2002,045,0000) |
| 1467 | -387.870 | -423.810 | 9.2951E-03 (2002,037,0000) | 5.8405E-03 (2002,359,0000) | 3.8359E-03 (2002,343,0000) | 2.4984E-03 (2002,325,0000) |
| 1468 | -385.623 | -423.919 | 9.2676E-03 (2002,037,0000) | 5.7386E-03 (2002,359,0000) | 3.8508E-03 (2002,343,0000) | 2.5709E-03 (2002,325,0000) |
| 1469 | -383.376 | -424.027 | 9.2309E-03 (2002,037,0000) | 5.6238E-03 (2002,359,0000) | 3.8627E-03 (2002,343,0000) | 2.6267E-03 (2002,325,0000) |
| 1470 | -381.129 | -424.134 | 9.1869E-03 (2002,037,0000) | 5.4982E-03 (2002,359,0000) | 3.8720E-03 (2002,343,0000) | 2.6987E-03 (2002,325,0000) |
| 1471 | -378.882 | -424.241 | 9.1341E-03 (2002,037,0000) | 5.3636E-03 (2002,359,0000) | 3.8784E-03 (2002,343,0000) | 2.7613E-03 (2002,325,0000) |
| 1472 | -376.636 | -424.347 | 9.0723E-03 (2002,037,0000) | 5.2216E-03 (2002,359,0000) | 3.8825E-03 (2002,343,0000) | 2.7993E-03 (2002,325,0000) |
| 1473 | -347.423 | -425.667 | 7.5926E-03 (2002,037,0000) | 3.6560E-03 (2002,078,0000) | 3.5714E-03 (2002,343,0000) | 3.1879E-03 (2002,359,0000) |
| 1474 | -345.176 | -425.764 | 7.4381E-03 (2002,037,0000) | 3.8158E-03 (2002,078,0000) | 3.5339E-03 (2002,343,0000) | 3.0474E-03 (2002,359,0000) |
| 1475 | -342.929 | -425.860 | 7.2794E-03 (2002,037,0000) | 3.9096E-03 (2002,078,0000) | 3.4802E-03 (2002,343,0000) | 3.0096E-03 (2002,339,0000) |
| 1476 | -340.681 | -425.956 | 7.1174E-03 (2002,037,0000) | 4.0007E-03 (2002,078,0000) | 3.4195E-03 (2002,343,0000) | 3.1034E-03 (2002,339,0000) |
| 1477 | -336.186 | -426.146 | 6.7886E-03 (2002,037,0000) | 4.3058E-03 (2002,078,0000) | 3.3619E-03 (2002,343,0000) | 3.2967E-03 (2002,339,0000) |
| 1478 | -255.264 | -429.133 | 7.9708E-03 (2002,339,0000) | 5.4067E-03 (2002,031,0000) | 5.1180E-03 (2002,340,0000) | 4.5440E-03 (2002,011,0000) |
| 1479 | -253.015 | -429.204 | 8.1141E-03 (2002,339,0000) | 5.7025E-03 (2002,031,0000) | 5.1953E-03 (2002,340,0000) | 4.9061E-03 (2002,011,0000) |
| 1480 | -250.767 | -429.275 | 8.2586E-03 (2002,339,0000) | 5.9590E-03 (2002,031,0000) | 5.2791E-03 (2002,011,0000) | 5.2728E-03 (2002,340,0000) |
| 1481 | -248.519 | -429.345 | 8.3914E-03 (2002,339,0000) | 5.5992E-03 (2002,031,0000) | 5.5214E-03 (2002,011,0000) | 5.3502E-03 (2002,340,0000) |
| 1482 | -246.270 | -429.414 | 8.5263E-03 (2002,339,0000) | 5.7587E-03 (2002,011,0000) | 5.7333E-03 (2002,031,0000) | 5.4270E-03 (2002,340,0000) |
| 1483 | -244.022 | -429.483 | 8.6599E-03 (2002,339,0000) | 5.9620E-03 (2002,011,0000) | 5.8623E-03 (2002,031,0000) | 5.5043E-03 (2002,340,0000) |
| 1484 | -241.774 | -429.551 | 8.7997E-03 (2002,339,0000) | 6.4561E-03 (2002,011,0000) | 6.1952E-03 (2002,031,0000) | 5.5812E-03 (2002,340,0000) |
| 1485 | -239.525 | -429.619 | 8.9234E-03 (2002,339,0000) | 6.4802E-03 (2002,011,0000) | 6.0040E-03 (2002,031,0000) | 5.6582E-03 (2002,340,0000) |
| 1486 | -237.277 | -429.685 | 9.0501E-03 (2002,339,0000) | 6.8956E-03 (2002,011,0000) | 6.4218E-03 (2002,031,0000) | 5.7331E-03 (2002,340,0000) |
| 1487 | -235.028 | -429.752 | 9.1737E-03 (2002,339,0000) | 7.3058E-03 (2002,011,0000) | 6.6224E-03 (2002,031,0000) | 5.8092E-03 (2002,340,0000) |
| 1488 | -232.780 | -429.817 | 9.2912E-03 (2002,339,0000) | 7.5370E-03 (2002,011,0000) | 6.7475E-03 (2002,031,0000) | 5.8830E-03 (2002,340,0000) |
| 1489 | -230.532 | -429.882 | 9.4250E-03 (2002,339,0000) | 8.0047E-03 (2002,011,0000) | 7.0938E-03 (2002,031,0000) | 5.9555E-03 (2002,340,0000) |
| 1490 | -228.283 | -429.947 | 9.5348E-03 (2002,339,0000) | 8.1715E-03 (2002,011,0000) | 7.2109E-03 (2002,031,0000) | 6.0272E-03 (2002,340,0000) |
| 1491 | -226.035 | -430.010 | 9.6394E-03 (2002,339,0000) | 8.2834E-03 (2002,011,0000) | 7.2875E-03 (2002,031,0000) | 6.0967E-03 (2002,340,0000) |
| 1492 | -223.786 | -430.073 | 9.7373E-03 (2002,339,0000) | 8.3492E-03 (2002,011,0000) | 7.3513E-03 (2002,031,0000) | 6.1652E-03 (2002,340,0000) |
| 1493 | -221.538 | -430.136 | 9.8301E-03 (2002,339,0000) | 8.4523E-03 (2002,011,0000) | 7.5601E-03 (2002,031,0000) | 6.2310E-03 (2002,340,0000) |
| 1494 | -219.289 | -430.198 | 9.9187E-03 (2002,339,0000) | 8.4946E-03 (2002,011,0000) | 7.8558E-03 (2002,031,0000) | 6.2951E-03 (2002,340,0000) |
| 1495 | -217.040 | -430.259 | 9.9950E-03 (2002,339,0000) | 8.2682E-03 (2002,011,0000) | 7.4698E-03 (2002,031,0000) | 6.3577E-03 (2002,340,0000) |
| 1496 | -214.792 | -430.320 | 1.0067E-02 (2002,339,0000) | 8.2274E-03 (2002,011,0000) | 7.5779E-03 (2002,031,0000) | 6.4168E-03 (2002,340,0000) |
| 1497 | -212.543 | -430.379 | 1.0130E-02 (2002,339,0000) | 8.0560E-03 (2002,011,0000) | 7.5437E-03 (2002,031,0000) | 6.4721E-03 (2002,340,0000) |
| 1498 | -210.295 | -430.439 | 1.0169E-02 (2002,339,0000) | 7.7383E-03 (2002,011,0000) | 7.4025E-03 (2002,031,0000) | 6.5252E-03 (2002,340,0000) |
| 1499 | -208.046 | -430.497 | 1.0211E-02 (2002,339,0000) | 7.4723E-03 (2002,011,0000) | 7.2916E-03 (2002,031,0000) | 6.5739E-03 (2002,340,0000) |
| 1500 | -205.797 | -430.556 | 1.0276E-02 (2002,339,0000) | 7.7274E-03 (2002,031,0000) | 7.5138E-03 (2002,011,0000) | 6.6206E-03 (2002,340,0000) |
| 1501 | -203.549 | -430.613 | 1.0307E-02 (2002,339,0000) | 7.6309E-03 (2002,031,0000) | 7.2627E-03 (2002,011,0000) | 6.6618E-03 (2002,340,0000) |
| 1502 | -396.719 | -420.589 | 9.3318E-03 (2002,037,0000) | 6.1502E-03 (2002,359,0000) | 3.8041E-03 (2002,343,0000) | 3.2215E-03 (2002,358,0000) |
| 1503 | -394.473 | -420.700 | 9.4468E-03 (2002,037,0000) | 6.1251E-03 (2002,359,0000) | 3.8843E-03 (2002,343,0000) | 2.9764E-03 (2002,358,0000) |
| 1504 | -392.227 | -420.811 | 9.4522E-03 (2002,037,0000) | 6.0772E-03 (2002,359,0000) | 3.9113E-03 (2002,343,0000) | 2.7412E-03 (2002,358,0000) |
| 1505 | -389.981 | -420.921 | 9.4403E-03 (2002,037,0000) | 6.0109E-03 (2002,359,0000) | 3.9353E-03 (2002,343,0000) | 2.5645E-03 (2002,045,0000) |
| 1506 | -387.735 | -421.030 | 9.4156E-03 (2002,037,0000) | 5.9247E-03 (2002,359,0000) | 3.9552E-03 (2002,343,0000) | 2.5224E-03 (2002,045,0000) |
| 1507 | -385.489 | -421.138 | 9.4146E-03 (2002,037,0000) | 5.8239E-03 (2002,359,0000) | 3.9730E-03 (2002,343,0000) | 2.5043E-03 (2002,325,0000) |
| 1508 | -383.243 | -421.246 | 9.3886E-03 (2002,037,0000) | 5.7096E-03 (2002,359,0000) | 3.9885E-03 (2002,343,0000) | 2.6016E-03 (2002,325,0000) |
| 1509 | -380.997 | -421.353 | 9.3459E-03 (2002,037,0000) | 5.5841E-03 (2002,359,0000) | 4.0003E-03 (2002,343,0000) | 2.6470E-03 (2002,325,0000) |
| 1510 | -345.056 | -422.982 | 7.6502E-03 (2002,037,0000) | 3.9221E-03 (2002,078,0000) | 3.6976E-03 (2002,343,0000) | 3.0867E-03 (2002,359,0000) |
| 1511 | -333.823 | -423.459 | 6.8200E-03 (2002,037,0000) | 4.4882E-03 (2002,078,0000) | 3.4679E-03 (2002,343,0000) | 3.4345E-03 (2002,339,0000) |
| 1512 | -259.670 | -426.206 | 7.8096E-03 (2002,339,0000) | 5.0225E-03 (2002,340,0000) | 4.9202E-03 (2002,031,0000) | 4.0605E-03 (2002,005,0000) |
| 1513 | -257.422 | -426.278 | 7.9608E-03 (2002,339,0000) | 5.2301E-03 (2002,031,0000) | 5.1013E-03 (2002,340,0000) | 4.0285E-03 (2002,011,0000) |
| 1514 | -255.175 | -426.350 | 8.1094E-03 (2002,339,0000) | 5.1824E-03 (2002,340,0000) | 5.0571E-03 (2002,031,0000) | 4.3324E-03 (2002,011,0000) |
| 1515 | -252.927 | -426.421 | 8.2590E-03 (2002,339,0000) | 5.4761E-03 (2002,031,0000) | 5.2628E-03 (2002,340,0000) | 4.7310E-03 (2002,011,0000) |
| 1516 | -250.680 | -426.492 | 8.3979E-03 (2002,339,0000) | 5.4377E-03 (2002,031,0000) | 5.3430E-03 (2002,340,0000) | 4.9210E-03 (2002,011,0000) |
| 1517 | -248.432 | -426.562 | 8.5384E-03 (2002,339,0000) | 5.6466E-03 (2002,031,0000) | 5.4245E-03 (2002,340,0000) | 5.2634E-03 (2002,011,0000) |
| 1518 | -246.185 | -426.631 | 8.6809E-03 (2002,339,0000) | 5.6692E-03 (2002,031,0000) | 5.5056E-03 (2002,340,0000) | 5.4311E-03 (2002,011,0000) |
| 1519 | -243.937 | -426.700 | 8.8380E-03 (2002,339,0000) | 6.5133E-03 (2002,031,0000) | 6.2850E-03 (2002,011,0000) | 5.5861E-03 (2002,340,0000) |
| 1520 | -241.690 | -426.768 | 8.9772E-03 (2002,339,0000) | 6.7809E-03 (2002,031,0000) | 6.6722E-03 (2002,011,0000) | 5.6667E-03 (2002,340,0000) |
| 1521 | -239.442 | -426.836 | 9.1015E-03 (2002,339,0000) | 6.8480E-03 (2002,011,0000) | 6.6143E-03 (2002,031,0000) | 5.7472E-03 (2002,340,0000) |
| 1522 | -237.195 | -426.903 | 9.2455E-03 (2002,339,0000) | 7.3860E-03 (2002,011,0000) | 7.1977E-03 (2002,031,0000) | 5.8280E-03 (2002,340,0000) |
| 1523 | -234.947 | -426.969 | 9.3667E-03 (2002,339,0000) | 7.5267E-03 (2002,011,0000) | 6.9700E-03 (2002,031,0000) | 5.9063E-03 (2002,340,0000) |
| 1524 | -232.699 | -427.034 | 9.4986E-03 (2002,339,0000) | 7.9194E-03 (2002,011,0000) | 7.3247E-03 (2002,031,0000) | 5.9855E-03 (2002,340,0000) |
| 1525 | -230.452 | -427.099 | 9.6183E-03 (2002,339,0000) | 8.1522E-03 (2002,011,0000) | 7.4582E-03 (2002,031,0000) | 6.0621E-03 (2002,340,0000) |

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|---|---|---|---|---|---|---|
| 1526 | -228.204 | -427.164 | 9.7351E-03 (2002,339,0000) | 8.4646E-03 (2002,011,0000) | 8.0430E-03 (2002,031,0000) | 6.1382E-03 (2002,340,0000) |
| 1527 | -225.956 | -427.227 | 9.8411E-03 (2002,339,0000) | 8.4049E-03 (2002,011,0000) | 7.5475E-03 (2002,031,0000) | 6.2124E-03 (2002,340,0000) |
| 1528 | -223.708 | -427.290 | 9.9451E-03 (2002,339,0000) | 8.5529E-03 (2002,011,0000) | 7.7070E-03 (2002,031,0000) | 6.2858E-03 (2002,340,0000) |
| 1529 | -221.461 | -427.353 | 1.0045E-02 (2002,339,0000) | 8.6936E-03 (2002,011,0000) | 8.1608E-03 (2002,031,0000) | 6.3575E-03 (2002,340,0000) |
| 1530 | -219.213 | -427.415 | 1.0135E-02 (2002,339,0000) | 8.6694E-03 (2002,011,0000) | 8.1783E-03 (2002,031,0000) | 6.4258E-03 (2002,340,0000) |
| 1531 | -216.965 | -427.476 | 1.0218E-02 (2002,339,0000) | 8.5945E-03 (2002,011,0000) | 8.1405E-03 (2002,031,0000) | 6.4924E-03 (2002,340,0000) |
| 1532 | -214.717 | -427.536 | 1.0293E-02 (2002,339,0000) | 8.4749E-03 (2002,011,0000) | 8.1161E-03 (2002,031,0000) | 6.5564E-03 (2002,340,0000) |
| 1533 | -212.469 | -427.596 | 1.0360E-02 (2002,339,0000) | 8.2470E-03 (2002,011,0000) | 7.8606E-03 (2002,031,0000) | 6.6180E-03 (2002,340,0000) |
| 1534 | -210.222 | -427.656 | 1.0399E-02 (2002,339,0000) | 7.8012E-03 (2002,011,0000) | 7.6160E-03 (2002,031,0000) | 6.6752E-03 (2002,340,0000) |
| 1535 | -207.974 | -427.714 | 1.0438E-02 (2002,339,0000) | 7.5355E-03 (2002,011,0000) | 7.5348E-03 (2002,031,0000) | 6.7286E-03 (2002,340,0000) |
| 1536 | -205.726 | -427.772 | 1.0517E-02 (2002,339,0000) | 7.9863E-03 (2002,031,0000) | 7.6640E-03 (2002,011,0000) | 6.7810E-03 (2002,340,0000) |
| 1537 | -203.478 | -427.830 | 1.0550E-02 (2002,339,0000) | 7.8902E-03 (2002,031,0000) | 7.4015E-03 (2002,011,0000) | 6.8277E-03 (2002,340,0000) |
| 1538 | -385.355 | -418.357 | 9.5450E-03 (2002,037,0000) | 5.9076E-03 (2002,359,0000) | 4.0938E-03 (2002,343,0000) | 2.5727E-03 (2002,045,0000) |
| 1539 | -347.182 | -420.104 | 8.0040E-03 (2002,037,0000) | 3.8902E-03 (2002,343,0000) | 3.8478E-03 (2002,078,0000) | 3.2678E-03 (2002,359,0000) |
| 1540 | -266.320 | -423.202 | 7.4715E-03 (2002,339,0000) | 4.8326E-03 (2002,340,0000) | 4.2951E-03 (2002,005,0000) | 4.1239E-03 (2002,031,0000) |
| 1541 | -264.073 | -423.276 | 7.6268E-03 (2002,339,0000) | 4.9136E-03 (2002,340,0000) | 4.3104E-03 (2002,031,0000) | 4.0277E-03 (2002,005,0000) |
| 1542 | -261.826 | -423.350 | 7.7827E-03 (2002,339,0000) | 4.9953E-03 (2002,340,0000) | 4.7243E-03 (2002,031,0000) | 4.1827E-03 (2002,005,0000) |
| 1543 | -259.580 | -423.423 | 7.9385E-03 (2002,339,0000) | 5.0768E-03 (2002,340,0000) | 5.0398E-03 (2002,031,0000) | 4.0867E-03 (2002,005,0000) |
| 1544 | -257.333 | -423.496 | 8.0936E-03 (2002,339,0000) | 5.3671E-03 (2002,031,0000) | 5.1598E-03 (2002,340,0000) | 4.0242E-03 (2002,005,0000) |
| 1545 | -255.086 | -423.568 | 8.2480E-03 (2002,339,0000) | 5.5796E-03 (2002,031,0000) | 5.2437E-03 (2002,340,0000) | 4.2186E-03 (2002,011,0000) |
| 1546 | -252.840 | -423.639 | 8.3925E-03 (2002,339,0000) | 5.3268E-03 (2002,340,0000) | 5.3156E-03 (2002,031,0000) | 4.3850E-03 (2002,011,0000) |
| 1547 | -250.593 | -423.709 | 8.5386E-03 (2002,339,0000) | 5.5515E-03 (2002,031,0000) | 5.4112E-03 (2002,340,0000) | 4.7360E-03 (2002,011,0000) |
| 1548 | -248.346 | -423.779 | 8.6885E-03 (2002,339,0000) | 5.7703E-03 (2002,031,0000) | 5.4962E-03 (2002,340,0000) | 5.0477E-03 (2002,011,0000) |
| 1549 | -246.099 | -423.849 | 8.8531E-03 (2002,339,0000) | 6.4243E-03 (2002,031,0000) | 5.7675E-03 (2002,011,0000) | 5.5809E-03 (2002,340,0000) |
| 1550 | -243.853 | -423.917 | 8.9997E-03 (2002,339,0000) | 6.4713E-03 (2002,031,0000) | 6.1028E-03 (2002,011,0000) | 5.6658E-03 (2002,340,0000) |
| 1551 | -241.606 | -423.986 | 9.1449E-03 (2002,339,0000) | 7.1262E-03 (2002,031,0000) | 6.6406E-03 (2002,011,0000) | 5.7503E-03 (2002,340,0000) |
| 1552 | -239.359 | -424.053 | 9.2862E-03 (2002,339,0000) | 7.5173E-03 (2002,031,0000) | 7.0874E-03 (2002,011,0000) | 5.8342E-03 (2002,340,0000) |
| 1553 | -237.112 | -424.120 | 9.4225E-03 (2002,339,0000) | 7.3499E-03 (2002,011,0000) | 7.3083E-03 (2002,031,0000) | 5.9189E-03 (2002,340,0000) |
| 1554 | -234.865 | -424.186 | 9.5559E-03 (2002,339,0000) | 7.6639E-03 (2002,011,0000) | 7.4171E-03 (2002,031,0000) | 6.0030E-03 (2002,340,0000) |
| 1555 | -232.618 | -424.252 | 9.6859E-03 (2002,339,0000) | 8.0064E-03 (2002,011,0000) | 7.7190E-03 (2002,031,0000) | 6.0848E-03 (2002,340,0000) |
| 1556 | -230.371 | -424.317 | 9.8098E-03 (2002,339,0000) | 8.1644E-03 (2002,011,0000) | 7.6663E-03 (2002,031,0000) | 6.1665E-03 (2002,340,0000) |
| 1557 | -228.125 | -424.381 | 9.9307E-03 (2002,339,0000) | 8.5323E-03 (2002,011,0000) | 8.1840E-03 (2002,031,0000) | 6.2478E-03 (2002,340,0000) |
| 1558 | -225.878 | -424.445 | 1.0046E-02 (2002,339,0000) | 8.7092E-03 (2002,011,0000) | 8.4129E-03 (2002,031,0000) | 6.3276E-03 (2002,340,0000) |
| 1559 | -223.631 | -424.508 | 1.0156E-02 (2002,339,0000) | 8.8048E-03 (2002,011,0000) | 8.4588E-03 (2002,031,0000) | 6.4049E-03 (2002,340,0000) |
| 1560 | -221.384 | -424.570 | 1.0256E-02 (2002,339,0000) | 8.8446E-03 (2002,011,0000) | 8.4761E-03 (2002,031,0000) | 6.4811E-03 (2002,340,0000) |
| 1561 | -219.137 | -424.632 | 1.0353E-02 (2002,339,0000) | 8.8290E-03 (2002,011,0000) | 8.5048E-03 (2002,031,0000) | 6.5552E-03 (2002,340,0000) |
| 1562 | -216.890 | -424.693 | 1.0438E-02 (2002,339,0000) | 8.7356E-03 (2002,011,0000) | 8.3134E-03 (2002,031,0000) | 6.6271E-03 (2002,340,0000) |
| 1563 | -214.643 | -424.754 | 1.0517E-02 (2002,339,0000) | 8.5379E-03 (2002,011,0000) | 8.1300E-03 (2002,031,0000) | 6.6972E-03 (2002,340,0000) |
| 1564 | -212.396 | -424.813 | 1.0568E-02 (2002,339,0000) | 8.1799E-03 (2002,011,0000) | 7.9661E-03 (2002,031,0000) | 6.7623E-03 (2002,340,0000) |
| 1565 | -210.149 | -424.873 | 1.0630E-02 (2002,339,0000) | 7.9174E-03 (2002,011,0000) | 7.8966E-03 (2002,031,0000) | 6.8247E-03 (2002,340,0000) |
| 1566 | -207.902 | -424.931 | 1.0672E-02 (2002,339,0000) | 7.6973E-03 (2002,031,0000) | 7.5425E-03 (2002,011,0000) | 6.8841E-03 (2002,340,0000) |
| 1567 | -205.654 | -424.989 | 1.0758E-02 (2002,339,0000) | 8.2803E-03 (2002,031,0000) | 7.8045E-03 (2002,011,0000) | 6.9418E-03 (2002,340,0000) |
| 1568 | -203.407 | -425.047 | 1.0796E-02 (2002,339,0000) | 8.2150E-03 (2002,031,0000) | 7.5345E-03 (2002,011,0000) | 6.9946E-03 (2002,340,0000) |
| 1569 | -349.306 | -417.225 | 8.3355E-03 (2002,037,0000) | 4.0755E-03 (2002,343,0000) | 3.7430E-03 (2002,078,0000) | 3.4580E-03 (2002,359,0000) |
| 1570 | -329.101 | -418.081 | 6.8608E-03 (2002,037,0000) | 4.8815E-03 (2002,078,0000) | 3.7247E-03 (2002,339,0000) | 3.7214E-03 (2002,343,0000) |
| 1571 | -326.856 | -418.173 | 6.6759E-03 (2002,037,0000) | 4.8772E-03 (2002,078,0000) | 3.8349E-03 (2002,339,0000) | 3.6527E-03 (2002,343,0000) |
| 1572 | -302.157 | -419.144 | 5.1998E-03 (2002,339,0000) | 4.7719E-03 (2002,037,0000) | 3.9224E-03 (2002,005,0000) | 3.7120E-03 (2002,078,0000) |
| 1573 | -266.227 | -420.420 | 7.5858E-03 (2002,339,0000) | 4.8755E-03 (2002,340,0000) | 4.0734E-03 (2002,005,0000) | 4.0413E-03 (2002,031,0000) |
| 1574 | -263.981 | -420.494 | 7.7464E-03 (2002,339,0000) | 4.9599E-03 (2002,340,0000) | 4.2805E-03 (2002,031,0000) | 3.8658E-03 (2002,005,0000) |
| 1575 | -261.735 | -420.568 | 7.9057E-03 (2002,339,0000) | 5.0434E-03 (2002,340,0000) | 4.6766E-03 (2002,031,0000) | 3.9445E-03 (2002,005,0000) |
| 1576 | -259.489 | -420.641 | 8.0658E-03 (2002,339,0000) | 5.1554E-03 (2002,031,0000) | 5.1291E-03 (2002,340,0000) | 4.1501E-03 (2002,005,0000) |
| 1577 | -257.244 | -420.713 | 8.2261E-03 (2002,339,0000) | 5.4928E-03 (2002,031,0000) | 5.2149E-03 (2002,340,0000) | 4.0641E-03 (2002,005,0000) |
| 1578 | -254.998 | -420.785 | 8.3747E-03 (2002,339,0000) | 5.3006E-03 (2002,340,0000) | 5.2314E-03 (2002,031,0000) | 3.9245E-03 (2002,011,0000) |
| 1579 | -252.752 | -420.856 | 8.5263E-03 (2002,339,0000) | 5.3888E-03 (2002,340,0000) | 5.3670E-03 (2002,031,0000) | 4.0765E-03 (2002,011,0000) |
| 1580 | -250.506 | -420.927 | 8.6886E-03 (2002,339,0000) | 5.8012E-03 (2002,031,0000) | 5.4769E-03 (2002,340,0000) | 4.6811E-03 (2002,011,0000) |
| 1581 | -248.260 | -420.997 | 8.8540E-03 (2002,339,0000) | 6.3071E-03 (2002,031,0000) | 5.5645E-03 (2002,340,0000) | 5.2030E-03 (2002,011,0000) |
| 1582 | -246.014 | -421.066 | 9.0088E-03 (2002,339,0000) | 6.7849E-03 (2002,031,0000) | 5.6711E-03 (2002,011,0000) | 5.6528E-03 (2002,340,0000) |
| 1583 | -243.768 | -421.135 | 9.1604E-03 (2002,339,0000) | 6.9386E-03 (2002,031,0000) | 6.0892E-03 (2002,011,0000) | 5.7427E-03 (2002,340,0000) |
| 1584 | -241.522 | -421.203 | 9.3087E-03 (2002,339,0000) | 7.0196E-03 (2002,031,0000) | 6.4413E-03 (2002,011,0000) | 5.8303E-03 (2002,340,0000) |
| 1585 | -239.276 | -421.270 | 9.4562E-03 (2002,339,0000) | 7.7857E-03 (2002,031,0000) | 7.0232E-03 (2002,011,0000) | 5.9192E-03 (2002,340,0000) |
| 1586 | -237.030 | -421.337 | 9.6000E-03 (2002,339,0000) | 8.0664E-03 (2002,031,0000) | 7.4240E-03 (2002,011,0000) | 6.0076E-03 (2002,340,0000) |
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| 1588 | -232.538 | -421.469 | 9.8732E-03 (2002,339,0000) | 8.3834E-03 (2002,031,0000) | 8.1191E-03 (2002,011,0000) | 6.1840E-03 (2002,340,0000) |
| 1589 | -230.291 | -421.534 | 1.0004E-02 (2002,339,0000) | 8.5372E-03 (2002,031,0000) | 8.4044E-03 (2002,011,0000) | 6.2699E-03 (2002,340,0000) |
| 1590 | -228.045 | -421.598 | 1.0126E-02 (2002,339,0000) | 8.5194E-03 (2002,011,0000) | 8.0906E-03 (2002,031,0000) | 6.3548E-03 (2002,340,0000) |
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| 1592 | -223.553 | -421.725 | 1.0363E-02 (2002,339,0000) | 8.9329E-03 (2002,011,0000) | 8.7986E-03 (2002,031,0000) | 6.5242E-03 (2002,340,0000) |
| 1593 | -221.307 | -421.787 | 1.0469E-02 (2002,339,0000) | 8.9876E-03 (2002,011,0000) | 8.8362E-03 (2002,031,0000) | 6.6045E-03 (2002,340,0000) |
| 1594 | -219.061 | -421.849 | 1.0571E-02 (2002,339,0000) | 8.9817E-03 (2002,011,0000) | 8.8549E-03 (2002,031,0000) | 6.6841E-03 (2002,340,0000) |
| 1595 | -216.814 | -421.910 | 1.0659E-02 (2002,339,0000) | 8.8956E-03 (2002,011,0000) | 8.6735E-03 (2002,031,0000) | 6.7604E-03 (2002,340,0000) |
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| 1602 | -326.742 | -415.392 | 6.8649E-03 (2002,037,0000) | 5.0364E-03 (2002,078,0000) | 4.0610E-03 (2002,343,0000) | 3.8769E-03 (2002,339,0000) |
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| 1604 | -322.253 | -415.574 | 6.4877E-03 (2002,037,0000) | 4.9723E-03 (2002,078,0000) | 4.1104E-03 (2002,339,0000) | 3.7133E-03 (2002,343,0000) |
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| 1606 | -268.380 | -417.562 | 7.5360E-03 (2002,339,0000) | 4.8304E-03 (2002,340,0000) | 4.5507E-03 (2002,005,0000) | 4.0187E-03 (2002,031,0000) |
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| 1610 | -259.399 | -417.858 | 8.1908E-03 (2002,339,0000) | 5.1778E-03 (2002,340,0000) | 5.1169E-03 (2002,031,0000) | 3.9179E-03 (2002,005,0000) |
| 1611 | -257.154 | -417.931 | 8.3537E-03 (2002,339,0000) | 5.3145E-03 (2002,031,0000) | 5.2660E-03 (2002,340,0000) | 3.7052E-03 (2002,005,0000) |
| 1612 | -254.909 | -418.003 | 8.5010E-03 (2002,339,0000) | 5.3564E-03 (2002,340,0000) | 5.2018E-03 (2002,031,0000) | 3.6444E-03 (2002,036,0000) |
| 1613 | -252.664 | -418.074 | 8.6794E-03 (2002,339,0000) | 5.7564E-03 (2002,031,0000) | 5.4473E-03 (2002,340,0000) | 4.1631E-03 (2002,011,0000) |
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| 1620 | -236.947 | -418.555 | 9.7750E-03 (2002,339,0000) | 8.3636E-03 (2002,031,0000) | 7.3745E-03 (2002,011,0000) | 6.0943E-03 (2002,340,0000) |
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| 1623 | -230.211 | -418.751 | 1.0195E-02 (2002,339,0000) | 8.8502E-03 (2002,031,0000) | 8.4543E-03 (2002,011,0000) | 6.3703E-03 (2002,340,0000) |
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| 1627 | -221.230 | -419.004 | 1.0682E-02 (2002,339,0000) | 9.1960E-03 (2002,031,0000) | 9.1179E-03 (2002,011,0000) | 6.7270E-03 (2002,340,0000) |
| 1628 | -218.984 | -419.066 | 1.0787E-02 (2002,339,0000) | 9.2236E-03 (2002,031,0000) | 9.1204E-03 (2002,011,0000) | 6.8119E-03 (2002,340,0000) |
| 1629 | -216.739 | -419.127 | 1.0883E-02 (2002,339,0000) | 9.0535E-03 (2002,031,0000) | 9.0449E-03 (2002,011,0000) | 6.8948E-03 (2002,340,0000) |
| 1630 | -214.494 | -419.188 | 1.0974E-02 (2002,339,0000) | 9.0834E-03 (2002,031,0000) | 8.9389E-03 (2002,011,0000) | 6.9742E-03 (2002,340,0000) |
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| 1637 | -326.629 | -412.611 | 7.0486E-03 (2002,037,0000) | 5.1837E-03 (2002,078,0000) | 4.2550E-03 (2002,343,0000) | 3.9179E-03 (2002,339,0000) |
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| 1639 | -322.141 | -412.793 | 6.6660E-03 (2002,037,0000) | 5.1167E-03 (2002,078,0000) | 4.1539E-03 (2002,339,0000) | 4.1407E-03 (2002,343,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1640 | -319.898 | -412.883 | 6.4741E-03 (2002,037,0000) | 5.0509E-03 (2002,078,0000) | 4.2756E-03 (2002,339,0000) | 4.0785E-03 (2002,343,0000) |
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| 1646 | -266.042 | -414.855 | 7.7972E-03 (2002,339,0000) | 4.9522E-03 (2002,340,0000) | 3.9841E-03 (2002,031,0000) | 3.6106E-03 (2002,036,0000) |
| 1647 | -263.798 | -414.929 | 7.9757E-03 (2002,339,0000) | 5.0410E-03 (2002,340,0000) | 4.5328E-03 (2002,031,0000) | 4.1379E-03 (2002,005,0000) |
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| 1656 | -243.598 | -415.570 | 9.4762E-03 (2002,339,0000) | 7.8530E-03 (2002,031,0000) | 5.9154E-03 (2002,011,0000) | 5.8862E-03 (2002,340,0000) |
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| 1662 | -230.131 | -415.969 | 1.0384E-02 (2002,339,0000) | 9.1636E-03 (2002,031,0000) | 8.4946E-03 (2002,011,0000) | 6.4697E-03 (2002,340,0000) |
| 1663 | -227.887 | -416.033 | 1.0520E-02 (2002,339,0000) | 9.2897E-03 (2002,031,0000) | 8.7783E-03 (2002,011,0000) | 6.5657E-03 (2002,340,0000) |
| 1664 | -225.642 | -416.096 | 1.0651E-02 (2002,339,0000) | 9.3947E-03 (2002,031,0000) | 8.9996E-03 (2002,011,0000) | 6.6607E-03 (2002,340,0000) |
| 1665 | -223.398 | -416.159 | 1.0776E-02 (2002,339,0000) | 9.4943E-03 (2002,031,0000) | 9.1536E-03 (2002,011,0000) | 6.7553E-03 (2002,340,0000) |
| 1666 | -221.153 | -416.222 | 1.0893E-02 (2002,339,0000) | 9.5639E-03 (2002,031,0000) | 9.2373E-03 (2002,011,0000) | 6.8467E-03 (2002,340,0000) |
| 1667 | -218.908 | -416.284 | 1.1001E-02 (2002,339,0000) | 9.2825E-03 (2002,031,0000) | 9.2216E-03 (2002,011,0000) | 6.9382E-03 (2002,340,0000) |
| 1668 | -216.664 | -416.345 | 1.1105E-02 (2002,339,0000) | 9.5052E-03 (2002,031,0000) | 9.1978E-03 (2002,011,0000) | 7.0278E-03 (2002,340,0000) |
| 1669 | -214.419 | -416.405 | 1.1198E-02 (2002,339,0000) | 9.0922E-03 (2002,031,0000) | 8.9475E-03 (2002,011,0000) | 7.1144E-03 (2002,340,0000) |
| 1670 | -212.174 | -416.465 | 1.1284E-02 (2002,339,0000) | 9.1104E-03 (2002,031,0000) | 8.7866E-03 (2002,011,0000) | 7.1972E-03 (2002,340,0000) |
| 1671 | -209.930 | -416.524 | 1.1363E-02 (2002,339,0000) | 9.0940E-03 (2002,031,0000) | 8.4904E-03 (2002,011,0000) | 7.2773E-03 (2002,340,0000) |
| 1672 | -207.685 | -416.583 | 1.1437E-02 (2002,339,0000) | 9.3959E-03 (2002,031,0000) | 8.4588E-03 (2002,011,0000) | 7.3552E-03 (2002,340,0000) |
| 1673 | -328.758 | -409.737 | 7.4217E-03 (2002,037,0000) | 5.3232E-03 (2002,078,0000) | 4.5033E-03 (2002,343,0000) | 3.8409E-03 (2002,339,0000) |
| 1674 | -326.515 | -409.829 | 7.2296E-03 (2002,037,0000) | 5.3393E-03 (2002,078,0000) | 4.4540E-03 (2002,343,0000) | 3.9580E-03 (2002,339,0000) |
| 1675 | -324.272 | -409.921 | 7.0361E-03 (2002,037,0000) | 5.2920E-03 (2002,078,0000) | 4.3913E-03 (2002,343,0000) | 4.0757E-03 (2002,339,0000) |
| 1676 | -322.029 | -410.011 | 6.8399E-03 (2002,037,0000) | 5.2453E-03 (2002,078,0000) | 4.3345E-03 (2002,343,0000) | 4.1968E-03 (2002,339,0000) |
| 1677 | -319.786 | -410.101 | 6.6430E-03 (2002,037,0000) | 5.1755E-03 (2002,078,0000) | 4.3208E-03 (2002,339,0000) | 4.2763E-03 (2002,343,0000) |
| 1678 | -317.543 | -410.191 | 6.4452E-03 (2002,037,0000) | 5.0773E-03 (2002,078,0000) | 4.4463E-03 (2002,339,0000) | 4.2127E-03 (2002,343,0000) |
| 1679 | -315.300 | -410.279 | 6.2451E-03 (2002,037,0000) | 4.9056E-03 (2002,078,0000) | 4.5744E-03 (2002,339,0000) | 3.8561E-03 (2002,343,0000) |
| 1680 | -313.057 | -410.367 | 6.0523E-03 (2002,037,0000) | 4.8188E-03 (2002,078,0000) | 4.7042E-03 (2002,339,0000) | 4.0757E-03 (2002,343,0000) |
| 1681 | -310.814 | -410.455 | 5.8591E-03 (2002,037,0000) | 4.8378E-03 (2002,339,0000) | 4.6567E-03 (2002,078,0000) | 3.9481E-03 (2002,343,0000) |
| 1682 | -308.571 | -410.542 | 5.6685E-03 (2002,037,0000) | 4.9736E-03 (2002,339,0000) | 4.4839E-03 (2002,078,0000) | 3.9443E-03 (2002,089,0000) |
| 1683 | -301.842 | -410.799 | 5.3910E-03 (2002,339,0000) | 5.1254E-03 (2002,037,0000) | 4.0878E-03 (2002,089,0000) | 3.9091E-03 (2002,078,0000) |
| 1684 | -299.599 | -410.883 | 5.5349E-03 (2002,339,0000) | 4.9572E-03 (2002,037,0000) | 4.1515E-03 (2002,005,0000) | 4.0799E-03 (2002,089,0000) |
| 1685 | -297.356 | -410.967 | 5.6802E-03 (2002,339,0000) | 4.7958E-03 (2002,037,0000) | 4.4053E-03 (2002,005,0000) | 4.0457E-03 (2002,089,0000) |
| 1686 | -295.113 | -411.050 | 5.8282E-03 (2002,339,0000) | 4.7044E-03 (2002,005,0000) | 4.6415E-03 (2002,037,0000) | 4.0419E-03 (2002,089,0000) |
| 1687 | -272.680 | -411.846 | 7.4098E-03 (2002,339,0000) | 4.7170E-03 (2002,340,0000) | 4.4247E-03 (2002,005,0000) | 3.6748E-03 (2002,036,0000) |
| 1688 | -270.436 | -411.922 | 7.5786E-03 (2002,339,0000) | 4.8058E-03 (2002,340,0000) | 4.5148E-03 (2002,005,0000) | 3.7515E-03 (2002,031,0000) |
| 1689 | -268.193 | -411.998 | 7.7467E-03 (2002,339,0000) | 4.8942E-03 (2002,340,0000) | 4.3728E-03 (2002,005,0000) | 3.9992E-03 (2002,031,0000) |
| 1690 | -265.949 | -412.073 | 7.9165E-03 (2002,339,0000) | 4.9856E-03 (2002,340,0000) | 4.1745E-03 (2002,031,0000) | 4.0182E-03 (2002,005,0000) |
| 1691 | -263.706 | -412.147 | 8.0883E-03 (2002,339,0000) | 5.0773E-03 (2002,340,0000) | 4.6309E-03 (2002,031,0000) | 4.2040E-03 (2002,005,0000) |
| 1692 | -261.462 | -412.221 | 8.2528E-03 (2002,339,0000) | 5.1703E-03 (2002,340,0000) | 4.6927E-03 (2002,031,0000) | 3.7711E-03 (2002,036,0000) |
| 1693 | -259.219 | -412.294 | 8.4223E-03 (2002,339,0000) | 5.2649E-03 (2002,340,0000) | 4.9814E-03 (2002,031,0000) | 3.7945E-03 (2002,036,0000) |
| 1694 | -256.975 | -412.366 | 8.6031E-03 (2002,339,0000) | 5.4623E-03 (2002,031,0000) | 5.3607E-03 (2002,340,0000) | 3.8222E-03 (2002,036,0000) |
| 1695 | -254.732 | -412.438 | 8.7558E-03 (2002,339,0000) | 5.4754E-03 (2002,031,0000) | 5.4562E-03 (2002,340,0000) | 3.8501E-03 (2002,036,0000) |
| 1696 | -252.488 | -412.509 | 8.9357E-03 (2002,339,0000) | 5.9315E-03 (2002,031,0000) | 5.5539E-03 (2002,340,0000) | 3.8826E-03 (2002,036,0000) |
| 1697 | -250.245 | -412.580 | 9.1207E-03 (2002,339,0000) | 6.8066E-03 (2002,031,0000) | 5.6534E-03 (2002,340,0000) | 4.3168E-03 (2002,011,0000) |
| 1698 | -248.001 | -412.650 | 9.2920E-03 (2002,339,0000) | 7.2978E-03 (2002,031,0000) | 5.7528E-03 (2002,340,0000) | 4.7994E-03 (2002,011,0000) |
| 1699 | -245.757 | -412.719 | 9.4625E-03 (2002,339,0000) | 7.7466E-03 (2002,031,0000) | 5.8529E-03 (2002,340,0000) | 5.2796E-03 (2002,011,0000) |
| 1700 | -243.514 | -412.788 | 9.6303E-03 (2002,339,0000) | 8.0734E-03 (2002,031,0000) | 5.9548E-03 (2002,340,0000) | 5.7776E-03 (2002,011,0000) |
| 1701 | -241.270 | -412.856 | 9.7957E-03 (2002,339,0000) | 8.3728E-03 (2002,031,0000) | 6.2832E-03 (2002,011,0000) | 6.0562E-03 (2002,340,0000) |
| 1702 | -239.026 | -412.923 | 9.9572E-03 (2002,339,0000) | 8.6481E-03 (2002,031,0000) | 6.7846E-03 (2002,011,0000) | 6.1582E-03 (2002,340,0000) |
| 1703 | -236.783 | -412.990 | 1.0117E-02 (2002,339,0000) | 8.8901E-03 (2002,031,0000) | 7.2697E-03 (2002,011,0000) | 6.2603E-03 (2002,340,0000) |
| 1704 | -234.539 | -413.056 | 1.0273E-02 (2002,339,0000) | 9.1162E-03 (2002,031,0000) | 7.7280E-03 (2002,011,0000) | 6.3630E-03 (2002,340,0000) |
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| 1706 | -230.051 | -413.186 | 1.0573E-02 (2002,339,0000) | 9.4756E-03 (2002,031,0000) | 8.5196E-03 (2002,011,0000) | 6.5660E-03 (2002,340,0000) |
| 1707 | -227.808 | -413.250 | 1.0715E-02 (2002,339,0000) | 9.6263E-03 (2002,031,0000) | 8.8329E-03 (2002,011,0000) | 6.6683E-03 (2002,340,0000) |
| 1708 | -225.564 | -413.314 | 1.0852E-02 (2002,339,0000) | 9.7449E-03 (2002,031,0000) | 9.0782E-03 (2002,011,0000) | 6.7692E-03 (2002,340,0000) |
| 1709 | -223.320 | -413.377 | 1.0982E-02 (2002,339,0000) | 9.8377E-03 (2002,031,0000) | 9.2526E-03 (2002,011,0000) | 6.8691E-03 (2002,340,0000) |
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| 1714 | -212.101 | -413.682 | 1.1520E-02 (2002,339,0000) | 9.6332E-03 (2002,031,0000) | 8.9917E-03 (2002,011,0000) | 7.3414E-03 (2002,340,0000) |
| 1715 | -209.857 | -413.741 | 1.1602E-02 (2002,339,0000) | 9.4291E-03 (2002,031,0000) | 8.5784E-03 (2002,011,0000) | 7.4289E-03 (2002,340,0000) |
| 1716 | -207.613 | -413.800 | 1.1677E-02 (2002,339,0000) | 9.5143E-03 (2002,031,0000) | 8.4860E-03 (2002,011,0000) | 7.5114E-03 (2002,340,0000) |
| 1717 | -328.643 | -406.956 | 7.6011E-03 (2002,037,0000) | 5.4590E-03 (2002,078,0000) | 4.7016E-03 (2002,343,0000) | 3.8776E-03 (2002,339,0000) |
| 1718 | -326.401 | -407.048 | 7.4076E-03 (2002,037,0000) | 5.4689E-03 (2002,078,0000) | 4.6515E-03 (2002,343,0000) | 3.9961E-03 (2002,339,0000) |
| 1719 | -324.159 | -407.139 | 7.2104E-03 (2002,037,0000) | 5.4271E-03 (2002,078,0000) | 4.5863E-03 (2002,343,0000) | 4.1166E-03 (2002,339,0000) |
| 1720 | -321.917 | -407.230 | 7.0111E-03 (2002,037,0000) | 5.3798E-03 (2002,078,0000) | 4.5326E-03 (2002,343,0000) | 4.2389E-03 (2002,339,0000) |
| 1721 | -319.675 | -407.320 | 6.8092E-03 (2002,037,0000) | 5.3084E-03 (2002,078,0000) | 4.4773E-03 (2002,343,0000) | 4.3651E-03 (2002,339,0000) |
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| 1723 | -315.191 | -407.498 | 6.4046E-03 (2002,037,0000) | 5.0798E-03 (2002,078,0000) | 4.6225E-03 (2002,339,0000) | 4.3485E-03 (2002,343,0000) |
| 1724 | -312.949 | -407.586 | 6.2031E-03 (2002,037,0000) | 4.9472E-03 (2002,078,0000) | 4.7554E-03 (2002,339,0000) | 4.2931E-03 (2002,343,0000) |
| 1725 | -310.706 | -407.673 | 6.0029E-03 (2002,037,0000) | 4.8900E-03 (2002,339,0000) | 4.7678E-03 (2002,078,0000) | 4.1995E-03 (2002,343,0000) |
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| 1727 | -306.222 | -407.847 | 5.6123E-03 (2002,037,0000) | 5.1672E-03 (2002,339,0000) | 4.3905E-03 (2002,078,0000) | 4.1473E-03 (2002,089,0000) |
| 1728 | -303.980 | -407.932 | 5.4238E-03 (2002,037,0000) | 5.3084E-03 (2002,339,0000) | 4.2054E-03 (2002,089,0000) | 4.1890E-03 (2002,078,0000) |
| 1729 | -301.737 | -408.017 | 5.4510E-03 (2002,339,0000) | 5.2394E-03 (2002,037,0000) | 3.7669E-03 (2002,078,0000) | 3.7132E-03 (2002,089,0000) |
| 1730 | -299.495 | -408.101 | 5.5973E-03 (2002,339,0000) | 5.0640E-03 (2002,037,0000) | 3.7557E-03 (2002,340,0000) | 3.6355E-03 (2002,089,0000) |
| 1731 | -297.253 | -408.185 | 5.7459E-03 (2002,339,0000) | 4.8967E-03 (2002,037,0000) | 4.3114E-03 (2002,005,0000) | 4.1269E-03 (2002,089,0000) |
| 1732 | -295.010 | -408.268 | 5.8943E-03 (2002,339,0000) | 4.7358E-03 (2002,037,0000) | 4.1112E-03 (2002,005,0000) | 3.9857E-03 (2002,089,0000) |
| 1733 | -292.768 | -408.351 | 6.0483E-03 (2002,339,0000) | 4.8066E-03 (2002,005,0000) | 4.5827E-03 (2002,037,0000) | 3.9847E-03 (2002,340,0000) |
| 1734 | -286.040 | -408.594 | 6.5165E-03 (2002,339,0000) | 5.2267E-03 (2002,005,0000) | 4.2256E-03 (2002,340,0000) | 4.1715E-03 (2002,037,0000) |
| 1735 | -281.555 | -408.753 | 6.8385E-03 (2002,339,0000) | 5.2517E-03 (2002,005,0000) | 4.3908E-03 (2002,340,0000) | 3.9368E-03 (2002,037,0000) |
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| 1737 | -274.828 | -408.988 | 7.3359E-03 (2002,339,0000) | 5.1651E-03 (2002,005,0000) | 4.6497E-03 (2002,340,0000) | 3.7983E-03 (2002,036,0000) |
| 1738 | -272.585 | -409.064 | 7.5052E-03 (2002,339,0000) | 4.7395E-03 (2002,340,0000) | 4.5974E-03 (2002,005,0000) | 3.8097E-03 (2002,036,0000) |
| 1739 | -270.342 | -409.141 | 7.6632E-03 (2002,339,0000) | 4.8300E-03 (2002,340,0000) | 3.8206E-03 (2002,036,0000) | 3.5398E-03 (2002,031,0000) |
| 1740 | -268.100 | -409.216 | 7.8484E-03 (2002,339,0000) | 4.9228E-03 (2002,340,0000) | 4.3262E-03 (2002,005,0000) | 4.0370E-03 (2002,031,0000) |
| 1741 | -265.857 | -409.291 | 8.0223E-03 (2002,339,0000) | 5.0149E-03 (2002,340,0000) | 4.3941E-03 (2002,031,0000) | 4.3737E-03 (2002,005,0000) |
| 1742 | -263.614 | -409.365 | 8.1969E-03 (2002,339,0000) | 5.1100E-03 (2002,340,0000) | 4.8800E-03 (2002,031,0000) | 4.6142E-03 (2002,005,0000) |
| 1743 | -261.372 | -409.439 | 8.3746E-03 (2002,339,0000) | 5.2485E-03 (2002,031,0000) | 5.2058E-03 (2002,340,0000) | 4.4955E-03 (2002,005,0000) |
| 1744 | -259.129 | -409.512 | 8.5482E-03 (2002,339,0000) | 5.4392E-03 (2002,031,0000) | 5.3030E-03 (2002,340,0000) | 4.0451E-03 (2002,005,0000) |
| 1745 | -256.886 | -409.584 | 8.7263E-03 (2002,339,0000) | 5.9330E-03 (2002,031,0000) | 5.4015E-03 (2002,340,0000) | 4.1062E-03 (2002,005,0000) |
| 1746 | -254.643 | -409.656 | 8.9008E-03 (2002,339,0000) | 5.8836E-03 (2002,031,0000) | 5.5023E-03 (2002,340,0000) | 3.9626E-03 (2002,036,0000) |
| 1747 | -252.400 | -409.727 | 9.0781E-03 (2002,339,0000) | 6.2102E-03 (2002,031,0000) | 5.6034E-03 (2002,340,0000) | 3.9933E-03 (2002,036,0000) |
| 1748 | -250.158 | -409.798 | 9.2542E-03 (2002,339,0000) | 6.6143E-03 (2002,031,0000) | 5.7050E-03 (2002,340,0000) | 4.0427E-03 (2002,011,0000) |
| 1749 | -247.915 | -409.867 | 9.4297E-03 (2002,339,0000) | 7.1063E-03 (2002,031,0000) | 5.8092E-03 (2002,340,0000) | 4.5794E-03 (2002,011,0000) |
| 1750 | -245.672 | -409.937 | 9.6086E-03 (2002,339,0000) | 7.9581E-03 (2002,031,0000) | 5.9142E-03 (2002,340,0000) | 5.1253E-03 (2002,011,0000) |
| 1751 | -243.429 | -410.005 | 9.7815E-03 (2002,339,0000) | 8.2975E-03 (2002,031,0000) | 6.0197E-03 (2002,340,0000) | 5.6404E-03 (2002,011,0000) |
| 1752 | -241.186 | -410.073 | 9.9518E-03 (2002,339,0000) | 8.6126E-03 (2002,031,0000) | 6.1666E-03 (2002,011,0000) | 6.1255E-03 (2002,340,0000) |
| 1753 | -238.943 | -410.141 | 1.0121E-02 (2002,339,0000) | 8.9064E-03 (2002,031,0000) | 6.6920E-03 (2002,011,0000) | 6.2326E-03 (2002,340,0000) |

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|---|---|---|---|---|---|---|
| 1754 | -236.700 | -410.207 | 1.0285E-02 (2002,339,0000) | 9.1712E-03 (2002,031,0000) | 7.2044E-03 (2002,011,0000) | 6.3399E-03 (2002,340,0000) |
| 1755 | -234.457 | -410.273 | 1.0447E-02 (2002,339,0000) | 9.4023E-03 (2002,031,0000) | 7.6918E-03 (2002,011,0000) | 6.4468E-03 (2002,340,0000) |
| 1756 | -232.214 | -410.339 | 1.0606E-02 (2002,339,0000) | 9.6146E-03 (2002,031,0000) | 8.1415E-03 (2002,011,0000) | 6.5542E-03 (2002,340,0000) |
| 1757 | -229.971 | -410.404 | 1.0760E-02 (2002,339,0000) | 9.7998E-03 (2002,031,0000) | 8.5419E-03 (2002,011,0000) | 6.6623E-03 (2002,340,0000) |
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| 1759 | -225.485 | -410.531 | 1.1050E-02 (2002,339,0000) | 1.0104E-02 (2002,031,0000) | 9.1527E-03 (2002,011,0000) | 6.8761E-03 (2002,340,0000) |
| 1760 | -223.242 | -410.594 | 1.1188E-02 (2002,339,0000) | 1.0219E-02 (2002,031,0000) | 9.3489E-03 (2002,011,0000) | 6.9812E-03 (2002,340,0000) |
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| 1762 | -218.756 | -410.718 | 1.1434E-02 (2002,339,0000) | 9.7818E-03 (2002,031,0000) | 9.4202E-03 (2002,011,0000) | 7.1897E-03 (2002,340,0000) |
| 1763 | -216.513 | -410.779 | 1.1547E-02 (2002,339,0000) | 9.7118E-03 (2002,031,0000) | 9.2949E-03 (2002,011,0000) | 7.2892E-03 (2002,340,0000) |
| 1764 | -214.270 | -410.840 | 1.1653E-02 (2002,339,0000) | 9.6324E-03 (2002,031,0000) | 8.8975E-03 (2002,011,0000) | 7.3886E-03 (2002,340,0000) |
| 1765 | -212.027 | -410.900 | 1.1754E-02 (2002,339,0000) | 9.6944E-03 (2002,031,0000) | 8.8063E-03 (2002,011,0000) | 7.4839E-03 (2002,340,0000) |
| 1766 | -209.784 | -410.959 | 1.1848E-02 (2002,339,0000) | 1.0221E-02 (2002,031,0000) | 8.9611E-03 (2002,011,0000) | 7.5787E-03 (2002,340,0000) |
| 1767 | -328.529 | -404.175 | 7.7738E-03 (2002,037,0000) | 5.5834E-03 (2002,078,0000) | 4.8900E-03 (2002,343,0000) | 3.9134E-03 (2002,339,0000) |
| 1768 | -326.288 | -404.267 | 7.5802E-03 (2002,037,0000) | 5.5959E-03 (2002,078,0000) | 4.8414E-03 (2002,343,0000) | 4.0335E-03 (2002,339,0000) |
| 1769 | -324.047 | -404.358 | 7.3814E-03 (2002,037,0000) | 5.5725E-03 (2002,078,0000) | 4.7864E-03 (2002,343,0000) | 4.1565E-03 (2002,339,0000) |
| 1770 | -317.323 | -404.628 | 6.7667E-03 (2002,037,0000) | 5.3518E-03 (2002,078,0000) | 4.6313E-03 (2002,343,0000) | 4.5384E-03 (2002,339,0000) |
| 1771 | -315.081 | -404.717 | 6.5589E-03 (2002,037,0000) | 5.2191E-03 (2002,078,0000) | 4.6706E-03 (2002,339,0000) | 4.5700E-03 (2002,343,0000) |
| 1772 | -312.840 | -404.805 | 6.3514E-03 (2002,037,0000) | 5.0636E-03 (2002,078,0000) | 4.8051E-03 (2002,339,0000) | 4.5010E-03 (2002,343,0000) |
| 1773 | -310.598 | -404.892 | 6.1457E-03 (2002,037,0000) | 4.9415E-03 (2002,339,0000) | 4.8798E-03 (2002,078,0000) | 4.4058E-03 (2002,343,0000) |
| 1774 | -308.357 | -404.979 | 5.9416E-03 (2002,037,0000) | 5.0811E-03 (2002,339,0000) | 4.6869E-03 (2002,078,0000) | 4.3098E-03 (2002,343,0000) |
| 1775 | -306.115 | -405.065 | 5.7416E-03 (2002,037,0000) | 5.2237E-03 (2002,339,0000) | 4.4881E-03 (2002,078,0000) | 4.3091E-03 (2002,089,0000) |
| 1776 | -303.874 | -405.151 | 5.5439E-03 (2002,037,0000) | 5.3662E-03 (2002,339,0000) | 4.2688E-03 (2002,078,0000) | 4.2313E-03 (2002,089,0000) |
| 1777 | -301.632 | -405.236 | 5.5109E-03 (2002,339,0000) | 5.3548E-03 (2002,037,0000) | 4.2713E-03 (2002,089,0000) | 4.0559E-03 (2002,078,0000) |
| 1778 | -299.391 | -405.320 | 5.6606E-03 (2002,339,0000) | 5.1717E-03 (2002,037,0000) | 4.4675E-03 (2002,089,0000) | 4.2687E-03 (2002,005,0000) |
| 1779 | -297.149 | -405.404 | 5.8111E-03 (2002,339,0000) | 4.9961E-03 (2002,037,0000) | 4.4186E-03 (2002,005,0000) | 4.2912E-03 (2002,089,0000) |
| 1780 | -294.907 | -405.487 | 5.9602E-03 (2002,339,0000) | 4.8266E-03 (2002,037,0000) | 3.9088E-03 (2002,340,0000) | 3.8124E-03 (2002,036,0000) |
| 1781 | -292.666 | -405.569 | 6.1154E-03 (2002,339,0000) | 4.6678E-03 (2002,037,0000) | 3.9885E-03 (2002,340,0000) | 3.8412E-03 (2002,036,0000) |
| 1782 | -290.424 | -405.651 | 6.2733E-03 (2002,339,0000) | 4.8607E-03 (2002,005,0000) | 4.5171E-03 (2002,037,0000) | 4.0678E-03 (2002,340,0000) |
| 1783 | -288.182 | -405.732 | 6.4309E-03 (2002,339,0000) | 5.0725E-03 (2002,005,0000) | 4.3740E-03 (2002,037,0000) | 4.1497E-03 (2002,340,0000) |
| 1784 | -285.941 | -405.812 | 6.5924E-03 (2002,339,0000) | 4.9684E-03 (2002,005,0000) | 4.2398E-03 (2002,037,0000) | 4.2324E-03 (2002,340,0000) |
| 1785 | -283.699 | -405.892 | 6.7538E-03 (2002,339,0000) | 5.1062E-03 (2002,005,0000) | 4.3173E-03 (2002,340,0000) | 4.1134E-03 (2002,037,0000) |
| 1786 | -281.457 | -405.972 | 6.9154E-03 (2002,339,0000) | 4.7194E-03 (2002,005,0000) | 4.4014E-03 (2002,340,0000) | 3.9953E-03 (2002,037,0000) |
| 1787 | -279.216 | -406.050 | 7.0865E-03 (2002,339,0000) | 5.2873E-03 (2002,005,0000) | 4.4891E-03 (2002,340,0000) | 3.9318E-03 (2002,036,0000) |
| 1788 | -274.732 | -406.206 | 7.4258E-03 (2002,339,0000) | 5.2214E-03 (2002,005,0000) | 4.6668E-03 (2002,340,0000) | 3.9470E-03 (2002,036,0000) |
| 1789 | -272.490 | -406.282 | 7.5970E-03 (2002,339,0000) | 4.7583E-03 (2002,340,0000) | 4.5735E-03 (2002,005,0000) | 3.9540E-03 (2002,036,0000) |
| 1790 | -270.248 | -406.359 | 7.7706E-03 (2002,339,0000) | 4.8500E-03 (2002,340,0000) | 4.6674E-03 (2002,005,0000) | 3.9634E-03 (2002,036,0000) |
| 1791 | -268.006 | -406.434 | 7.9315E-03 (2002,339,0000) | 4.9457E-03 (2002,340,0000) | 3.9702E-03 (2002,036,0000) | 3.8772E-03 (2002,031,0000) |
| 1792 | -265.764 | -406.509 | 8.1229E-03 (2002,339,0000) | 5.0415E-03 (2002,340,0000) | 4.4457E-03 (2002,031,0000) | 4.3876E-03 (2002,005,0000) |
| 1793 | -263.523 | -406.583 | 8.3025E-03 (2002,339,0000) | 5.1386E-03 (2002,340,0000) | 4.7712E-03 (2002,031,0000) | 4.2564E-03 (2002,005,0000) |
| 1794 | -261.281 | -406.657 | 8.4817E-03 (2002,339,0000) | 5.2625E-03 (2002,031,0000) | 5.2370E-03 (2002,340,0000) | 4.3526E-03 (2002,005,0000) |
| 1795 | -259.039 | -406.730 | 8.6646E-03 (2002,339,0000) | 5.7479E-03 (2002,031,0000) | 5.3379E-03 (2002,340,0000) | 4.4268E-03 (2002,005,0000) |
| 1796 | -256.797 | -406.802 | 8.8450E-03 (2002,339,0000) | 6.1420E-03 (2002,031,0000) | 5.4401E-03 (2002,340,0000) | 4.3137E-03 (2002,005,0000) |
| 1797 | -254.555 | -406.874 | 9.0248E-03 (2002,339,0000) | 6.2617E-03 (2002,031,0000) | 5.5433E-03 (2002,340,0000) | 4.0781E-03 (2002,036,0000) |
| 1798 | -252.313 | -406.945 | 9.2081E-03 (2002,339,0000) | 6.9758E-03 (2002,031,0000) | 5.6477E-03 (2002,340,0000) | 4.1546E-03 (2002,263,0000) |
| 1799 | -250.071 | -407.015 | 9.3901E-03 (2002,339,0000) | 7.3614E-03 (2002,031,0000) | 5.7552E-03 (2002,340,0000) | 4.3282E-03 (2002,263,0000) |
| 1800 | -247.828 | -407.085 | 9.5710E-03 (2002,339,0000) | 7.7819E-03 (2002,031,0000) | 5.8620E-03 (2002,340,0000) | 4.5092E-03 (2002,263,0000) |
| 1801 | -245.586 | -407.154 | 9.7494E-03 (2002,339,0000) | 8.1456E-03 (2002,031,0000) | 5.9717E-03 (2002,340,0000) | 4.9700E-03 (2002,011,0000) |
| 1802 | -243.344 | -407.223 | 9.9286E-03 (2002,339,0000) | 8.5324E-03 (2002,031,0000) | 6.0818E-03 (2002,340,0000) | 5.5029E-03 (2002,011,0000) |
| 1803 | -241.102 | -407.291 | 1.0105E-02 (2002,339,0000) | 8.8619E-03 (2002,031,0000) | 6.1924E-03 (2002,340,0000) | 6.0485E-03 (2002,011,0000) |
| 1804 | -238.860 | -407.358 | 1.0280E-02 (2002,339,0000) | 9.1696E-03 (2002,031,0000) | 6.5964E-03 (2002,011,0000) | 6.3032E-03 (2002,340,0000) |
| 1805 | -236.618 | -407.425 | 1.0452E-02 (2002,339,0000) | 9.4602E-03 (2002,031,0000) | 7.1357E-03 (2002,011,0000) | 6.4164E-03 (2002,340,0000) |
| 1806 | -234.376 | -407.491 | 1.0620E-02 (2002,339,0000) | 9.7115E-03 (2002,031,0000) | 7.6518E-03 (2002,011,0000) | 6.5299E-03 (2002,340,0000) |
| 1807 | -232.133 | -407.557 | 1.0784E-02 (2002,339,0000) | 9.9366E-03 (2002,031,0000) | 8.1308E-03 (2002,011,0000) | 6.6422E-03 (2002,340,0000) |
| 1808 | -229.891 | -407.621 | 1.0943E-02 (2002,339,0000) | 1.0129E-02 (2002,031,0000) | 8.5613E-03 (2002,011,0000) | 6.7551E-03 (2002,340,0000) |
| 1809 | -227.649 | -407.685 | 1.1099E-02 (2002,339,0000) | 1.0306E-02 (2002,031,0000) | 8.9316E-03 (2002,011,0000) | 6.8693E-03 (2002,340,0000) |
| 1810 | -225.407 | -407.749 | 1.1248E-02 (2002,339,0000) | 1.0459E-02 (2002,031,0000) | 9.2322E-03 (2002,011,0000) | 6.9812E-03 (2002,340,0000) |
| 1811 | -223.165 | -407.812 | 1.1392E-02 (2002,339,0000) | 1.0598E-02 (2002,031,0000) | 9.4585E-03 (2002,011,0000) | 7.0922E-03 (2002,340,0000) |
| 1812 | -220.922 | -407.874 | 1.1528E-02 (2002,339,0000) | 1.0706E-02 (2002,031,0000) | 9.6108E-03 (2002,011,0000) | 7.2029E-03 (2002,340,0000) |
| 1813 | -218.680 | -407.936 | 1.1659E-02 (2002,339,0000) | 1.0775E-02 (2002,031,0000) | 9.6759E-03 (2002,011,0000) | 7.3124E-03 (2002,340,0000) |
| 1814 | -216.438 | -407.997 | 1.1775E-02 (2002,339,0000) | 1.0526E-02 (2002,031,0000) | 9.6021E-03 (2002,011,0000) | 7.4214E-03 (2002,340,0000) |
| 1815 | -214.195 | -408.057 | 1.1884E-02 (2002,339,0000) | 1.0227E-02 (2002,031,0000) | 9.3722E-03 (2002,011,0000) | 7.5250E-03 (2002,340,0000) |
| 1816 | -211.953 | -408.117 | 1.1915E-02 (2002,339,0000) | 9.3963E-03 (2002,031,0000) | 8.0271E-03 (2002,011,0000) | 7.6239E-03 (2002,340,0000) |
| 1817 | -317.212 | -401.847 | 6.9222E-03 (2002,037,0000) | 5.4759E-03 (2002,078,0000) | 4.8271E-03 (2002,343,0000) | 4.5825E-03 (2002,339,0000) |
| 1818 | -314.971 | -401.935 | 6.7101E-03 (2002,037,0000) | 5.3471E-03 (2002,078,0000) | 4.7822E-03 (2002,343,0000) | 4.7169E-03 (2002,339,0000) |
| 1819 | -312.731 | -402.023 | 6.4973E-03 (2002,037,0000) | 5.1846E-03 (2002,078,0000) | 4.8534E-03 (2002,339,0000) | 4.7147E-03 (2002,343,0000) |
| 1820 | -310.490 | -402.111 | 6.2848E-03 (2002,037,0000) | 5.0010E-03 (2002,078,0000) | 4.9934E-03 (2002,339,0000) | 4.6370E-03 (2002,343,0000) |
| 1821 | -308.249 | -402.198 | 6.0750E-03 (2002,037,0000) | 5.1339E-03 (2002,339,0000) | 4.7986E-03 (2002,078,0000) | 4.5467E-03 (2002,343,0000) |
| 1822 | -306.009 | -402.284 | 5.8677E-03 (2002,037,0000) | 5.2784E-03 (2002,339,0000) | 4.5776E-03 (2002,078,0000) | 4.3384E-03 (2002,343,0000) |
| 1823 | -303.768 | -402.369 | 5.6603E-03 (2002,037,0000) | 5.4222E-03 (2002,339,0000) | 4.3511E-03 (2002,078,0000) | 4.1573E-03 (2002,089,0000) |
| 1824 | -301.527 | -402.454 | 5.5704E-03 (2002,339,0000) | 5.4675E-03 (2002,037,0000) | 4.5278E-03 (2002,089,0000) | 4.2319E-03 (2002,343,0000) |
| 1825 | -299.286 | -402.538 | 5.7212E-03 (2002,339,0000) | 5.2769E-03 (2002,037,0000) | 4.4487E-03 (2002,089,0000) | 4.1373E-03 (2002,005,0000) |
| 1826 | -297.046 | -402.622 | 5.8735E-03 (2002,339,0000) | 5.0936E-03 (2002,037,0000) | 4.5888E-03 (2002,089,0000) | 4.5577E-03 (2002,005,0000) |
| 1827 | -294.805 | -402.705 | 6.0279E-03 (2002,339,0000) | 4.9180E-03 (2002,037,0000) | 4.7480E-03 (2002,005,0000) | 4.4723E-03 (2002,089,0000) |
| 1828 | -292.564 | -402.787 | 6.1817E-03 (2002,339,0000) | 4.7512E-03 (2002,037,0000) | 4.4241E-03 (2002,005,0000) | 4.1280E-03 (2002,089,0000) |
| 1829 | -290.323 | -402.869 | 6.3430E-03 (2002,339,0000) | 4.9180E-03 (2002,005,0000) | 4.5926E-03 (2002,037,0000) | 4.0841E-03 (2002,089,0000) |
| 1830 | -288.082 | -402.950 | 6.5015E-03 (2002,339,0000) | 4.7041E-03 (2002,005,0000) | 4.4440E-03 (2002,037,0000) | 4.1516E-03 (2002,340,0000) |
| 1831 | -285.841 | -403.031 | 6.6668E-03 (2002,339,0000) | 5.1179E-03 (2002,005,0000) | 4.3044E-03 (2002,037,0000) | 4.2359E-03 (2002,340,0000) |
| 1832 | -283.600 | -403.111 | 6.8253E-03 (2002,339,0000) | 4.3221E-03 (2002,340,0000) | 4.1729E-03 (2002,037,0000) | 4.0886E-03 (2002,036,0000) |
| 1833 | -281.359 | -403.190 | 6.9985E-03 (2002,339,0000) | 4.9792E-03 (2002,005,0000) | 4.4090E-03 (2002,340,0000) | 4.0975E-03 (2002,036,0000) |
| 1834 | -279.118 | -403.269 | 7.1682E-03 (2002,339,0000) | 5.2233E-03 (2002,005,0000) | 4.4975E-03 (2002,340,0000) | 4.1022E-03 (2002,036,0000) |
| 1835 | -276.877 | -403.347 | 7.3401E-03 (2002,339,0000) | 5.3205E-03 (2002,005,0000) | 4.5880E-03 (2002,340,0000) | 4.1044E-03 (2002,036,0000) |
| 1836 | -272.395 | -403.501 | 7.6874E-03 (2002,339,0000) | 5.1487E-03 (2002,005,0000) | 4.7729E-03 (2002,340,0000) | 4.1103E-03 (2002,036,0000) |
| 1837 | -270.154 | -403.577 | 7.8656E-03 (2002,339,0000) | 5.0828E-03 (2002,005,0000) | 4.8685E-03 (2002,340,0000) | 4.1139E-03 (2002,036,0000) |
| 1838 | -267.913 | -403.652 | 8.0429E-03 (2002,339,0000) | 4.9644E-03 (2002,340,0000) | 4.3915E-03 (2002,005,0000) | 4.1522E-03 (2002,031,0000) |
| 1839 | -265.672 | -403.727 | 8.2044E-03 (2002,339,0000) | 5.0632E-03 (2002,340,0000) | 4.1242E-03 (2002,036,0000) | 4.0829E-03 (2002,031,0000) |
| 1840 | -263.431 | -403.801 | 8.4047E-03 (2002,339,0000) | 5.1634E-03 (2002,340,0000) | 4.8534E-03 (2002,031,0000) | 4.3020E-03 (2002,005,0000) |
| 1841 | -261.190 | -403.875 | 8.5890E-03 (2002,339,0000) | 5.2708E-03 (2002,031,0000) | 5.2658E-03 (2002,340,0000) | 4.2507E-03 (2002,005,0000) |
| 1842 | -258.948 | -403.948 | 8.7741E-03 (2002,339,0000) | 5.8272E-03 (2002,031,0000) | 5.3690E-03 (2002,340,0000) | 4.4372E-03 (2002,005,0000) |
| 1843 | -256.707 | -404.020 | 8.9605E-03 (2002,339,0000) | 6.2784E-03 (2002,031,0000) | 5.4744E-03 (2002,340,0000) | 4.3386E-03 (2002,005,0000) |
| 1844 | -254.466 | -404.092 | 9.1473E-03 (2002,339,0000) | 6.7147E-03 (2002,031,0000) | 5.5807E-03 (2002,340,0000) | 4.2332E-03 (2002,005,0000) |
| 1845 | -252.225 | -404.163 | 9.3329E-03 (2002,339,0000) | 7.1531E-03 (2002,031,0000) | 5.6900E-03 (2002,340,0000) | 4.2278E-03 (2002,036,0000) |
| 1846 | -249.984 | -404.233 | 9.5195E-03 (2002,339,0000) | 7.5827E-03 (2002,031,0000) | 5.7996E-03 (2002,340,0000) | 4.3453E-03 (2002,263,0000) |
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| 1848 | -245.501 | -404.372 | 9.8905E-03 (2002,339,0000) | 8.3984E-03 (2002,031,0000) | 6.0257E-03 (2002,340,0000) | 4.8181E-03 (2002,011,0000) |
| 1849 | -243.260 | -404.441 | 1.0075E-02 (2002,339,0000) | 8.7768E-03 (2002,031,0000) | 6.1403E-03 (2002,340,0000) | 5.3634E-03 (2002,011,0000) |
| 1850 | -241.018 | -404.509 | 1.0256E-02 (2002,339,0000) | 9.1249E-03 (2002,031,0000) | 6.2561E-03 (2002,340,0000) | 5.9298E-03 (2002,011,0000) |
| 1851 | -238.777 | -404.576 | 1.0437E-02 (2002,339,0000) | 9.4467E-03 (2002,031,0000) | 6.4995E-03 (2002,011,0000) | 6.3729E-03 (2002,340,0000) |
| 1852 | -236.536 | -404.643 | 1.0615E-02 (2002,339,0000) | 9.7438E-03 (2002,031,0000) | 7.0645E-03 (2002,011,0000) | 6.4907E-03 (2002,340,0000) |
| 1853 | -234.294 | -404.709 | 1.0789E-02 (2002,339,0000) | 1.0026E-02 (2002,031,0000) | 7.6099E-03 (2002,011,0000) | 6.6082E-03 (2002,340,0000) |
| 1854 | -232.053 | -404.774 | 1.0961E-02 (2002,339,0000) | 1.0271E-02 (2002,031,0000) | 8.1220E-03 (2002,011,0000) | 6.7282E-03 (2002,340,0000) |
| 1855 | -229.811 | -404.839 | 1.1127E-02 (2002,339,0000) | 1.0491E-02 (2002,031,0000) | 8.5877E-03 (2002,011,0000) | 6.8468E-03 (2002,340,0000) |
| 1856 | -211.879 | -405.335 | 1.2144E-02 (2002,339,0000) | 9.6987E-03 (2002,031,0000) | 7.9957E-03 (2002,011,0000) | 7.7667E-03 (2002,340,0000) |
| 1857 | -314.862 | -399.154 | 6.8573E-03 (2002,037,0000) | 5.4803E-03 (2002,078,0000) | 4.9931E-03 (2002,343,0000) | 4.7623E-03 (2002,339,0000) |
| 1858 | -312.622 | -399.242 | 6.6392E-03 (2002,037,0000) | 5.3088E-03 (2002,078,0000) | 4.9218E-03 (2002,343,0000) | 4.9012E-03 (2002,339,0000) |
| 1859 | -310.382 | -399.330 | 6.4217E-03 (2002,037,0000) | 5.1139E-03 (2002,078,0000) | 5.0421E-03 (2002,339,0000) | 4.8413E-03 (2002,343,0000) |
| 1860 | -308.142 | -399.416 | 6.2052E-03 (2002,037,0000) | 5.1853E-03 (2002,339,0000) | 4.9044E-03 (2002,078,0000) | 4.7468E-03 (2002,343,0000) |
| 1861 | -305.902 | -399.502 | 5.9920E-03 (2002,037,0000) | 5.3308E-03 (2002,339,0000) | 4.6780E-03 (2002,078,0000) | 4.6128E-03 (2002,343,0000) |
| 1862 | -303.662 | -399.588 | 5.7811E-03 (2002,037,0000) | 5.4800E-03 (2002,339,0000) | 4.4601E-03 (2002,089,0000) | 4.4451E-03 (2002,078,0000) |
| 1863 | -301.422 | -399.673 | 5.6282E-03 (2002,339,0000) | 5.5779E-03 (2002,037,0000) | 4.6520E-03 (2002,089,0000) | 4.4394E-03 (2002,343,0000) |
| 1864 | -299.182 | -399.757 | 5.7809E-03 (2002,339,0000) | 5.3796E-03 (2002,037,0000) | 4.7477E-03 (2002,089,0000) | 4.3554E-03 (2002,343,0000) |
| 1865 | -296.942 | -399.841 | 5.9341E-03 (2002,339,0000) | 5.1889E-03 (2002,037,0000) | 4.7592E-03 (2002,089,0000) | 4.5704E-03 (2002,005,0000) |
| 1866 | -294.702 | -399.924 | 6.0918E-03 (2002,339,0000) | 5.0058E-03 (2002,037,0000) | 4.8140E-03 (2002,005,0000) | 4.7039E-03 (2002,089,0000) |
| 1867 | -292.462 | -400.006 | 6.2514E-03 (2002,339,0000) | 4.9358E-03 (2002,005,0000) | 4.8315E-03 (2002,037,0000) | 4.5167E-03 (2002,089,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1868 | -290.222 | -400.088 | 6.4104E-03 (2002,339,0000) | 4.9894E-03 (2002,005,0000) | 4.6667E-03 (2002,037,0000) | 4.2774E-03 (2002,089,0000) |
| 1869 | -287.982 | -400.169 | 6.5700E-03 (2002,339,0000) | 4.5095E-03 (2002,037,0000) | 4.2609E-03 (2002,036,0000) | 4.2411E-03 (2002,005,0000) |
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| 1871 | -283.502 | -400.329 | 6.8977E-03 (2002,339,0000) | 4.3239E-03 (2002,340,0000) | 4.2800E-03 (2002,036,0000) | 4.2281E-03 (2002,037,0000) |
| 1872 | -281.261 | -400.408 | 7.0757E-03 (2002,339,0000) | 5.1610E-03 (2002,005,0000) | 4.4130E-03 (2002,340,0000) | 4.2851E-03 (2002,036,0000) |
| 1873 | -279.021 | -400.487 | 7.2412E-03 (2002,339,0000) | 4.5022E-03 (2002,340,0000) | 4.2836E-03 (2002,036,0000) | 4.2793E-03 (2002,005,0000) |
| 1874 | -276.781 | -400.565 | 7.4206E-03 (2002,339,0000) | 5.1230E-03 (2002,005,0000) | 4.5953E-03 (2002,340,0000) | 4.2838E-03 (2002,036,0000) |
| 1875 | -274.541 | -400.642 | 7.5965E-03 (2002,339,0000) | 5.3826E-03 (2002,005,0000) | 4.6893E-03 (2002,340,0000) | 4.2809E-03 (2002,036,0000) |
| 1876 | -272.300 | -400.719 | 7.7738E-03 (2002,339,0000) | 4.8707E-03 (2002,005,0000) | 4.7837E-03 (2002,340,0000) | 4.2785E-03 (2002,036,0000) |
| 1877 | -270.060 | -400.795 | 7.9549E-03 (2002,339,0000) | 5.1743E-03 (2002,005,0000) | 4.8818E-03 (2002,340,0000) | 4.2764E-03 (2002,036,0000) |
| 1878 | -267.820 | -400.870 | 8.1372E-03 (2002,339,0000) | 4.9809E-03 (2002,340,0000) | 4.8424E-03 (2002,005,0000) | 4.3631E-03 (2002,031,0000) |
| 1879 | -265.579 | -400.945 | 8.2983E-03 (2002,339,0000) | 5.0820E-03 (2002,340,0000) | 4.2772E-03 (2002,036,0000) | 4.2072E-03 (2002,031,0000) |
| 1880 | -263.339 | -401.019 | 8.4934E-03 (2002,339,0000) | 5.1850E-03 (2002,340,0000) | 4.6853E-03 (2002,031,0000) | 4.2832E-03 (2002,036,0000) |
| 1881 | -261.099 | -401.093 | 8.6919E-03 (2002,339,0000) | 5.2891E-03 (2002,340,0000) | 5.2816E-03 (2002,031,0000) | 4.2918E-03 (2002,036,0000) |
| 1882 | -258.858 | -401.166 | 8.8815E-03 (2002,339,0000) | 5.8271E-03 (2002,031,0000) | 5.3967E-03 (2002,340,0000) | 4.3043E-03 (2002,036,0000) |
| 1883 | -256.618 | -401.238 | 9.0719E-03 (2002,339,0000) | 6.3588E-03 (2002,031,0000) | 5.5050E-03 (2002,340,0000) | 4.3449E-03 (2002,005,0000) |
| 1884 | -216.287 | -402.432 | 1.2219E-02 (2002,339,0000) | 1.1349E-02 (2002,031,0000) | 9.8713E-03 (2002,011,0000) | 7.6763E-03 (2002,340,0000) |
| 1885 | -214.046 | -402.493 | 1.2254E-02 (2002,339,0000) | 9.9672E-03 (2002,031,0000) | 8.0454E-03 (2002,011,0000) | 7.7903E-03 (2002,340,0000) |
| 1886 | -211.805 | -402.552 | 1.2459E-02 (2002,339,0000) | 1.1201E-02 (2002,031,0000) | 9.5410E-03 (2002,011,0000) | 7.9113E-03 (2002,340,0000) |
| 1887 | -314.752 | -396.373 | 7.0017E-03 (2002,037,0000) | 5.6149E-03 (2002,078,0000) | 5.1967E-03 (2002,343,0000) | 4.8070E-03 (2002,339,0000) |
| 1888 | -312.513 | -396.461 | 6.7786E-03 (2002,037,0000) | 5.4362E-03 (2002,078,0000) | 5.1272E-03 (2002,343,0000) | 4.9472E-03 (2002,339,0000) |
| 1889 | -310.274 | -396.548 | 6.5559E-03 (2002,037,0000) | 5.2353E-03 (2002,078,0000) | 5.0899E-03 (2002,339,0000) | 5.0410E-03 (2002,343,0000) |
| 1890 | -308.035 | -396.635 | 6.3336E-03 (2002,037,0000) | 5.2362E-03 (2002,339,0000) | 5.0164E-03 (2002,078,0000) | 4.9466E-03 (2002,343,0000) |
| 1891 | -305.796 | -396.721 | 6.1137E-03 (2002,037,0000) | 5.3829E-03 (2002,339,0000) | 4.8095E-03 (2002,343,0000) | 4.7763E-03 (2002,078,0000) |
| 1892 | -303.556 | -396.807 | 5.8966E-03 (2002,037,0000) | 5.5327E-03 (2002,339,0000) | 4.7510E-03 (2002,343,0000) | 4.7201E-03 (2002,089,0000) |
| 1893 | -301.317 | -396.892 | 5.6860E-03 (2002,037,0000) | 5.6840E-03 (2002,339,0000) | 4.7428E-03 (2002,089,0000) | 4.6387E-03 (2002,343,0000) |
| 1894 | -299.078 | -396.976 | 5.8385E-03 (2002,339,0000) | 5.4800E-03 (2002,037,0000) | 4.9033E-03 (2002,089,0000) | 4.5644E-03 (2002,343,0000) |
| 1895 | -296.839 | -397.059 | 5.9956E-03 (2002,339,0000) | 5.2817E-03 (2002,037,0000) | 4.9269E-03 (2002,089,0000) | 4.5525E-03 (2002,005,0000) |
| 1896 | -294.599 | -397.142 | 6.1531E-03 (2002,339,0000) | 5.0911E-03 (2002,037,0000) | 4.8616E-03 (2002,089,0000) | 4.7417E-03 (2002,005,0000) |
| 1897 | -292.360 | -397.225 | 6.3155E-03 (2002,339,0000) | 4.9095E-03 (2002,037,0000) | 4.8379E-03 (2002,005,0000) | 4.5887E-03 (2002,089,0000) |
| 1898 | -290.121 | -397.306 | 6.4776E-03 (2002,339,0000) | 4.9989E-03 (2002,005,0000) | 4.7374E-03 (2002,037,0000) | 4.4562E-03 (2002,036,0000) |
| 1899 | -287.882 | -397.387 | 6.6423E-03 (2002,339,0000) | 5.2669E-03 (2002,005,0000) | 4.5750E-03 (2002,037,0000) | 4.4832E-03 (2002,089,0000) |
| 1900 | -285.642 | -397.468 | 6.8088E-03 (2002,339,0000) | 5.2788E-03 (2002,005,0000) | 4.4826E-03 (2002,036,0000) | 4.4223E-03 (2002,037,0000) |
| 1901 | -283.403 | -397.548 | 6.9780E-03 (2002,339,0000) | 5.1969E-03 (2002,005,0000) | 4.4873E-03 (2002,036,0000) | 4.3223E-03 (2002,340,0000) |
| 1902 | -281.163 | -397.627 | 7.1493E-03 (2002,339,0000) | 5.0158E-03 (2002,005,0000) | 4.4868E-03 (2002,036,0000) | 4.4128E-03 (2002,340,0000) |
| 1903 | -278.924 | -397.705 | 7.3229E-03 (2002,339,0000) | 5.1529E-03 (2002,005,0000) | 4.5047E-03 (2002,340,0000) | 4.4830E-03 (2002,036,0000) |
| 1904 | -276.684 | -397.783 | 7.4992E-03 (2002,339,0000) | 5.0750E-03 (2002,005,0000) | 4.5978E-03 (2002,340,0000) | 4.4764E-03 (2002,036,0000) |
| 1905 | -274.445 | -397.861 | 7.6776E-03 (2002,339,0000) | 4.9093E-03 (2002,005,0000) | 4.6940E-03 (2002,340,0000) | 4.4687E-03 (2002,036,0000) |
| 1906 | -272.206 | -397.937 | 7.8576E-03 (2002,339,0000) | 4.9365E-03 (2002,005,0000) | 4.7923E-03 (2002,340,0000) | 4.4605E-03 (2002,036,0000) |
| 1907 | -269.966 | -398.013 | 8.0404E-03 (2002,339,0000) | 4.8919E-03 (2002,340,0000) | 4.6367E-03 (2002,005,0000) | 4.4533E-03 (2002,036,0000) |
| 1908 | -267.726 | -398.089 | 8.2041E-03 (2002,339,0000) | 4.9932E-03 (2002,340,0000) | 4.4451E-03 (2002,036,0000) | 3.8565E-03 (2002,031,0000) |
| 1909 | -265.487 | -398.164 | 8.3897E-03 (2002,339,0000) | 5.0963E-03 (2002,340,0000) | 4.4418E-03 (2002,036,0000) | 4.1831E-03 (2002,031,0000) |
| 1910 | -263.247 | -398.238 | 8.6017E-03 (2002,339,0000) | 5.2019E-03 (2002,340,0000) | 5.0357E-03 (2002,031,0000) | 4.4708E-03 (2002,005,0000) |
| 1911 | -261.008 | -398.311 | 8.7926E-03 (2002,339,0000) | 5.3099E-03 (2002,340,0000) | 5.2305E-03 (2002,031,0000) | 4.4461E-03 (2002,036,0000) |
| 1912 | -258.768 | -398.384 | 8.9838E-03 (2002,339,0000) | 5.5786E-03 (2002,031,0000) | 5.4196E-03 (2002,340,0000) | 4.4521E-03 (2002,036,0000) |
| 1913 | -256.528 | -398.456 | 9.1809E-03 (2002,339,0000) | 6.5156E-03 (2002,031,0000) | 5.5319E-03 (2002,340,0000) | 4.4632E-03 (2002,036,0000) |
| 1914 | -254.289 | -398.528 | 9.3770E-03 (2002,339,0000) | 7.0023E-03 (2002,031,0000) | 5.6473E-03 (2002,340,0000) | 4.4779E-03 (2002,036,0000) |
| 1915 | -213.972 | -399.710 | 1.2566E-02 (2002,339,0000) | 1.1160E-02 (2002,031,0000) | 9.3850E-03 (2002,011,0000) | 7.9275E-03 (2002,340,0000) |
| 1916 | -211.732 | -399.770 | 1.2598E-02 (2002,339,0000) | 1.0488E-02 (2002,031,0000) | 8.2568E-03 (2002,011,0000) | 8.0457E-03 (2002,340,0000) |
| 1917 | -209.492 | -399.829 | 1.2802E-02 (2002,339,0000) | 1.1112E-02 (2002,031,0000) | 8.8935E-03 (2002,011,0000) | 8.1718E-03 (2002,340,0000) |
| 1918 | -314.642 | -393.592 | 7.1397E-03 (2002,037,0000) | 5.7551E-03 (2002,078,0000) | 5.3929E-03 (2002,343,0000) | 4.8490E-03 (2002,339,0000) |
| 1919 | -312.404 | -393.680 | 6.9132E-03 (2002,037,0000) | 5.5695E-03 (2002,078,0000) | 5.3217E-03 (2002,343,0000) | 4.9923E-03 (2002,339,0000) |
| 1920 | -310.166 | -393.767 | 6.6858E-03 (2002,037,0000) | 5.3610E-03 (2002,078,0000) | 5.2424E-03 (2002,343,0000) | 5.1369E-03 (2002,339,0000) |
| 1921 | -307.927 | -393.854 | 6.4590E-03 (2002,037,0000) | 5.2839E-03 (2002,339,0000) | 5.1464E-03 (2002,343,0000) | 5.1306E-03 (2002,078,0000) |
| 1922 | -305.689 | -393.940 | 6.2330E-03 (2002,037,0000) | 5.4339E-03 (2002,339,0000) | 5.0537E-03 (2002,343,0000) | 4.8879E-03 (2002,078,0000) |
| 1923 | -303.451 | -394.025 | 6.0102E-03 (2002,037,0000) | 5.5860E-03 (2002,339,0000) | 4.9528E-03 (2002,343,0000) | 4.8267E-03 (2002,089,0000) |
| 1924 | -301.212 | -394.110 | 5.7907E-03 (2002,037,0000) | 5.7394E-03 (2002,339,0000) | 5.0003E-03 (2002,089,0000) | 4.8658E-03 (2002,343,0000) |
| 1925 | -298.974 | -394.194 | 5.8949E-03 (2002,339,0000) | 5.5779E-03 (2002,037,0000) | 5.1060E-03 (2002,089,0000) | 4.7729E-03 (2002,343,0000) |
| 1926 | -296.735 | -394.278 | 6.0533E-03 (2002,339,0000) | 5.3718E-03 (2002,037,0000) | 5.0766E-03 (2002,089,0000) | 4.6758E-03 (2002,343,0000) |
| 1927 | -294.497 | -394.361 | 6.2143E-03 (2002,339,0000) | 5.1734E-03 (2002,037,0000) | 5.0450E-03 (2002,089,0000) | 4.7549E-03 (2002,005,0000) |
| 1928 | -292.258 | -394.443 | 6.3759E-03 (2002,339,0000) | 5.0060E-03 (2002,005,0000) | 4.9845E-03 (2002,037,0000) | 4.9684E-03 (2002,089,0000) |
| 1929 | -290.020 | -394.525 | 6.5420E-03 (2002,339,0000) | 5.2175E-03 (2002,005,0000) | 4.8665E-03 (2002,089,0000) | 4.8052E-03 (2002,037,0000) |
| 1930 | -287.781 | -394.606 | 6.7081E-03 (2002,339,0000) | 5.3941E-03 (2002,005,0000) | 4.7767E-03 (2002,089,0000) | 4.6979E-03 (2002,036,0000) |
| 1931 | -285.543 | -394.686 | 6.8777E-03 (2002,339,0000) | 5.4992E-03 (2002,005,0000) | 4.7060E-03 (2002,036,0000) | 4.6075E-03 (2002,089,0000) |
| 1932 | -283.304 | -394.766 | 7.0497E-03 (2002,339,0000) | 5.5653E-03 (2002,005,0000) | 4.7080E-03 (2002,036,0000) | 4.4208E-03 (2002,089,0000) |
| 1933 | -281.065 | -394.845 | 7.2224E-03 (2002,339,0000) | 5.0401E-03 (2002,005,0000) | 4.7044E-03 (2002,036,0000) | 4.4083E-03 (2002,340,0000) |
| 1934 | -278.827 | -394.924 | 7.3979E-03 (2002,339,0000) | 5.2006E-03 (2002,005,0000) | 4.6964E-03 (2002,036,0000) | 4.5022E-03 (2002,340,0000) |
| 1935 | -276.588 | -395.002 | 7.5756E-03 (2002,339,0000) | 4.9305E-03 (2002,005,0000) | 4.6851E-03 (2002,036,0000) | 4.5977E-03 (2002,340,0000) |
| 1936 | -274.349 | -395.079 | 7.7415E-03 (2002,339,0000) | 4.6954E-03 (2002,340,0000) | 4.6701E-03 (2002,036,0000) | 3.8335E-03 (2002,037,0000) |
| 1937 | -272.111 | -395.156 | 7.9221E-03 (2002,339,0000) | 4.7961E-03 (2002,340,0000) | 4.6566E-03 (2002,036,0000) | 3.7328E-03 (2002,037,0000) |
| 1938 | -269.872 | -395.232 | 8.1248E-03 (2002,339,0000) | 4.8980E-03 (2002,340,0000) | 4.6444E-03 (2002,036,0000) | 4.5596E-03 (2002,005,0000) |
| 1939 | -267.633 | -395.307 | 8.3134E-03 (2002,339,0000) | 5.0009E-03 (2002,340,0000) | 4.6897E-03 (2002,005,0000) | 4.6314E-03 (2002,036,0000) |
| 1940 | -265.394 | -395.382 | 8.5027E-03 (2002,339,0000) | 5.1078E-03 (2002,340,0000) | 4.7375E-03 (2002,031,0000) | 4.6856E-03 (2002,005,0000) |
| 1941 | -263.156 | -395.456 | 8.6957E-03 (2002,339,0000) | 5.2156E-03 (2002,340,0000) | 5.1192E-03 (2002,031,0000) | 4.6144E-03 (2002,036,0000) |
| 1942 | -260.917 | -395.530 | 8.8895E-03 (2002,339,0000) | 5.5617E-03 (2002,031,0000) | 5.3258E-03 (2002,340,0000) | 4.6112E-03 (2002,036,0000) |
| 1943 | -258.678 | -395.602 | 9.0852E-03 (2002,339,0000) | 5.9506E-03 (2002,031,0000) | 5.4392E-03 (2002,340,0000) | 4.6119E-03 (2002,036,0000) |
| 1944 | -216.136 | -396.868 | 1.2657E-02 (2002,339,0000) | 1.2092E-02 (2002,031,0000) | 1.0156E-02 (2002,011,0000) | 7.9247E-03 (2002,340,0000) |
| 1945 | -213.897 | -396.928 | 1.2797E-02 (2002,339,0000) | 1.2044E-02 (2002,031,0000) | 1.0051E-02 (2002,011,0000) | 8.0578E-03 (2002,340,0000) |
| 1946 | -211.658 | -396.988 | 1.2921E-02 (2002,339,0000) | 1.1477E-02 (2002,031,0000) | 9.1497E-03 (2002,011,0000) | 8.1888E-03 (2002,340,0000) |
| 1947 | -209.419 | -397.047 | 1.3055E-02 (2002,339,0000) | 1.1964E-02 (2002,031,0000) | 9.6034E-03 (2002,011,0000) | 8.3181E-03 (2002,340,0000) |
| 1948 | -285.443 | -391.905 | 6.9433E-03 (2002,339,0000) | 5.5059E-03 (2002,005,0000) | 4.9451E-03 (2002,036,0000) | 4.7586E-03 (2002,089,0000) |
| 1949 | -283.205 | -391.985 | 7.1164E-03 (2002,339,0000) | 5.3167E-03 (2002,005,0000) | 4.9455E-03 (2002,036,0000) | 4.3722E-03 (2002,037,0000) |
| 1950 | -280.967 | -392.064 | 7.2805E-03 (2002,339,0000) | 4.9369E-03 (2002,036,0000) | 4.4009E-03 (2002,340,0000) | 4.2263E-03 (2002,037,0000) |
| 1951 | -278.730 | -392.142 | 7.4698E-03 (2002,339,0000) | 5.2713E-03 (2002,005,0000) | 4.9261E-03 (2002,036,0000) | 4.4956E-03 (2002,340,0000) |
| 1952 | -276.492 | -392.220 | 7.6503E-03 (2002,339,0000) | 5.3411E-03 (2002,005,0000) | 4.9106E-03 (2002,036,0000) | 4.5931E-03 (2002,340,0000) |
| 1953 | -274.254 | -392.298 | 7.8326E-03 (2002,339,0000) | 5.1409E-03 (2002,005,0000) | 4.8918E-03 (2002,036,0000) | 4.6924E-03 (2002,340,0000) |
| 1954 | -272.016 | -392.374 | 8.0187E-03 (2002,339,0000) | 4.9497E-03 (2002,005,0000) | 4.8712E-03 (2002,036,0000) | 4.7950E-03 (2002,340,0000) |
| 1955 | -269.778 | -392.450 | 8.2057E-03 (2002,339,0000) | 4.9284E-03 (2002,005,0000) | 4.8989E-03 (2002,340,0000) | 4.8507E-03 (2002,036,0000) |
| 1956 | -267.540 | -392.526 | 8.3960E-03 (2002,339,0000) | 5.0048E-03 (2002,340,0000) | 4.8320E-03 (2002,036,0000) | 4.8064E-03 (2002,005,0000) |
| 1957 | -265.302 | -392.600 | 8.5903E-03 (2002,339,0000) | 5.1135E-03 (2002,340,0000) | 4.8149E-03 (2002,036,0000) | 4.8144E-03 (2002,031,0000) |
| 1958 | -263.064 | -392.674 | 8.7868E-03 (2002,339,0000) | 5.3655E-03 (2002,031,0000) | 5.2248E-03 (2002,340,0000) | 5.0314E-03 (2002,005,0000) |
| 1959 | -260.826 | -392.748 | 8.9855E-03 (2002,339,0000) | 5.8000E-03 (2002,031,0000) | 5.3385E-03 (2002,340,0000) | 4.8710E-03 (2002,005,0000) |
| 1960 | -258.588 | -392.821 | 9.1836E-03 (2002,339,0000) | 6.1671E-03 (2002,031,0000) | 5.4549E-03 (2002,340,0000) | 4.7850E-03 (2002,036,0000) |
| 1961 | -213.823 | -394.146 | 1.3026E-02 (2002,339,0000) | 1.2490E-02 (2002,031,0000) | 1.0230E-02 (2002,011,0000) | 8.1866E-03 (2002,340,0000) |
| 1962 | -211.584 | -394.206 | 1.3164E-02 (2002,339,0000) | 1.2476E-02 (2002,031,0000) | 1.0050E-02 (2002,011,0000) | 8.3256E-03 (2002,340,0000) |
| 1963 | -285.344 | -389.124 | 7.0084E-03 (2002,339,0000) | 5.5049E-03 (2002,005,0000) | 5.1991E-03 (2002,036,0000) | 4.9401E-03 (2002,089,0000) |
| 1964 | -283.107 | -389.203 | 7.1783E-03 (2002,339,0000) | 5.1970E-03 (2002,036,0000) | 4.7645E-03 (2002,005,0000) | 4.4119E-03 (2002,037,0000) |
| 1965 | -280.869 | -389.283 | 7.3538E-03 (2002,339,0000) | 5.1885E-03 (2002,036,0000) | 4.3892E-03 (2002,340,0000) | 4.2770E-03 (2002,005,0000) |
| 1966 | -278.632 | -389.361 | 7.5402E-03 (2002,339,0000) | 5.1744E-03 (2002,036,0000) | 5.0423E-03 (2002,005,0000) | 4.4852E-03 (2002,340,0000) |
| 1967 | -276.395 | -389.439 | 7.7225E-03 (2002,339,0000) | 5.3630E-03 (2002,005,0000) | 5.1533E-03 (2002,036,0000) | 4.5838E-03 (2002,340,0000) |
| 1968 | -274.158 | -389.516 | 7.9086E-03 (2002,339,0000) | 5.6856E-03 (2002,005,0000) | 5.1279E-03 (2002,036,0000) | 4.6865E-03 (2002,340,0000) |
| 1969 | -269.684 | -389.669 | 8.2859E-03 (2002,339,0000) | 5.5132E-03 (2002,005,0000) | 5.0748E-03 (2002,036,0000) | 4.8953E-03 (2002,340,0000) |
| 1970 | -267.447 | -389.744 | 8.4789E-03 (2002,339,0000) | 5.3046E-03 (2002,005,0000) | 5.0476E-03 (2002,036,0000) | 5.0040E-03 (2002,340,0000) |
| 1971 | -211.510 | -391.424 | 1.3397E-02 (2002,339,0000) | 1.2872E-02 (2002,031,0000) | 1.0207E-02 (2002,011,0000) | 8.4590E-03 (2002,340,0000) |
| 1972 | -209.273 | -391.483 | 1.3399E-02 (2002,339,0000) | 1.1508E-02 (2002,031,0000) | 8.5959E-03 (2002,340,0000) | 7.9987E-03 (2002,011,0000) |
| 1973 | -278.535 | -386.580 | 7.6001E-03 (2002,339,0000) | 5.4393E-03 (2002,036,0000) | 4.4710E-03 (2002,340,0000) | 4.3403E-03 (2002,005,0000) |
| 1974 | -276.299 | -386.658 | 7.7916E-03 (2002,339,0000) | 5.4319E-03 (2002,005,0000) | 5.4146E-03 (2002,036,0000) | 4.5707E-03 (2002,340,0000) |
| 1975 | -215.910 | -388.522 | 1.3316E-02 (2002,031,0000) | 1.3301E-02 (2002,339,0000) | 1.0638E-02 (2002,011,0000) | 8.2787E-03 (2002,340,0000) |
| 1976 | -213.599 | -385.800 | 1.3725E-02 (2002,031,0000) | 1.3680E-02 (2002,339,0000) | 1.0634E-02 (2002,011,0000) | 8.5564E-03 (2002,340,0000) |
| 1977 | -211.363 | -385.860 | 1.3849E-02 (2002,339,0000) | 1.3700E-02 (2002,031,0000) | 1.0444E-02 (2002,011,0000) | 8.7197E-03 (2002,340,0000) |
| 1978 | -209.054 | -383.137 | 1.4235E-02 (2002,339,0000) | 1.4094E-02 (2002,031,0000) | 1.0335E-02 (2002,011,0000) | 9.0179E-03 (2002,340,0000) |
| 1979 | -206.746 | -380.413 | 1.4504E-02 (2002,339,0000) | 1.3127E-02 (2002,031,0000) | 9.3110E-03 (2002,340,0000) | 8.1440E-03 (2002,011,0000) |
| 1980 | -204.440 | -377.689 | 1.5009E-02 (2002,339,0000) | 1.4589E-02 (2002,031,0000) | 9.8162E-03 (2002,011,0000) | 9.6526E-03 (2002,340,0000) |
| 1981 | -202.136 | -374.965 | 1.5380E-02 (2002,339,0000) | 1.4385E-02 (2002,031,0000) | 9.9908E-03 (2002,340,0000) | 8.5306E-03 (2002,011,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1982 | -202.065 | -372.183 | 1.5384E-02 (2002,339,0000) | 1.3451E-02 (2002,031,0000) | 1.0115E-02 (2002,340,0000) | 7.3166E-03 (2002,282,0000) |
| 1983 | -201.994 | -369.401 | 1.5830E-02 (2002,339,0000) | 1.4978E-02 (2002,031,0000) | 1.0286E-02 (2002,340,0000) | 8.2271E-03 (2002,011,0000) |
| 1984 | -199.763 | -369.458 | 1.5858E-02 (2002,339,0000) | 1.3936E-02 (2002,031,0000) | 1.0474E-02 (2002,340,0000) | 7.4570E-03 (2002,282,0000) |
| 1985 | -199.693 | -366.676 | 1.6253E-02 (2002,339,0000) | 1.5318E-02 (2002,031,0000) | 1.0651E-02 (2002,340,0000) | 8.7717E-03 (2002,011,0000) |
| 1986 | -195.231 | -366.787 | 1.6524E-02 (2002,339,0000) | 1.4588E-02 (2002,031,0000) | 1.1081E-02 (2002,340,0000) | 7.9864E-03 (2002,011,0000) |
| 1987 | -197.393 | -363.950 | 1.6626E-02 (2002,339,0000) | 1.5086E-02 (2002,031,0000) | 1.1024E-02 (2002,340,0000) | 8.1937E-03 (2002,013,0000) |
| 1988 | -192.798 | -358.497 | 1.7121E-02 (2002,339,0000) | 1.3238E-02 (2002,031,0000) | 1.1750E-02 (2002,340,0000) | 8.9265E-03 (2002,013,0000) |

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CALPOST Version 5.6394 Level 070622

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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1198 | -355.887 | -464.319 | 1.3557E-04 | 1593 | -221.307 | -421.787 | 3.8593E-04 |
| 1199 | -353.629 | -464.418 | 1.3754E-04 | 1594 | -219.061 | -421.849 | 3.8866E-04 |
| 1200 | -351.371 | -464.517 | 1.3795E-04 | 1595 | -216.814 | -421.910 | 3.8705E-04 |
| 1201 | -362.536 | -461.234 | 1.3835E-04 | 1596 | -214.568 | -421.971 | 3.8333E-04 |
| 1202 | -360.279 | -461.336 | 1.3934E-04 | 1597 | -212.322 | -422.030 | 3.8359E-04 |
| 1203 | -358.021 | -461.436 | 1.4064E-04 | 1598 | -210.076 | -422.090 | 3.8796E-04 |
| 1204 | -355.764 | -461.536 | 1.4235E-04 | 1599 | -207.829 | -422.148 | 3.7201E-04 |
| 1205 | -353.507 | -461.636 | 1.4372E-04 | 1600 | -205.583 | -422.206 | 3.7540E-04 |
| 1206 | -351.249 | -461.735 | 1.4372E-04 | 1601 | -203.337 | -422.264 | 4.0103E-04 |
| 1207 | -348.992 | -461.833 | 1.4405E-04 | 1602 | -326.742 | -415.392 | 2.3156E-04 |
| 1208 | -366.923 | -458.247 | 1.3764E-04 | 1603 | -324.498 | -415.483 | 2.3302E-04 |
| 1209 | -364.667 | -458.350 | 1.4136E-04 | 1604 | -322.253 | -415.574 | 2.3510E-04 |
| 1210 | -362.410 | -458.452 | 1.4205E-04 | 1605 | -302.052 | -416.362 | 2.5994E-04 |
| 1211 | -360.154 | -458.553 | 1.4402E-04 | 1606 | -268.380 | -417.562 | 2.9770E-04 |
| 1212 | -357.897 | -458.654 | 1.4511E-04 | 1607 | -266.134 | -417.637 | 2.8989E-04 |
| 1213 | -355.641 | -458.754 | 1.4664E-04 | 1608 | -263.889 | -417.712 | 2.8013E-04 |
| 1214 | -353.384 | -458.853 | 1.4746E-04 | 1609 | -261.644 | -417.785 | 2.9990E-04 |
| 1215 | -351.128 | -458.952 | 1.4889E-04 | 1610 | -259.399 | -417.858 | 3.0960E-04 |
| 1216 | -348.871 | -459.050 | 1.4987E-04 | 1611 | -257.154 | -417.931 | 3.0986E-04 |
| 1217 | -346.614 | -459.148 | 1.4878E-04 | 1612 | -254.909 | -418.003 | 2.9667E-04 |
| 1218 | -373.563 | -455.154 | 1.3938E-04 | 1613 | -252.664 | -418.074 | 3.1271E-04 |
| 1219 | -366.796 | -455.465 | 1.4228E-04 | 1614 | -250.419 | -418.144 | 3.1920E-04 |
| 1220 | -364.541 | -455.568 | 1.4497E-04 | 1615 | -248.174 | -418.214 | 3.3827E-04 |
| 1221 | -362.285 | -455.670 | 1.4641E-04 | 1616 | -245.928 | -418.284 | 3.3641E-04 |
| 1222 | -360.029 | -455.771 | 1.4779E-04 | 1617 | -243.683 | -418.352 | 3.4898E-04 |
| 1223 | -357.774 | -455.872 | 1.4915E-04 | 1618 | -241.438 | -418.420 | 3.5158E-04 |
| 1224 | -355.518 | -455.972 | 1.5067E-04 | 1619 | -239.193 | -418.488 | 3.5065E-04 |
| 1225 | -353.262 | -456.071 | 1.5176E-04 | 1620 | -236.947 | -418.555 | 3.6616E-04 |
| 1226 | -351.006 | -456.170 | 1.5242E-04 | 1621 | -234.702 | -418.621 | 3.7137E-04 |
| 1227 | -348.750 | -456.268 | 1.5289E-04 | 1622 | -232.457 | -418.686 | 3.7641E-04 |
| 1228 | -346.494 | -456.366 | 1.5276E-04 | 1623 | -230.211 | -418.751 | 3.8104E-04 |
| 1229 | -375.689 | -452.267 | 1.3928E-04 | 1624 | -227.966 | -418.815 | 3.8540E-04 |
| 1230 | -373.434 | -452.372 | 1.4270E-04 | 1625 | -225.721 | -418.879 | 3.8949E-04 |
| 1231 | -371.179 | -452.476 | 1.4186E-04 | 1626 | -223.475 | -418.942 | 3.9347E-04 |
| 1232 | -368.924 | -452.580 | 1.4578E-04 | 1627 | -221.230 | -419.004 | 3.9684E-04 |
| 1233 | -366.670 | -452.683 | 1.4727E-04 | 1628 | -218.984 | -419.066 | 3.9949E-04 |
| 1234 | -364.415 | -452.786 | 1.4806E-04 | 1629 | -216.739 | -419.127 | 3.9887E-04 |
| 1235 | -362.160 | -452.888 | 1.5009E-04 | 1630 | -214.494 | -419.188 | 4.0233E-04 |
| 1236 | -359.905 | -452.989 | 1.5122E-04 | 1631 | -212.248 | -419.248 | 4.0187E-04 |
| 1237 | -357.650 | -453.089 | 1.5305E-04 | 1632 | -210.003 | -419.307 | 3.9832E-04 |
| 1238 | -353.140 | -453.289 | 1.5558E-04 | 1633 | -207.757 | -419.365 | 3.8089E-04 |
| 1239 | -350.885 | -453.388 | 1.5662E-04 | 1634 | -205.512 | -419.423 | 4.0449E-04 |
| 1240 | -348.630 | -453.486 | 1.5740E-04 | 1635 | -203.266 | -419.481 | 4.1264E-04 |
| 1241 | -346.375 | -453.583 | 1.5922E-04 | 1636 | -328.872 | -412.519 | 2.3420E-04 |
| 1242 | -377.813 | -449.379 | 1.4124E-04 | 1637 | -326.629 | -412.611 | 2.3680E-04 |
| 1243 | -375.559 | -449.485 | 1.4446E-04 | 1638 | -324.385 | -412.702 | 2.3887E-04 |
| 1244 | -373.305 | -449.590 | 1.4487E-04 | 1639 | -322.141 | -412.793 | 2.4181E-04 |
| 1245 | -371.051 | -449.694 | 1.4691E-04 | 1640 | -319.898 | -412.883 | 2.4531E-04 |
| 1246 | -368.797 | -449.798 | 1.4930E-04 | 1641 | -317.654 | -412.972 | 2.4171E-04 |
| 1247 | -366.543 | -449.901 | 1.5075E-04 | 1642 | -301.947 | -413.580 | 2.6162E-04 |
| 1248 | -364.289 | -450.004 | 1.5153E-04 | 1643 | -272.775 | -414.628 | 2.8658E-04 |
| 1249 | -362.034 | -450.105 | 1.5304E-04 | 1644 | -270.530 | -414.705 | 2.9152E-04 |
| 1250 | -359.780 | -450.207 | 1.5495E-04 | 1645 | -268.286 | -414.780 | 2.9305E-04 |
| 1251 | -357.526 | -450.307 | 1.5654E-04 | 1646 | -266.042 | -414.855 | 2.8481E-04 |
| 1252 | -353.018 | -450.507 | 1.5966E-04 | 1647 | -263.798 | -414.929 | 3.0506E-04 |
| 1253 | -350.763 | -450.605 | 1.6066E-04 | 1648 | -261.553 | -415.003 | 2.9646E-04 |
| 1254 | -348.509 | -450.703 | 1.6149E-04 | 1649 | -259.309 | -415.076 | 3.1052E-04 |
| 1255 | -346.255 | -450.801 | 1.6316E-04 | 1650 | -257.065 | -415.149 | 3.0853E-04 |
| 1256 | -344.000 | -450.898 | 1.6110E-04 | 1651 | -254.820 | -415.220 | 2.9782E-04 |
| 1257 | -379.935 | -446.491 | 1.4262E-04 | 1652 | -252.576 | -415.292 | 3.1837E-04 |
| 1258 | -377.682 | -446.597 | 1.4687E-04 | 1653 | -250.332 | -415.362 | 3.3975E-04 |
| 1259 | -375.429 | -446.703 | 1.4828E-04 | 1654 | -248.087 | -415.432 | 3.4423E-04 |
| 1260 | -373.175 | -446.808 | 1.4936E-04 | 1655 | -245.843 | -415.501 | 3.5180E-04 |
| 1261 | -370.922 | -446.912 | 1.5099E-04 | 1656 | -243.598 | -415.570 | 3.5759E-04 |
| 1262 | -368.669 | -447.016 | 1.5260E-04 | 1657 | -241.354 | -415.638 | 3.6326E-04 |
| 1263 | -366.416 | -447.119 | 1.5411E-04 | 1658 | -239.109 | -415.705 | 3.6365E-04 |
| 1264 | -364.162 | -447.222 | 1.5536E-04 | 1659 | -236.865 | -415.772 | 3.7495E-04 |
| 1265 | -361.909 | -447.323 | 1.5682E-04 | 1660 | -234.620 | -415.838 | 3.8061E-04 |
| 1266 | -359.656 | -447.425 | 1.5853E-04 | 1661 | -232.376 | -415.904 | 3.8592E-04 |
| 1267 | -350.642 | -447.823 | 1.6453E-04 | 1662 | -230.131 | -415.969 | 3.9103E-04 |
| 1268 | -348.388 | -447.921 | 1.6533E-04 | 1663 | -227.887 | -416.033 | 3.9576E-04 |
| 1269 | -346.135 | -448.019 | 1.6616E-04 | 1664 | -225.642 | -416.096 | 3.9998E-04 |
| 1270 | -379.803 | -443.709 | 1.4537E-04 | 1665 | -223.398 | -416.159 | 4.0437E-04 |
| 1271 | -377.551 | -443.816 | 1.4992E-04 | 1666 | -221.153 | -416.222 | 4.0755E-04 |
| 1272 | -375.299 | -443.921 | 1.5137E-04 | 1667 | -218.908 | -416.284 | 4.0431E-04 |
| 1273 | -373.046 | -444.026 | 1.5282E-04 | 1668 | -216.664 | -416.345 | 4.1221E-04 |
| 1274 | -370.794 | -444.131 | 1.5370E-04 | 1669 | -214.419 | -416.405 | 3.9961E-04 |
| 1275 | -368.541 | -444.234 | 1.5579E-04 | 1670 | -212.174 | -416.465 | 4.0214E-04 |
| 1276 | -366.289 | -444.337 | 1.5729E-04 | 1671 | -209.930 | -416.524 | 4.0365E-04 |
| 1277 | -364.036 | -444.440 | 1.5887E-04 | 1672 | -207.685 | -416.583 | 4.2142E-04 |
| 1278 | -355.026 | -444.843 | 1.6536E-04 | 1673 | -328.758 | -409.737 | 2.3815E-04 |
| 1279 | -350.520 | -445.041 | 1.6853E-04 | 1674 | -326.515 | -409.829 | 2.4154E-04 |
| 1280 | -348.268 | -445.139 | 1.6931E-04 | 1675 | -324.272 | -409.921 | 2.4289E-04 |
| 1281 | -346.015 | -445.237 | 1.7020E-04 | 1676 | -322.029 | -410.011 | 2.4589E-04 |
| 1282 | -381.923 | -440.821 | 1.4647E-04 | 1677 | -319.786 | -410.101 | 2.4978E-04 |
| 1283 | -379.672 | -440.928 | 1.5088E-04 | 1678 | -317.543 | -410.191 | 2.5295E-04 |
| 1284 | -377.420 | -441.034 | 1.5238E-04 | 1679 | -315.300 | -410.279 | 2.5070E-04 |
| 1285 | -375.169 | -441.140 | 1.5431E-04 | 1680 | -313.057 | -410.367 | 2.6028E-04 |
| 1286 | -372.917 | -441.245 | 1.5583E-04 | 1681 | -310.814 | -410.455 | 2.6074E-04 |
| 1287 | -370.665 | -441.349 | 1.5717E-04 | 1682 | -308.571 | -410.542 | 2.6349E-04 |
| 1288 | -368.414 | -441.453 | 1.5854E-04 | 1683 | -301.842 | -410.799 | 2.7008E-04 |

| | | | |
|---|---|---|---|
| 1289 | -366.162 | -441.556 | 1.6006E-04 |
| 1290 | -354.903 | -442.061 | 1.6856E-04 |
| 1291 | -352.651 | -442.161 | 1.6940E-04 |
| 1292 | -350.399 | -442.259 | 1.7159E-04 |
| 1293 | -348.147 | -442.357 | 1.7248E-04 |
| 1294 | -345.895 | -442.454 | 1.7422E-04 |
| 1295 | -397.546 | -437.275 | 1.4402E-04 |
| 1296 | -384.042 | -437.932 | 1.4982E-04 |
| 1297 | -381.791 | -438.040 | 1.4931E-04 |
| 1298 | -379.540 | -438.146 | 1.5413E-04 |
| 1299 | -377.289 | -438.253 | 1.5564E-04 |
| 1300 | -375.039 | -438.358 | 1.5719E-04 |
| 1301 | -372.788 | -438.463 | 1.5886E-04 |
| 1302 | -370.537 | -438.567 | 1.6011E-04 |
| 1303 | -368.286 | -438.671 | 1.6176E-04 |
| 1304 | -366.035 | -438.774 | 1.6279E-04 |
| 1305 | -363.784 | -438.876 | 1.6492E-04 |
| 1306 | -361.533 | -438.978 | 1.6660E-04 |
| 1307 | -359.282 | -439.079 | 1.6848E-04 |
| 1308 | -352.529 | -439.379 | 1.7351E-04 |
| 1309 | -350.278 | -439.477 | 1.7459E-04 |
| 1310 | -348.026 | -439.575 | 1.7587E-04 |
| 1311 | -345.775 | -439.673 | 1.7565E-04 |
| 1312 | -228.679 | -443.862 | 3.0252E-04 |
| 1313 | -226.427 | -443.926 | 3.0448E-04 |
| 1314 | -224.175 | -443.990 | 3.0630E-04 |
| 1315 | -221.922 | -444.052 | 3.0797E-04 |
| 1316 | -219.670 | -444.114 | 3.0951E-04 |
| 1317 | -401.907 | -434.269 | 1.4452E-04 |
| 1318 | -399.658 | -434.382 | 1.4565E-04 |
| 1319 | -397.408 | -434.493 | 1.4682E-04 |
| 1320 | -383.909 | -435.151 | 1.5411E-04 |
| 1321 | -381.659 | -435.258 | 1.5553E-04 |
| 1322 | -379.409 | -435.365 | 1.5699E-04 |
| 1323 | -377.159 | -435.471 | 1.5791E-04 |
| 1324 | -374.909 | -435.577 | 1.5953E-04 |
| 1325 | -372.659 | -435.682 | 1.6160E-04 |
| 1326 | -368.158 | -435.889 | 1.6468E-04 |
| 1327 | -365.908 | -435.992 | 1.6593E-04 |
| 1328 | -361.408 | -436.196 | 1.6968E-04 |
| 1329 | -359.157 | -436.297 | 1.7152E-04 |
| 1330 | -352.407 | -436.597 | 1.7696E-04 |
| 1331 | -350.156 | -436.695 | 1.7798E-04 |
| 1332 | -347.906 | -436.793 | 1.8036E-04 |
| 1333 | -235.355 | -440.884 | 3.0370E-04 |
| 1334 | -233.103 | -440.950 | 3.0640E-04 |
| 1335 | -230.852 | -441.015 | 3.0884E-04 |
| 1336 | -228.600 | -441.079 | 3.1115E-04 |
| 1337 | -226.349 | -441.143 | 3.1331E-04 |
| 1338 | -224.097 | -441.206 | 3.1484E-04 |
| 1339 | -221.845 | -441.269 | 3.0791E-04 |
| 1340 | -219.594 | -441.331 | 3.1515E-04 |
| 1341 | -217.342 | -441.392 | 3.2022E-04 |
| 1342 | -215.090 | -441.453 | 3.2180E-04 |
| 1343 | -212.838 | -441.513 | 3.2343E-04 |
| 1344 | -401.768 | -431.488 | 1.4720E-04 |
| 1345 | -399.519 | -431.601 | 1.4833E-04 |
| 1346 | -397.270 | -431.713 | 1.4953E-04 |
| 1347 | -386.025 | -432.262 | 1.5173E-04 |
| 1348 | -383.776 | -432.370 | 1.5683E-04 |
| 1349 | -381.526 | -432.477 | 1.5819E-04 |
| 1350 | -379.277 | -432.584 | 1.5961E-04 |
| 1351 | -377.028 | -432.690 | 1.6105E-04 |
| 1352 | -374.779 | -432.795 | 1.6261E-04 |
| 1353 | -372.529 | -432.900 | 1.6424E-04 |
| 1354 | -368.031 | -433.108 | 1.6751E-04 |
| 1355 | -365.781 | -433.211 | 1.6910E-04 |
| 1356 | -363.532 | -433.313 | 1.7136E-04 |
| 1357 | -361.282 | -433.415 | 1.7275E-04 |
| 1358 | -359.033 | -433.516 | 1.7487E-04 |
| 1359 | -354.534 | -433.716 | 1.7871E-04 |
| 1360 | -352.284 | -433.815 | 1.7991E-04 |
| 1361 | -350.035 | -433.914 | 1.8192E-04 |
| 1362 | -347.785 | -434.012 | 1.8319E-04 |
| 1363 | -246.527 | -437.763 | 2.9468E-04 |
| 1364 | -244.276 | -437.832 | 2.9842E-04 |
| 1365 | -242.026 | -437.900 | 3.0203E-04 |
| 1366 | -239.775 | -437.967 | 3.0550E-04 |
| 1367 | -237.524 | -438.034 | 3.0879E-04 |
| 1368 | -235.273 | -438.101 | 3.1190E-04 |
| 1369 | -233.022 | -438.166 | 3.1477E-04 |
| 1370 | -230.772 | -438.231 | 3.1751E-04 |
| 1371 | -228.521 | -438.296 | 3.1113E-04 |
| 1372 | -226.270 | -438.360 | 3.1227E-04 |
| 1373 | -224.019 | -438.423 | 3.1248E-04 |
| 1374 | -221.768 | -438.485 | 3.1166E-04 |
| 1375 | -219.517 | -438.547 | 3.1349E-04 |
| 1376 | -217.267 | -438.609 | 3.1942E-04 |
| 1377 | -215.016 | -438.669 | 3.2614E-04 |
| 1378 | -212.765 | -438.729 | 3.2783E-04 |
| 1379 | -210.514 | -438.789 | 3.3467E-04 |
| 1380 | -208.263 | -438.847 | 3.3634E-04 |
| 1381 | -206.012 | -438.905 | 3.3806E-04 |
| 1382 | -203.761 | -438.963 | 3.3949E-04 |
| 1383 | -401.629 | -428.708 | 1.4947E-04 |
| 1384 | -399.380 | -428.820 | 1.5108E-04 |
| 1385 | -397.132 | -428.932 | 1.5210E-04 |
| 1386 | -392.636 | -429.153 | 1.5030E-04 |
| 1387 | -390.387 | -429.263 | 1.5298E-04 |
| 1388 | -388.139 | -429.372 | 1.5557E-04 |
| 1389 | -385.891 | -429.481 | 1.5810E-04 |
| 1390 | -383.642 | -429.589 | 1.5937E-04 |
| 1391 | -381.394 | -429.696 | 1.6066E-04 |
| 1392 | -379.146 | -429.803 | 1.6201E-04 |
| 1393 | -376.897 | -429.909 | 1.6372E-04 |
| 1394 | -374.649 | -430.014 | 1.6498E-04 |
| 1395 | -367.903 | -430.327 | 1.7024E-04 |
| 1396 | -365.654 | -430.430 | 1.7203E-04 |
| 1397 | -358.908 | -430.734 | 1.7759E-04 |
| 1398 | -352.162 | -431.034 | 1.8387E-04 |
| 1399 | -349.913 | -431.132 | 1.8599E-04 |
| 1400 | -347.664 | -431.230 | 1.8691E-04 |
| 1401 | -248.691 | -434.910 | 2.9776E-04 |
| 1402 | -246.441 | -434.980 | 3.0156E-04 |

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| 1684 | -299.599 | -410.883 | 2.7276E-04 |
| 1685 | -297.356 | -410.967 | 2.7563E-04 |
| 1686 | -295.113 | -411.050 | 2.8235E-04 |
| 1687 | -272.680 | -411.846 | 2.8942E-04 |
| 1688 | -270.436 | -411.922 | 2.9806E-04 |
| 1689 | -268.193 | -411.998 | 3.0117E-04 |
| 1690 | -265.949 | -412.073 | 2.9815E-04 |
| 1691 | -263.706 | -412.147 | 3.1137E-04 |
| 1692 | -261.462 | -412.221 | 3.0401E-04 |
| 1693 | -259.219 | -412.294 | 3.0736E-04 |
| 1694 | -256.975 | -412.366 | 3.1772E-04 |
| 1695 | -254.732 | -412.438 | 3.0968E-04 |
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| 1518 | -246.185 | -426.631 | 2.9590E-04 | 1913 | -256.528 | -398.456 | 3.6538E-04 |
| 1519 | -243.937 | -426.700 | 3.1777E-04 | 1914 | -254.289 | -398.528 | 3.7163E-04 |
| 1520 | -241.690 | -426.768 | 3.2344E-04 | 1915 | -213.972 | -399.710 | 4.6472E-04 |
| 1521 | -239.442 | -426.836 | 3.1840E-04 | 1916 | -211.732 | -399.770 | 4.5074E-04 |
| 1522 | -237.195 | -426.903 | 3.3317E-04 | 1917 | -209.492 | -399.829 | 4.6810E-04 |
| 1523 | -234.947 | -426.969 | 3.2781E-04 | 1918 | -314.642 | -393.592 | 2.8463E-04 |
| 1524 | -232.699 | -427.034 | 3.3692E-04 | 1919 | -312.404 | -393.680 | 2.8902E-04 |
| 1525 | -230.452 | -427.099 | 3.4112E-04 | 1920 | -310.166 | -393.767 | 2.9347E-04 |
| 1526 | -228.204 | -427.164 | 3.5634E-04 | 1921 | -307.927 | -393.854 | 2.9734E-04 |
| 1527 | -225.956 | -427.227 | 3.4506E-04 | 1922 | -305.689 | -393.940 | 3.0126E-04 |
| 1528 | -223.708 | -427.290 | 3.5077E-04 | 1923 | -303.451 | -394.025 | 3.0450E-04 |
| 1529 | -221.461 | -427.353 | 3.6516E-04 | 1924 | -301.212 | -394.110 | 3.0876E-04 |
| 1530 | -219.213 | -427.415 | 3.6741E-04 | 1925 | -298.974 | -394.194 | 3.1235E-04 |
| 1531 | -216.965 | -427.476 | 3.6888E-04 | 1926 | -296.735 | -394.278 | 3.1524E-04 |
| 1532 | -214.717 | -427.536 | 3.7068E-04 | 1927 | -294.497 | -394.361 | 3.1805E-04 |
| 1533 | -212.469 | -427.596 | 3.6354E-04 | 1928 | -292.258 | -394.443 | 3.2079E-04 |
| 1534 | -210.222 | -427.656 | 3.5628E-04 | 1929 | -290.020 | -394.525 | 3.2337E-04 |
| 1535 | -207.974 | -427.714 | 3.5527E-04 | 1930 | -287.781 | -394.606 | 3.2602E-04 |
| 1536 | -205.726 | -427.772 | 3.7801E-04 | 1931 | -285.543 | -394.686 | 3.2801E-04 |
| 1537 | -203.478 | -427.830 | 3.7830E-04 | 1932 | -283.304 | -394.766 | 3.3005E-04 |
| 1538 | -385.355 | -418.357 | 1.6747E-04 | 1933 | -281.065 | -394.845 | 3.1915E-04 |
| 1539 | -347.182 | -420.104 | 1.9904E-04 | 1934 | -278.827 | -394.924 | 3.2341E-04 |
| 1540 | -266.320 | -423.202 | 2.8973E-04 | 1935 | -276.588 | -395.002 | 3.2270E-04 |
| 1541 | -264.073 | -423.276 | 2.8993E-04 | 1936 | -274.349 | -395.079 | 3.1381E-04 |
| 1542 | -261.826 | -423.350 | 2.9768E-04 | 1937 | -272.111 | -395.156 | 3.1658E-04 |
| 1543 | -259.580 | -423.423 | 3.0172E-04 | 1938 | -269.872 | -395.232 | 3.2892E-04 |
| 1544 | -257.333 | -423.496 | 3.0622E-04 | 1939 | -267.633 | -395.307 | 3.3767E-04 |
| 1545 | -255.086 | -423.568 | 3.0858E-04 | 1940 | -265.394 | -395.382 | 3.4614E-04 |
| 1546 | -252.840 | -423.639 | 2.9596E-04 | 1941 | -263.156 | -395.456 | 3.5090E-04 |
| 1547 | -250.593 | -423.709 | 2.9907E-04 | 1942 | -260.917 | -395.530 | 3.5755E-04 |
| 1548 | -248.346 | -423.779 | 3.0164E-04 | 1943 | -258.678 | -395.602 | 3.6115E-04 |
| 1549 | -246.099 | -423.849 | 3.1902E-04 | 1944 | -216.136 | -396.868 | 4.9810E-04 |
| 1550 | -243.853 | -423.917 | 3.1829E-04 | 1945 | -213.897 | -396.928 | 4.9981E-04 |
| 1551 | -241.606 | -423.986 | 3.3406E-04 | 1946 | -211.658 | -396.988 | 4.7631E-04 |
| 1552 | -239.359 | -424.053 | 3.4273E-04 | 1947 | -209.419 | -397.047 | 5.0407E-04 |
| 1553 | -237.112 | -424.120 | 3.3808E-04 | 1948 | -285.443 | -391.905 | 3.3460E-04 |
| 1554 | -234.865 | -424.186 | 3.4076E-04 | 1949 | -283.205 | -391.985 | 3.2910E-04 |
| 1555 | -232.618 | -424.252 | 3.4942E-04 | 1950 | -280.967 | -392.064 | 3.1162E-04 |
| 1556 | -230.371 | -424.317 | 3.4820E-04 | 1951 | -278.730 | -392.142 | 3.3145E-04 |
| 1557 | -228.125 | -424.381 | 3.6332E-04 | 1952 | -276.492 | -392.220 | 3.3760E-04 |
| 1558 | -225.878 | -424.445 | 3.6922E-04 | 1953 | -274.254 | -392.298 | 3.3680E-04 |
| 1559 | -223.631 | -424.508 | 3.7255E-04 | 1954 | -272.016 | -392.374 | 3.3681E-04 |
| 1560 | -221.384 | -424.570 | 3.7504E-04 | 1955 | -269.778 | -392.450 | 3.4252E-04 |
| 1561 | -219.137 | -424.632 | 3.7787E-04 | 1956 | -267.540 | -392.526 | 3.4658E-04 |
| 1562 | -216.890 | -424.693 | 3.7575E-04 | 1957 | -265.302 | -392.600 | 3.5478E-04 |
| 1563 | -214.643 | -424.754 | 3.6966E-04 | 1958 | -263.064 | -392.674 | 3.6500E-04 |
| 1564 | -212.396 | -424.813 | 3.6547E-04 | 1959 | -260.826 | -392.748 | 3.6976E-04 |
| 1565 | -210.149 | -424.873 | 3.6572E-04 | 1960 | -258.588 | -392.821 | 3.7379E-04 |
| 1566 | -207.902 | -424.931 | 3.6194E-04 | 1961 | -213.823 | -394.146 | 5.1394E-04 |
| 1567 | -205.654 | -424.989 | 3.8850E-04 | 1962 | -211.584 | -394.206 | 5.1766E-04 |
| 1568 | -203.407 | -425.047 | 3.8984E-04 | 1963 | -285.344 | -389.124 | 3.4139E-04 |
| 1569 | -349.306 | -417.225 | 1.9925E-04 | 1964 | -283.107 | -389.203 | 3.2929E-04 |
| 1570 | -329.101 | -418.081 | 2.2345E-04 | 1965 | -280.869 | -389.283 | 3.2646E-04 |
| 1571 | -326.856 | -418.173 | 2.2508E-04 | 1966 | -278.632 | -389.361 | 3.3414E-04 |
| 1572 | -302.157 | -419.144 | 2.6028E-04 | 1967 | -276.395 | -389.439 | 3.4315E-04 |
| 1573 | -266.227 | -420.420 | 2.8771E-04 | 1968 | -274.158 | -389.516 | 3.5587E-04 |
| 1574 | -263.981 | -420.494 | 2.9008E-04 | 1969 | -269.684 | -389.669 | 3.6178E-04 |
| 1575 | -261.735 | -420.568 | 2.9882E-04 | 1970 | -267.447 | -389.744 | 3.6461E-04 |
| 1576 | -259.489 | -420.641 | 3.0780E-04 | 1971 | -211.510 | -391.424 | 5.3030E-04 |
| 1577 | -257.244 | -420.713 | 3.1234E-04 | 1972 | -209.273 | -391.483 | 4.9002E-04 |
| 1578 | -254.998 | -420.785 | 2.9955E-04 | 1973 | -278.535 | -386.580 | 3.3645E-04 |
| 1579 | -252.752 | -420.856 | 2.9664E-04 | 1974 | -276.299 | -386.658 | 3.5089E-04 |
| 1580 | -250.506 | -420.927 | 3.0912E-04 | 1975 | -215.910 | -388.522 | 5.3541E-04 |
| 1581 | -248.260 | -420.997 | 3.1994E-04 | 1976 | -213.599 | -385.800 | 5.5163E-04 |
| 1582 | -246.014 | -421.066 | 3.3043E-04 | 1977 | -211.363 | -385.860 | 5.5643E-04 |
| 1583 | -243.768 | -421.135 | 3.3279E-04 | 1978 | -209.054 | -383.137 | 5.7696E-04 |
| 1584 | -241.522 | -421.203 | 3.3336E-04 | 1979 | -206.746 | -380.413 | 5.5566E-04 |
| 1585 | -239.276 | -421.270 | 3.5139E-04 | 1980 | -204.440 | -377.689 | 6.1504E-04 |
| 1586 | -237.030 | -421.337 | 3.5721E-04 | 1981 | -202.136 | -374.965 | 6.1387E-04 |
| 1587 | -234.784 | -421.403 | 3.6172E-04 | 1982 | -202.065 | -372.183 | 6.0287E-04 |
| 1588 | -232.538 | -421.469 | 3.6654E-04 | 1983 | -201.994 | -369.401 | 6.4129E-04 |
| 1589 | -230.291 | -421.534 | 3.7128E-04 | 1984 | -199.763 | -369.458 | 6.3320E-04 |
| 1590 | -228.045 | -421.598 | 3.6236E-04 | 1985 | -199.693 | -366.676 | 6.7830E-04 |
| 1591 | -225.799 | -421.662 | 3.7930E-04 | 1986 | -195.231 | -366.787 | 6.9059E-04 |
| 1592 | -223.553 | -421.725 | 3.8285E-04 | 1987 | -197.393 | -363.950 | 6.9210E-04 |
| | | | | 1988 | -192.798 | -358.497 | 7.1095E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 1988 | -192.798 | -358.497 | DISCRETE | 1.7121E-02 (2002,339,0000) | RANK | 1 | 24 | HOUR |
| 1985 | -199.693 | -366.676 | DISCRETE | 1.5318E-02 (2002,031,0000) | RANK | 2 | 24 | HOUR |
| 1988 | -192.798 | -358.497 | DISCRETE | 1.1750E-02 (2002,340,0000) | RANK | 3 | 24 | HOUR |
| 1980 | -204.440 | -377.689 | DISCRETE | 9.6526E-03 (2002,340,0000) | RANK | 4 | 24 | HOUR |
| 1988 | -192.798 | -358.497 | DISCRETE | 7.1095E-04 | RANK | 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2002 CALPUFF Run
     CALPOST Control File for Zion

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2002   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                             ! NDRECP =  1988*0, 224*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2002) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                              (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1952 2051
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                         Run starting date -- year: 2002
                                             month:    0
                                               day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

OUTPUT FILES

| Default Name | Unit No. | File Name and Path |
|---|---|---|
| CALPOST.LST | 8 | C:\SPC_FF\CALPOST\2002\2002_ZION_PM.LST |
| (TOPN) | 11 | C:\SPC_FF\CALPOST\2002\GRAPHICS\RANK()_SPECIES_ttHR_CONC_ZI.DAT |

CALPOST Version 5.6394 Level 070622

PM10 1

4 RANKED 24 HOUR AVERAGE CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR (YEAR,DAY,ENDING TIME) (ug/m**3)

| RECEPTOR | COORDINATES (km) | | 1 RANK | 2 RANK | 3 RANK | 4 RANK |
|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 1.1990E-02 (2002,078,0000) | 7.3029E-03 (2002,343,0000) | 5.0852E-03 (2002,339,0000) | 3.6035E-03 (2002,194,0000) |
| 1990 | -306.221 | -311.322 | 1.1927E-02 (2002,078,0000) | 7.2878E-03 (2002,343,0000) | 5.2129E-03 (2002,339,0000) | 3.6280E-03 (2002,194,0000) |
| 1991 | -304.745 | -311.379 | 1.2096E-02 (2002,078,0000) | 7.5492E-03 (2002,343,0000) | 5.3424E-03 (2002,339,0000) | 4.7655E-03 (2002,037,0000) |
| 1992 | -303.268 | -311.436 | 1.2302E-02 (2002,078,0000) | 8.1899E-03 (2002,343,0000) | 7.0338E-03 (2002,037,0000) | 5.4741E-03 (2002,339,0000) |
| 1993 | -301.791 | -311.492 | 1.1902E-02 (2002,078,0000) | 8.0818E-03 (2002,343,0000) | 6.7193E-03 (2002,037,0000) | 5.6061E-03 (2002,339,0000) |
| 1994 | -307.626 | -309.412 | 1.2067E-02 (2002,078,0000) | 7.1416E-03 (2002,343,0000) | 5.0367E-03 (2002,339,0000) | 3.6616E-03 (2002,359,0000) |
| 1995 | -306.150 | -309.469 | 1.1990E-02 (2002,078,0000) | 7.0877E-03 (2002,343,0000) | 5.1659E-03 (2002,339,0000) | 3.6671E-03 (2002,194,0000) |
| 1996 | -304.673 | -309.526 | 1.2182E-02 (2002,078,0000) | 7.2906E-03 (2002,343,0000) | 5.2951E-03 (2002,339,0000) | 4.1226E-03 (2002,037,0000) |
| 1997 | -303.197 | -309.583 | 1.2553E-02 (2002,078,0000) | 7.9062E-03 (2002,343,0000) | 6.5641E-03 (2002,037,0000) | 5.4272E-03 (2002,339,0000) |
| 1998 | -301.720 | -309.640 | 1.1854E-02 (2002,078,0000) | 7.4290E-03 (2002,343,0000) | 5.5590E-03 (2002,339,0000) | 4.7897E-03 (2002,037,0000) |
| 1999 | -300.244 | -309.696 | 1.1857E-02 (2002,078,0000) | 7.9659E-03 (2002,343,0000) | 6.5805E-03 (2002,037,0000) | 5.6921E-03 (2002,339,0000) |
| 2000 | -298.767 | -309.752 | 1.1384E-02 (2002,078,0000) | 8.0103E-03 (2002,343,0000) | 6.6389E-03 (2002,037,0000) | 5.8277E-03 (2002,339,0000) |
| 2001 | -317.886 | -307.150 | 9.8774E-03 (2002,078,0000) | 7.2982E-03 (2002,343,0000) | 4.4554E-03 (2002,359,0000) | 4.1476E-03 (2002,339,0000) |
| 2002 | -316.410 | -307.209 | 1.0381E-02 (2002,078,0000) | 7.2652E-03 (2002,343,0000) | 4.3255E-03 (2002,359,0000) | 4.2609E-03 (2002,339,0000) |
| 2003 | -314.934 | -307.268 | 1.0826E-02 (2002,078,0000) | 7.2125E-03 (2002,343,0000) | 4.3768E-03 (2002,339,0000) | 4.2006E-03 (2002,359,0000) |
| 2004 | -313.458 | -307.327 | 1.1288E-02 (2002,078,0000) | 7.2195E-03 (2002,343,0000) | 4.4959E-03 (2002,339,0000) | 4.1100E-03 (2002,359,0000) |
| 2005 | -311.982 | -307.385 | 1.1700E-02 (2002,078,0000) | 7.2197E-03 (2002,343,0000) | 4.6152E-03 (2002,339,0000) | 4.0022E-03 (2002,359,0000) |
| 2006 | -309.030 | -307.501 | 1.2255E-02 (2002,078,0000) | 7.2041E-03 (2002,343,0000) | 4.8618E-03 (2002,339,0000) | 3.8920E-03 (2002,037,0000) |
| 2007 | -307.554 | -307.559 | 1.3195E-02 (2002,078,0000) | 8.0281E-03 (2002,343,0000) | 7.1087E-03 (2002,037,0000) | 4.9889E-03 (2002,339,0000) |
| 2008 | -306.078 | -307.616 | 1.2580E-02 (2002,078,0000) | 7.2819E-03 (2002,343,0000) | 5.1161E-03 (2002,339,0000) | 4.4004E-03 (2002,037,0000) |
| 2009 | -304.602 | -307.673 | 1.3069E-02 (2002,078,0000) | 7.8366E-03 (2002,343,0000) | 6.6193E-03 (2002,037,0000) | 5.2469E-03 (2002,339,0000) |
| 2010 | -303.125 | -307.730 | 1.2224E-02 (2002,078,0000) | 7.1595E-03 (2002,343,0000) | 5.3775E-03 (2002,339,0000) | 4.0819E-03 (2002,037,0000) |
| 2011 | -301.649 | -307.787 | 1.1565E-02 (2002,078,0000) | 6.8667E-03 (2002,343,0000) | 5.5087E-03 (2002,339,0000) | 3.7659E-03 (2002,194,0000) |
| 2012 | -300.173 | -307.843 | 1.1727E-02 (2002,078,0000) | 7.2040E-03 (2002,343,0000) | 5.6434E-03 (2002,339,0000) | 4.4725E-03 (2002,037,0000) |
| 2013 | -298.697 | -307.899 | 1.0881E-02 (2002,078,0000) | 6.8207E-03 (2002,343,0000) | 5.7785E-03 (2002,339,0000) | 3.8226E-03 (2002,036,0000) |
| 2014 | -317.812 | -305.297 | 9.7102E-03 (2002,078,0000) | 7.2965E-03 (2002,343,0000) | 4.5648E-03 (2002,359,0000) | 4.0975E-03 (2002,339,0000) |
| 2015 | -316.336 | -305.356 | 1.0121E-02 (2002,078,0000) | 7.0932E-03 (2002,343,0000) | 4.3578E-03 (2002,359,0000) | 4.2116E-03 (2002,339,0000) |
| 2016 | -314.860 | -305.415 | 1.0752E-02 (2002,078,0000) | 7.2110E-03 (2002,343,0000) | 4.3282E-03 (2002,339,0000) | 4.3050E-03 (2002,359,0000) |
| 2017 | -313.385 | -305.474 | 1.1854E-02 (2002,078,0000) | 7.8405E-03 (2002,343,0000) | 6.1749E-03 (2002,037,0000) | 4.4454E-03 (2002,339,0000) |
| 2018 | -311.909 | -305.533 | 1.2357E-02 (2002,078,0000) | 7.8842E-03 (2002,343,0000) | 6.4879E-03 (2002,037,0000) | 4.5654E-03 (2002,339,0000) |
| 2019 | -308.957 | -305.649 | 1.1962E-02 (2002,078,0000) | 6.9200E-03 (2002,343,0000) | 4.8111E-03 (2002,339,0000) | 3.7896E-03 (2002,359,0000) |
| 2020 | -307.482 | -305.706 | 1.2393E-02 (2002,078,0000) | 7.0514E-03 (2002,343,0000) | 4.9373E-03 (2002,339,0000) | 3.7941E-03 (2002,359,0000) |
| 2021 | -306.006 | -305.764 | 1.3363E-02 (2002,078,0000) | 7.7970E-03 (2002,343,0000) | 6.7855E-03 (2002,037,0000) | 5.0659E-03 (2002,339,0000) |
| 2022 | -304.530 | -305.821 | 1.3485E-02 (2002,078,0000) | 7.9856E-03 (2002,343,0000) | 7.2823E-03 (2002,037,0000) | 5.1957E-03 (2002,339,0000) |
| 2023 | -303.054 | -305.878 | 1.2947E-02 (2002,078,0000) | 7.4515E-03 (2002,343,0000) | 5.6736E-03 (2002,037,0000) | 5.3251E-03 (2002,339,0000) |
| 2024 | -301.579 | -305.934 | 1.3024E-02 (2002,078,0000) | 7.8115E-03 (2002,343,0000) | 6.7575E-03 (2002,037,0000) | 5.4590E-03 (2002,339,0000) |
| 2025 | -300.103 | -305.990 | 1.2621E-02 (2002,078,0000) | 7.7035E-03 (2002,343,0000) | 6.4664E-03 (2002,037,0000) | 5.5930E-03 (2002,339,0000) |
| 2026 | -298.627 | -306.046 | 1.1935E-02 (2002,078,0000) | 7.3295E-03 (2002,343,0000) | 5.7286E-03 (2002,339,0000) | 5.4861E-03 (2002,037,0000) |
| 2027 | -319.212 | -303.385 | 8.9675E-03 (2002,078,0000) | 7.3861E-03 (2002,343,0000) | 4.8025E-03 (2002,359,0000) | 4.0971E-03 (2002,037,0000) |
| 2028 | -317.737 | -303.445 | 9.4449E-03 (2002,078,0000) | 7.2382E-03 (2002,343,0000) | 4.6562E-03 (2002,359,0000) | 4.0468E-03 (2002,339,0000) |
| 2029 | -316.262 | -303.504 | 1.0024E-02 (2002,078,0000) | 7.2006E-03 (2002,343,0000) | 4.5195E-03 (2002,359,0000) | 4.1619E-03 (2002,339,0000) |
| 2030 | -314.786 | -303.563 | 1.0485E-02 (2002,078,0000) | 7.0889E-03 (2002,343,0000) | 4.3877E-03 (2002,359,0000) | 4.2762E-03 (2002,339,0000) |
| 2031 | -313.311 | -303.622 | 1.1044E-02 (2002,078,0000) | 7.0856E-03 (2002,343,0000) | 4.3933E-03 (2002,339,0000) | 4.2650E-03 (2002,359,0000) |
| 2032 | -311.836 | -303.680 | 1.2502E-02 (2002,078,0000) | 8.5468E-03 (2002,343,0000) | 6.9435E-03 (2002,037,0000) | 4.6719E-03 (2002,331,0000) |
| 2033 | -310.360 | -303.738 | 1.1920E-02 (2002,078,0000) | 7.0443E-03 (2002,343,0000) | 4.6346E-03 (2002,339,0000) | 4.0432E-03 (2002,359,0000) |
| 2034 | -308.885 | -303.796 | 1.1987E-02 (2002,078,0000) | 6.8883E-03 (2002,343,0000) | 4.7590E-03 (2002,339,0000) | 3.9446E-03 (2002,359,0000) |
| 2035 | -307.409 | -303.854 | 1.2168E-02 (2002,078,0000) | 6.8376E-03 (2002,343,0000) | 4.8847E-03 (2002,339,0000) | 3.8542E-03 (2002,359,0000) |
| 2036 | -305.934 | -303.911 | 1.2702E-02 (2002,078,0000) | 7.0118E-03 (2002,343,0000) | 5.0116E-03 (2002,339,0000) | 4.0404E-03 (2002,037,0000) |
| 2037 | -304.459 | -303.968 | 1.3059E-02 (2002,078,0000) | 7.2017E-03 (2002,343,0000) | 5.1412E-03 (2002,339,0000) | 4.9753E-03 (2002,037,0000) |
| 2038 | -302.983 | -304.025 | 1.3240E-02 (2002,078,0000) | 7.3965E-03 (2002,343,0000) | 5.8268E-03 (2002,037,0000) | 5.2718E-03 (2002,339,0000) |
| 2039 | -301.508 | -304.082 | 1.3490E-02 (2002,078,0000) | 7.9222E-03 (2002,343,0000) | 7.2770E-03 (2002,037,0000) | 5.4070E-03 (2002,339,0000) |
| 2040 | -300.032 | -304.138 | 1.3380E-02 (2002,078,0000) | 8.6754E-03 (2002,343,0000) | 7.3827E-03 (2002,037,0000) | 5.5435E-03 (2002,339,0000) |
| 2041 | -298.557 | -304.194 | 1.2820E-02 (2002,078,0000) | 7.8932E-03 (2002,343,0000) | 7.3057E-03 (2002,037,0000) | 5.6770E-03 (2002,339,0000) |
| 2042 | -319.137 | -301.533 | 8.5937E-03 (2002,078,0000) | 7.2823E-03 (2002,343,0000) | 4.8941E-03 (2002,359,0000) | 3.8858E-03 (2002,339,0000) |
| 2043 | -317.662 | -301.592 | 9.1286E-03 (2002,078,0000) | 7.1697E-03 (2002,343,0000) | 4.7444E-03 (2002,359,0000) | 3.9958E-03 (2002,339,0000) |
| 2044 | -316.187 | -301.651 | 9.7639E-03 (2002,078,0000) | 7.1478E-03 (2002,343,0000) | 4.6027E-03 (2002,359,0000) | 4.1085E-03 (2002,339,0000) |
| 2045 | -314.712 | -301.710 | 1.0257E-02 (2002,078,0000) | 7.0381E-03 (2002,343,0000) | 4.4688E-03 (2002,359,0000) | 4.2222E-03 (2002,339,0000) |
| 2046 | -313.237 | -301.769 | 1.0908E-02 (2002,078,0000) | 7.0725E-03 (2002,343,0000) | 4.3415E-03 (2002,359,0000) | 4.3398E-03 (2002,339,0000) |
| 2047 | -311.762 | -301.827 | 1.2364E-02 (2002,078,0000) | 8.2975E-03 (2002,343,0000) | 6.8187E-03 (2002,037,0000) | 4.8811E-03 (2002,331,0000) |
| 2048 | -310.287 | -301.886 | 1.2877E-02 (2002,078,0000) | 8.3932E-03 (2002,343,0000) | 6.9345E-03 (2002,037,0000) | 4.8593E-03 (2002,331,0000) |
| 2049 | -308.812 | -301.944 | 1.3313E-02 (2002,078,0000) | 8.3982E-03 (2002,343,0000) | 7.0787E-03 (2002,037,0000) | 4.8101E-03 (2002,331,0000) |
| 2050 | -307.337 | -302.001 | 1.2501E-02 (2002,078,0000) | 6.9327E-03 (2002,343,0000) | 4.8292E-03 (2002,339,0000) | 3.9342E-03 (2002,037,0000) |
| 2051 | -305.862 | -302.059 | 1.3531E-02 (2002,078,0000) | 7.5324E-03 (2002,343,0000) | 6.3743E-03 (2002,037,0000) | 4.9573E-03 (2002,339,0000) |
| 2052 | -304.387 | -302.116 | 1.3810E-02 (2002,078,0000) | 7.7101E-03 (2002,343,0000) | 6.9452E-03 (2002,037,0000) | 5.0869E-03 (2002,339,0000) |
| 2053 | -302.912 | -302.172 | 1.4043E-02 (2002,078,0000) | 8.1023E-03 (2002,343,0000) | 7.4032E-03 (2002,037,0000) | 5.2195E-03 (2002,339,0000) |
| 2054 | -301.437 | -302.229 | 1.3761E-02 (2002,078,0000) | 7.7704E-03 (2002,343,0000) | 7.1249E-03 (2002,037,0000) | 5.3509E-03 (2002,339,0000) |
| 2055 | -299.962 | -302.285 | 1.3525E-02 (2002,078,0000) | 7.7167E-03 (2002,343,0000) | 7.1060E-03 (2002,037,0000) | 5.4853E-03 (2002,339,0000) |
| 2056 | -298.487 | -302.341 | 1.3038E-02 (2002,078,0000) | 7.4705E-03 (2002,343,0000) | 6.6541E-03 (2002,037,0000) | 5.6220E-03 (2002,339,0000) |
| 2057 | -319.062 | -299.680 | 8.4717E-03 (2002,078,0000) | 7.4970E-03 (2002,343,0000) | 4.9860E-03 (2002,359,0000) | 4.7474E-03 (2002,037,0000) |
| 2058 | -317.588 | -299.740 | 9.2395E-03 (2002,078,0000) | 7.6175E-03 (2002,343,0000) | 5.3624E-03 (2002,037,0000) | 4.8373E-03 (2002,359,0000) |
| 2059 | -316.113 | -299.799 | 1.0045E-02 (2002,078,0000) | 7.7932E-03 (2002,343,0000) | 6.0539E-03 (2002,037,0000) | 4.6930E-03 (2002,359,0000) |
| 2060 | -314.639 | -299.858 | 1.0146E-02 (2002,078,0000) | 7.1190E-03 (2002,343,0000) | 4.5470E-03 (2002,359,0000) | 4.1670E-03 (2002,339,0000) |
| 2061 | -313.164 | -299.917 | 1.0870E-02 (2002,078,0000) | 7.1791E-03 (2002,343,0000) | 4.5087E-03 (2002,037,0000) | 4.4176E-03 (2002,359,0000) |
| 2062 | -311.689 | -299.975 | 1.1405E-02 (2002,078,0000) | 7.1264E-03 (2002,343,0000) | 4.4965E-03 (2002,037,0000) | 4.4031E-03 (2002,339,0000) |
| 2063 | -310.214 | -300.033 | 1.2734E-02 (2002,078,0000) | 8.1309E-03 (2002,343,0000) | 6.8023E-03 (2002,037,0000) | 5.0501E-03 (2002,331,0000) |
| 2064 | -308.740 | -300.091 | 1.3235E-02 (2002,078,0000) | 8.2615E-03 (2002,343,0000) | 6.9572E-03 (2002,037,0000) | 5.0410E-03 (2002,331,0000) |
| 2065 | -307.265 | -300.149 | 1.3575E-02 (2002,078,0000) | 7.8784E-03 (2002,343,0000) | 7.0297E-03 (2002,037,0000) | 4.9938E-03 (2002,331,0000) |
| 2066 | -305.790 | -300.206 | 1.2333E-02 (2002,078,0000) | 6.6463E-03 (2002,343,0000) | 4.8995E-03 (2002,339,0000) | 3.8998E-03 (2002,359,0000) |
| 2067 | -304.316 | -300.263 | 1.3995E-02 (2002,078,0000) | 7.7218E-03 (2002,343,0000) | 7.1124E-03 (2002,037,0000) | 5.0305E-03 (2002,339,0000) |
| 2068 | -302.841 | -300.320 | 1.4276E-02 (2002,078,0000) | 8.4152E-03 (2002,343,0000) | 7.3234E-03 (2002,037,0000) | 5.1639E-03 (2002,339,0000) |
| 2069 | -301.366 | -300.376 | 1.4247E-02 (2002,078,0000) | 8.2470E-03 (2002,343,0000) | 7.2482E-03 (2002,037,0000) | 5.2951E-03 (2002,339,0000) |
| 2070 | -299.891 | -300.432 | 1.4088E-02 (2002,078,0000) | 8.3533E-03 (2002,343,0000) | 7.2986E-03 (2002,037,0000) | 5.4316E-03 (2002,339,0000) |
| 2071 | -298.417 | -300.488 | 1.3709E-02 (2002,078,0000) | 7.8269E-03 (2002,343,0000) | 7.3542E-03 (2002,037,0000) | 5.5681E-03 (2002,339,0000) |
| 2072 | -318.988 | -297.828 | 7.7291E-03 (2002,078,0000) | 7.0852E-03 (2002,343,0000) | 5.0651E-03 (2002,359,0000) | 3.7796E-03 (2002,339,0000) |
| 2073 | -317.513 | -297.887 | 8.5683E-03 (2002,078,0000) | 7.2117E-03 (2002,343,0000) | 4.9086E-03 (2002,359,0000) | 4.0424E-03 (2002,037,0000) |
| 2074 | -316.039 | -297.946 | 9.1774E-03 (2002,078,0000) | 7.1318E-03 (2002,343,0000) | 4.7597E-03 (2002,359,0000) | 3.9978E-03 (2002,339,0000) |
| 2075 | -314.565 | -298.005 | 1.0530E-02 (2002,078,0000) | 7.9551E-03 (2002,343,0000) | 6.2929E-03 (2002,037,0000) | 4.9201E-03 (2002,331,0000) |
| 2076 | -313.090 | -298.064 | 1.0996E-02 (2002,078,0000) | 7.5481E-03 (2002,343,0000) | 5.9113E-03 (2002,037,0000) | 4.4967E-03 (2002,359,0000) |
| 2077 | -311.616 | -298.122 | 1.1914E-02 (2002,078,0000) | 8.2438E-03 (2002,343,0000) | 6.5144E-03 (2002,037,0000) | 5.1109E-03 (2002,331,0000) |
| 2078 | -310.142 | -298.181 | 1.2530E-02 (2002,078,0000) | 8.2303E-03 (2002,343,0000) | 6.6513E-03 (2002,037,0000) | 5.1745E-03 (2002,331,0000) |
| 2079 | -308.667 | -298.238 | 1.3085E-02 (2002,078,0000) | 8.0317E-03 (2002,343,0000) | 6.8064E-03 (2002,037,0000) | 5.2102E-03 (2002,331,0000) |
| 2080 | -307.193 | -298.296 | 1.3422E-02 (2002,078,0000) | 7.6950E-03 (2002,343,0000) | 6.8727E-03 (2002,037,0000) | 5.1109E-03 (2002,331,0000) |
| 2081 | -305.719 | -298.353 | 1.3468E-02 (2002,078,0000) | 7.3205E-03 (2002,343,0000) | 6.0316E-03 (2002,037,0000) | 4.8418E-03 (2002,339,0000) |
| 2082 | -304.244 | -298.410 | 1.4138E-02 (2002,078,0000) | 7.7848E-03 (2002,343,0000) | 7.0617E-03 (2002,037,0000) | 5.0976E-03 (2002,331,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2083 | -302.770 | -298.467 | 1.4382E-02 (2002,078,0000) | 7.9430E-03 (2002,343,0000) | 7.2015E-03 (2002,037,0000) | 5.1015E-03 (2002,339,0000) |
| 2084 | -301.295 | -298.524 | 1.4453E-02 (2002,078,0000) | 8.1826E-03 (2002,343,0000) | 7.1459E-03 (2002,037,0000) | 5.2377E-03 (2002,339,0000) |
| 2085 | -299.821 | -298.580 | 1.4365E-02 (2002,078,0000) | 8.2140E-03 (2002,343,0000) | 7.2152E-03 (2002,037,0000) | 5.3739E-03 (2002,339,0000) |
| 2086 | -318.913 | -295.975 | 7.4920E-03 (2002,078,0000) | 7.2024E-03 (2002,343,0000) | 5.1448E-03 (2002,359,0000) | 3.8869E-03 (2002,191,0000) |
| 2087 | -317.439 | -296.035 | 8.2677E-03 (2002,078,0000) | 7.2776E-03 (2002,343,0000) | 4.9842E-03 (2002,359,0000) | 4.3055E-03 (2002,037,0000) |
| 2088 | -315.965 | -296.094 | 8.6434E-03 (2002,078,0000) | 7.0106E-03 (2002,343,0000) | 4.8313E-03 (2002,359,0000) | 3.9410E-03 (2002,339,0000) |
| 2089 | -314.491 | -296.153 | 9.4963E-03 (2002,078,0000) | 7.1051E-03 (2002,343,0000) | 4.6883E-03 (2002,359,0000) | 4.1593E-03 (2002,037,0000) |
| 2090 | -313.017 | -296.212 | 1.0011E-02 (2002,078,0000) | 6.9757E-03 (2002,343,0000) | 4.5532E-03 (2002,359,0000) | 4.1688E-03 (2002,339,0000) |
| 2091 | -311.543 | -296.270 | 1.0919E-02 (2002,078,0000) | 7.1195E-03 (2002,343,0000) | 4.6987E-03 (2002,037,0000) | 4.4322E-03 (2002,359,0000) |
| 2092 | -310.069 | -296.328 | 1.2261E-02 (2002,078,0000) | 8.1683E-03 (2002,343,0000) | 6.4846E-03 (2002,037,0000) | 5.2313E-03 (2002,331,0000) |
| 2093 | -308.595 | -296.386 | 1.2758E-02 (2002,078,0000) | 7.6887E-03 (2002,343,0000) | 6.6293E-03 (2002,037,0000) | 5.2704E-03 (2002,331,0000) |
| 2094 | -307.121 | -296.444 | 1.3408E-02 (2002,078,0000) | 8.1715E-03 (2002,343,0000) | 6.7320E-03 (2002,037,0000) | 5.3644E-03 (2002,331,0000) |
| 2095 | -305.647 | -296.501 | 1.3624E-02 (2002,078,0000) | 7.5140E-03 (2002,343,0000) | 6.6226E-03 (2002,037,0000) | 5.1172E-03 (2002,331,0000) |
| 2096 | -304.173 | -296.558 | 1.3966E-02 (2002,078,0000) | 7.4829E-03 (2002,343,0000) | 6.7308E-03 (2002,037,0000) | 5.0931E-03 (2002,331,0000) |
| 2097 | -302.699 | -296.615 | 1.3794E-02 (2002,078,0000) | 7.0511E-03 (2002,343,0000) | 5.7906E-03 (2002,037,0000) | 5.0377E-03 (2002,339,0000) |
| 2098 | -301.225 | -296.671 | 1.4587E-02 (2002,078,0000) | 8.1252E-03 (2002,343,0000) | 7.0189E-03 (2002,037,0000) | 5.1985E-03 (2002,331,0000) |
| 2099 | -318.838 | -294.123 | 7.6551E-03 (2002,343,0000) | 7.4532E-03 (2002,078,0000) | 5.2146E-03 (2002,359,0000) | 5.1421E-03 (2002,037,0000) |
| 2100 | -317.364 | -294.182 | 8.2390E-03 (2002,078,0000) | 7.8004E-03 (2002,343,0000) | 5.6787E-03 (2002,037,0000) | 5.0547E-03 (2002,359,0000) |
| 2101 | -315.890 | -294.242 | 8.4642E-03 (2002,078,0000) | 7.1814E-03 (2002,343,0000) | 4.8972E-03 (2002,359,0000) | 4.1572E-03 (2002,037,0000) |
| 2102 | -314.417 | -294.301 | 9.7842E-03 (2002,078,0000) | 8.1541E-03 (2002,343,0000) | 5.9365E-03 (2002,037,0000) | 4.7631E-03 (2002,359,0000) |
| 2103 | -312.943 | -294.359 | 1.0268E-02 (2002,078,0000) | 7.4990E-03 (2002,343,0000) | 5.6743E-03 (2002,037,0000) | 4.6214E-03 (2002,359,0000) |
| 2104 | -311.470 | -294.418 | 1.1235E-02 (2002,078,0000) | 8.0367E-03 (2002,343,0000) | 6.1667E-03 (2002,037,0000) | 5.0723E-03 (2002,331,0000) |
| 2105 | -309.996 | -294.476 | 1.1909E-02 (2002,078,0000) | 7.8216E-03 (2002,343,0000) | 6.2910E-03 (2002,037,0000) | 5.2192E-03 (2002,331,0000) |
| 2106 | -308.522 | -294.534 | 1.2582E-02 (2002,078,0000) | 8.1009E-03 (2002,343,0000) | 6.4598E-03 (2002,037,0000) | 5.3439E-03 (2002,331,0000) |
| 2107 | -307.049 | -294.591 | 1.3179E-02 (2002,078,0000) | 8.1078E-03 (2002,343,0000) | 6.5649E-03 (2002,037,0000) | 5.4448E-03 (2002,331,0000) |
| 2108 | -305.575 | -294.648 | 1.3350E-02 (2002,078,0000) | 7.3408E-03 (2002,343,0000) | 6.2110E-03 (2002,037,0000) | 5.0515E-03 (2002,331,0000) |
| 2109 | -304.101 | -294.705 | 1.3791E-02 (2002,078,0000) | 7.3203E-03 (2002,343,0000) | 6.4147E-03 (2002,037,0000) | 5.1526E-03 (2002,331,0000) |
| 2110 | -302.627 | -294.762 | 1.4443E-02 (2002,078,0000) | 8.0245E-03 (2002,343,0000) | 6.8695E-03 (2002,037,0000) | 5.5382E-03 (2002,331,0000) |
| 2111 | -301.154 | -294.819 | 1.4643E-02 (2002,078,0000) | 7.8643E-03 (2002,343,0000) | 6.8625E-03 (2002,037,0000) | 5.4835E-03 (2002,331,0000) |
| 2112 | -318.763 | -292.271 | 7.8908E-03 (2002,343,0000) | 7.1507E-03 (2002,078,0000) | 5.4638E-03 (2002,037,0000) | 5.2740E-03 (2002,359,0000) |
| 2113 | -317.289 | -292.330 | 7.7392E-03 (2002,078,0000) | 7.6772E-03 (2002,343,0000) | 5.2924E-03 (2002,037,0000) | 5.1132E-03 (2002,359,0000) |
| 2114 | -315.816 | -292.389 | 8.5632E-03 (2002,078,0000) | 7.8637E-03 (2002,343,0000) | 5.6727E-03 (2002,037,0000) | 4.9619E-03 (2002,359,0000) |
| 2115 | -314.343 | -292.448 | 9.3395E-03 (2002,078,0000) | 8.0913E-03 (2002,343,0000) | 5.7549E-03 (2002,037,0000) | 4.8177E-03 (2002,359,0000) |
| 2116 | -312.870 | -292.507 | 9.9468E-03 (2002,078,0000) | 7.6353E-03 (2002,343,0000) | 5.8218E-03 (2002,037,0000) | 4.6770E-03 (2002,359,0000) |
| 2117 | -311.396 | -292.565 | 1.0819E-02 (2002,078,0000) | 8.0944E-03 (2002,343,0000) | 5.9754E-03 (2002,037,0000) | 4.9583E-03 (2002,331,0000) |
| 2118 | -309.923 | -292.623 | 1.1426E-02 (2002,078,0000) | 7.6228E-03 (2002,343,0000) | 6.0983E-03 (2002,037,0000) | 5.0911E-03 (2002,331,0000) |
| 2119 | -308.450 | -292.681 | 1.2233E-02 (2002,078,0000) | 8.0611E-03 (2002,343,0000) | 6.2791E-03 (2002,037,0000) | 5.3069E-03 (2002,331,0000) |
| 2120 | -306.976 | -292.739 | 1.2721E-02 (2002,078,0000) | 7.5356E-03 (2002,343,0000) | 6.3793E-03 (2002,037,0000) | 5.3658E-03 (2002,331,0000) |
| 2121 | -305.503 | -292.796 | 1.2314E-02 (2002,078,0000) | 6.7355E-03 (2002,343,0000) | 4.6488E-03 (2002,339,0000) | 4.4389E-03 (2002,037,0000) |
| 2122 | -304.030 | -292.853 | 1.2656E-02 (2002,078,0000) | 6.6265E-03 (2002,343,0000) | 4.7761E-03 (2002,339,0000) | 4.3806E-03 (2002,037,0000) |
| 2123 | -302.556 | -292.910 | 1.2741E-02 (2002,078,0000) | 6.4680E-03 (2002,343,0000) | 4.9053E-03 (2002,339,0000) | 3.9920E-03 (2002,359,0000) |
| 2124 | -301.083 | -292.966 | 1.3215E-02 (2002,078,0000) | 6.5279E-03 (2002,343,0000) | 5.0380E-03 (2002,339,0000) | 4.4370E-03 (2002,037,0000) |
| 2125 | -318.688 | -290.418 | 8.2091E-03 (2002,343,0000) | 6.7969E-03 (2002,078,0000) | 5.3292E-03 (2002,037,0000) | 5.3240E-03 (2002,359,0000) |
| 2126 | -317.215 | -290.478 | 7.9571E-03 (2002,343,0000) | 7.4192E-03 (2002,078,0000) | 5.4124E-03 (2002,037,0000) | 5.1642E-03 (2002,359,0000) |
| 2127 | -315.742 | -290.537 | 8.2152E-03 (2002,343,0000) | 8.1476E-03 (2002,078,0000) | 5.4980E-03 (2002,037,0000) | 5.0141E-03 (2002,359,0000) |
| 2128 | -314.269 | -290.596 | 8.8688E-03 (2002,078,0000) | 8.1622E-03 (2002,343,0000) | 5.5801E-03 (2002,037,0000) | 4.8697E-03 (2002,359,0000) |
| 2129 | -312.796 | -290.654 | 9.6101E-03 (2002,078,0000) | 8.0106E-03 (2002,343,0000) | 5.6801E-03 (2002,037,0000) | 4.7349E-03 (2002,359,0000) |
| 2130 | -311.323 | -290.713 | 1.0181E-02 (2002,078,0000) | 7.5579E-03 (2002,343,0000) | 5.6737E-03 (2002,037,0000) | 4.5969E-03 (2002,359,0000) |
| 2131 | -309.850 | -290.771 | 1.1101E-02 (2002,078,0000) | 8.0581E-03 (2002,343,0000) | 5.9164E-03 (2002,037,0000) | 5.0007E-03 (2002,331,0000) |
| 2132 | -308.377 | -290.829 | 1.1822E-02 (2002,078,0000) | 8.0353E-03 (2002,343,0000) | 6.0926E-03 (2002,037,0000) | 5.2037E-03 (2002,331,0000) |
| 2133 | -306.904 | -290.886 | 1.2503E-02 (2002,078,0000) | 7.9961E-03 (2002,343,0000) | 6.1853E-03 (2002,037,0000) | 5.3920E-03 (2002,331,0000) |
| 2134 | -305.431 | -290.943 | 1.1505E-02 (2002,078,0000) | 6.5104E-03 (2002,343,0000) | 4.5805E-03 (2002,339,0000) | 4.1740E-03 (2002,359,0000) |
| 2135 | -303.958 | -291.000 | 1.3670E-02 (2002,078,0000) | 7.6298E-03 (2002,343,0000) | 6.3844E-03 (2002,037,0000) | 5.6972E-03 (2002,331,0000) |
| 2136 | -302.485 | -291.057 | 1.4146E-02 (2002,078,0000) | 7.6815E-03 (2002,343,0000) | 6.4199E-03 (2002,037,0000) | 5.8001E-03 (2002,331,0000) |
| 2137 | -301.012 | -291.114 | 1.4505E-02 (2002,078,0000) | 7.6585E-03 (2002,343,0000) | 6.4802E-03 (2002,037,0000) | 5.8629E-03 (2002,331,0000) |
| 2138 | -318.613 | -288.566 | 8.3637E-03 (2002,343,0000) | 6.3655E-03 (2002,078,0000) | 5.6373E-03 (2002,330,0000) | 5.3583E-03 (2002,359,0000) |
| 2139 | -317.140 | -288.625 | 8.2510E-03 (2002,343,0000) | 6.9982E-03 (2002,078,0000) | 5.2615E-03 (2002,330,0000) | 5.2526E-03 (2002,037,0000) |
| 2140 | -315.668 | -288.684 | 8.2441E-03 (2002,343,0000) | 7.6720E-03 (2002,078,0000) | 5.3364E-03 (2002,037,0000) | 5.0737E-03 (2002,191,0000) |
| 2141 | -314.195 | -288.743 | 8.3796E-03 (2002,078,0000) | 8.1875E-03 (2002,343,0000) | 5.4098E-03 (2002,037,0000) | 4.9382E-03 (2002,191,0000) |
| 2142 | -312.722 | -288.802 | 9.1131E-03 (2002,078,0000) | 8.1371E-03 (2002,343,0000) | 5.4880E-03 (2002,037,0000) | 4.8072E-03 (2002,191,0000) |
| 2143 | -311.250 | -288.860 | 9.8640E-03 (2002,078,0000) | 8.0515E-03 (2002,343,0000) | 5.5979E-03 (2002,037,0000) | 4.6919E-03 (2002,191,0000) |
| 2144 | -309.777 | -288.918 | 1.0619E-02 (2002,078,0000) | 8.0518E-03 (2002,343,0000) | 5.7361E-03 (2002,037,0000) | 4.8098E-03 (2002,331,0000) |
| 2145 | -308.305 | -288.976 | 1.1357E-02 (2002,078,0000) | 8.0145E-03 (2002,343,0000) | 5.9023E-03 (2002,037,0000) | 5.0411E-03 (2002,331,0000) |
| 2146 | -306.832 | -289.034 | 1.1931E-02 (2002,078,0000) | 7.4801E-03 (2002,343,0000) | 5.9749E-03 (2002,037,0000) | 5.2136E-03 (2002,331,0000) |
| 2147 | -305.359 | -289.091 | 1.2586E-02 (2002,078,0000) | 7.3973E-03 (2002,343,0000) | 6.0276E-03 (2002,037,0000) | 5.4143E-03 (2002,331,0000) |
| 2148 | -303.887 | -289.148 | 1.3082E-02 (2002,078,0000) | 7.2247E-03 (2002,343,0000) | 6.1018E-03 (2002,037,0000) | 5.4190E-03 (2002,331,0000) |
| 2149 | -302.414 | -289.205 | 1.3879E-02 (2002,078,0000) | 7.6949E-03 (2002,343,0000) | 6.1934E-03 (2002,037,0000) | 5.8177E-03 (2002,331,0000) |
| 2150 | -300.941 | -289.261 | 1.4315E-02 (2002,078,0000) | 7.6441E-03 (2002,343,0000) | 6.2824E-03 (2002,037,0000) | 5.9373E-03 (2002,331,0000) |
| 2151 | -320.010 | -286.654 | 8.3652E-03 (2002,343,0000) | 6.3528E-03 (2002,330,0000) | 5.9651E-03 (2002,358,0000) | 5.8333E-03 (2002,191,0000) |
| 2152 | -318.538 | -286.714 | 8.4285E-03 (2002,343,0000) | 6.0688E-03 (2002,330,0000) | 5.9403E-03 (2002,078,0000) | 5.7142E-03 (2002,191,0000) |
| 2153 | -317.066 | -286.773 | 8.3602E-03 (2002,343,0000) | 6.5429E-03 (2002,078,0000) | 5.7241E-03 (2002,330,0000) | 5.5800E-03 (2002,191,0000) |
| 2154 | -315.593 | -286.832 | 8.2923E-03 (2002,343,0000) | 7.1936E-03 (2002,078,0000) | 5.4367E-03 (2002,191,0000) | 5.3261E-03 (2002,330,0000) |
| 2155 | -314.121 | -286.891 | 8.2241E-03 (2002,343,0000) | 7.8806E-03 (2002,078,0000) | 5.2904E-03 (2002,191,0000) | 5.2422E-03 (2002,037,0000) |
| 2156 | -312.649 | -286.950 | 8.6015E-03 (2002,078,0000) | 8.1651E-03 (2002,343,0000) | 5.3223E-03 (2002,037,0000) | 5.1507E-03 (2002,191,0000) |
| 2157 | -311.177 | -287.008 | 9.3458E-03 (2002,078,0000) | 8.1107E-03 (2002,343,0000) | 5.4334E-03 (2002,037,0000) | 5.0248E-03 (2002,191,0000) |
| 2158 | -309.704 | -287.066 | 1.0100E-02 (2002,078,0000) | 8.0594E-03 (2002,343,0000) | 5.5642E-03 (2002,037,0000) | 4.9165E-03 (2002,191,0000) |
| 2159 | -308.232 | -287.124 | 1.0565E-02 (2002,078,0000) | 7.3775E-03 (2002,343,0000) | 5.4411E-03 (2002,037,0000) | 4.7876E-03 (2002,191,0000) |
| 2160 | -306.760 | -287.181 | 1.1593E-02 (2002,078,0000) | 7.9367E-03 (2002,343,0000) | 5.7915E-03 (2002,037,0000) | 5.0760E-03 (2002,331,0000) |
| 2161 | -305.288 | -287.239 | 1.2084E-02 (2002,078,0000) | 7.3238E-03 (2002,343,0000) | 5.8185E-03 (2002,037,0000) | 5.1570E-03 (2002,331,0000) |
| 2162 | -303.815 | -287.296 | 1.1960E-02 (2002,078,0000) | 6.7862E-03 (2002,343,0000) | 4.6653E-03 (2002,037,0000) | 4.5661E-03 (2002,339,0000) |
| 2163 | -302.343 | -287.352 | 1.3539E-02 (2002,078,0000) | 7.5631E-03 (2002,343,0000) | 5.9793E-03 (2002,037,0000) | 5.7593E-03 (2002,331,0000) |
| 2164 | -300.871 | -287.409 | 1.3924E-02 (2002,078,0000) | 7.3149E-03 (2002,343,0000) | 6.0887E-03 (2002,037,0000) | 5.9339E-03 (2002,331,0000) |
| 2165 | -325.822 | -284.560 | 9.1546E-03 (2002,358,0000) | 7.8848E-03 (2002,343,0000) | 6.3587E-03 (2002,191,0000) | 5.9934E-03 (2002,359,0000) |
| 2166 | -324.350 | -284.621 | 8.5263E-03 (2002,358,0000) | 7.9749E-03 (2002,343,0000) | 6.3729E-03 (2002,191,0000) | 5.8867E-03 (2002,359,0000) |
| 2167 | -322.878 | -284.681 | 8.3195E-03 (2002,343,0000) | 7.9360E-03 (2002,358,0000) | 6.9016E-03 (2002,330,0000) | 6.4117E-03 (2002,191,0000) |
| 2168 | -321.407 | -284.742 | 8.5181E-03 (2002,343,0000) | 7.2709E-03 (2002,358,0000) | 6.8729E-03 (2002,330,0000) | 6.3349E-03 (2002,191,0000) |
| 2169 | -319.935 | -284.802 | 8.1193E-03 (2002,343,0000) | 6.6220E-03 (2002,330,0000) | 6.5914E-03 (2002,358,0000) | 6.2144E-03 (2002,191,0000) |
| 2170 | -318.463 | -284.861 | 8.4816E-03 (2002,343,0000) | 6.4770E-03 (2002,330,0000) | 6.0997E-03 (2002,191,0000) | 5.9505E-03 (2002,358,0000) |
| 2171 | -314.047 | -285.039 | 8.2821E-03 (2002,343,0000) | 7.3806E-03 (2002,078,0000) | 5.6582E-03 (2002,191,0000) | 5.3826E-03 (2002,330,0000) |
| 2172 | -312.575 | -285.097 | 8.2177E-03 (2002,343,0000) | 8.0831E-03 (2002,078,0000) | 5.5081E-03 (2002,191,0000) | 5.1744E-03 (2002,037,0000) |
| 2173 | -311.103 | -285.156 | 8.8133E-03 (2002,078,0000) | 8.1574E-03 (2002,343,0000) | 5.3792E-03 (2002,191,0000) | 5.2776E-03 (2002,037,0000) |
| 2174 | -309.632 | -285.214 | 9.5619E-03 (2002,078,0000) | 8.0952E-03 (2002,343,0000) | 5.3913E-03 (2002,037,0000) | 5.2582E-03 (2002,191,0000) |
| 2175 | -327.217 | -282.647 | 1.0650E-02 (2002,358,0000) | 8.5399E-03 (2002,343,0000) | 6.8691E-03 (2002,191,0000) | 6.8002E-03 (2002,330,0000) |
| 2176 | -325.745 | -282.708 | 9.8601E-03 (2002,358,0000) | 8.0256E-03 (2002,343,0000) | 6.7147E-03 (2002,191,0000) | 5.9497E-03 (2002,359,0000) |
| 2177 | -324.274 | -282.769 | 9.3063E-03 (2002,358,0000) | 8.4071E-03 (2002,343,0000) | 7.0034E-03 (2002,330,0000) | 6.8327E-03 (2002,191,0000) |
| 2178 | -322.802 | -282.829 | 8.7375E-03 (2002,343,0000) | 8.6374E-03 (2002,358,0000) | 7.1567E-03 (2002,330,0000) | 6.7978E-03 (2002,191,0000) |
| 2179 | -321.331 | -282.889 | 8.2753E-03 (2002,343,0000) | 7.9318E-03 (2002,358,0000) | 7.0176E-03 (2002,330,0000) | 6.6922E-03 (2002,191,0000) |
| 2180 | -319.859 | -282.949 | 8.4334E-03 (2002,343,0000) | 7.2606E-03 (2002,358,0000) | 7.0297E-03 (2002,330,0000) | 6.6103E-03 (2002,191,0000) |
| 2181 | -318.388 | -283.009 | 8.5825E-03 (2002,343,0000) | 6.8531E-03 (2002,330,0000) | 6.5851E-03 (2002,358,0000) | 6.4811E-03 (2002,191,0000) |
| 2182 | -309.559 | -283.361 | 8.9718E-03 (2002,078,0000) | 7.8579E-03 (2002,343,0000) | 5.5813E-03 (2002,191,0000) | 5.2168E-03 (2002,037,0000) |
| 2183 | -327.140 | -280.795 | 1.1317E-02 (2002,358,0000) | 8.5878E-03 (2002,343,0000) | 7.1671E-03 (2002,191,0000) | 6.7885E-03 (2002,330,0000) |
| 2184 | -325.669 | -280.856 | 1.0623E-02 (2002,358,0000) | 8.3553E-03 (2002,343,0000) | 7.1143E-03 (2002,191,0000) | 6.4512E-03 (2002,330,0000) |
| 2185 | -324.198 | -280.917 | 9.9276E-03 (2002,358,0000) | 8.2298E-03 (2002,343,0000) | 7.0627E-03 (2002,191,0000) | 6.3000E-03 (2002,330,0000) |
| 2186 | -322.726 | -280.977 | 9.2124E-03 (2002,358,0000) | 8.1118E-03 (2002,343,0000) | 6.9704E-03 (2002,191,0000) | 6.1156E-03 (2002,330,0000) |
| 2187 | -321.255 | -281.037 | 8.6417E-03 (2002,358,0000) | 8.5736E-03 (2002,343,0000) | 7.3369E-03 (2002,330,0000) | 7.0814E-03 (2002,191,0000) |
| 2188 | -319.784 | -281.097 | 8.7645E-03 (2002,343,0000) | 7.9440E-03 (2002,358,0000) | 7.2998E-03 (2002,330,0000) | 6.9903E-03 (2002,191,0000) |
| 2189 | -318.313 | -281.157 | 8.7022E-03 (2002,343,0000) | 7.2485E-03 (2002,358,0000) | 7.1833E-03 (2002,330,0000) | 6.8728E-03 (2002,191,0000) |
| 2190 | -327.063 | -278.943 | 1.1981E-02 (2002,358,0000) | 8.8010E-03 (2002,343,0000) | 7.4591E-03 (2002,191,0000) | 6.8090E-03 (2002,330,0000) |
| 2191 | -325.592 | -279.004 | 1.1292E-02 (2002,358,0000) | 8.4640E-03 (2002,343,0000) | 7.4006E-03 (2002,191,0000) | 6.4509E-03 (2002,330,0000) |
| 2192 | -324.121 | -279.064 | 1.0716E-02 (2002,358,0000) | 9.0302E-03 (2002,343,0000) | 7.5126E-03 (2002,191,0000) | 7.2468E-03 (2002,330,0000) |
| 2193 | -322.650 | -279.125 | 1.0036E-02 (2002,358,0000) | 8.8921E-03 (2002,343,0000) | 7.4903E-03 (2002,191,0000) | 7.3989E-03 (2002,330,0000) |
| 2194 | -321.180 | -279.185 | 9.3384E-03 (2002,358,0000) | 8.8164E-03 (2002,343,0000) | 7.4919E-03 (2002,330,0000) | 7.4375E-03 (2002,191,0000) |
| 2195 | -319.709 | -279.245 | 8.6128E-03 (2002,358,0000) | 8.4860E-03 (2002,343,0000) | 7.3853E-03 (2002,330,0000) | 7.3264E-03 (2002,191,0000) |
| 2196 | -318.238 | -279.305 | 8.5762E-03 (2002,343,0000) | 7.9256E-03 (2002,358,0000) | 7.4654E-03 (2002,330,0000) | 7.2593E-03 (2002,191,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2197 | -326.986 | -277.091 | 1.2613E-02 (2002,358,0000) | 9.1416E-03 (2002,343,0000) | 7.7125E-03 (2002,191,0000) | 6.7293E-03 (2002,330,0000) |
| 2198 | -325.515 | -277.152 | 1.1989E-02 (2002,358,0000) | 8.7251E-03 (2002,343,0000) | 7.7324E-03 (2002,191,0000) | 6.8309E-03 (2002,330,0000) |
| 2199 | -324.045 | -277.212 | 1.1392E-02 (2002,358,0000) | 8.9611E-03 (2002,343,0000) | 7.8148E-03 (2002,191,0000) | 7.2472E-03 (2002,330,0000) |
| 2200 | -322.574 | -277.273 | 1.0732E-02 (2002,358,0000) | 9.1368E-03 (2002,343,0000) | 7.8131E-03 (2002,191,0000) | 7.4470E-03 (2002,330,0000) |
| 2201 | -328.379 | -275.177 | 1.3547E-02 (2002,358,0000) | 8.4670E-03 (2002,343,0000) | 7.5100E-03 (2002,191,0000) | 5.6724E-03 (2002,359,0000) |
| 2202 | -326.909 | -275.239 | 1.3103E-02 (2002,358,0000) | 8.6381E-03 (2002,343,0000) | 7.7431E-03 (2002,191,0000) | 5.8550E-03 (2002,330,0000) |
| 2203 | -325.439 | -275.300 | 1.2586E-02 (2002,358,0000) | 8.7665E-03 (2002,343,0000) | 7.9071E-03 (2002,191,0000) | 6.4950E-03 (2002,330,0000) |
| 2204 | -323.969 | -275.360 | 1.2054E-02 (2002,358,0000) | 9.3156E-03 (2002,343,0000) | 8.0872E-03 (2002,191,0000) | 7.2069E-03 (2002,330,0000) |
| 2205 | -322.498 | -275.421 | 1.1416E-02 (2002,358,0000) | 9.3194E-03 (2002,343,0000) | 8.1543E-03 (2002,191,0000) | 7.4504E-03 (2002,330,0000) |
| 2206 | -326.832 | -273.387 | 1.3740E-02 (2002,358,0000) | 8.9719E-03 (2002,343,0000) | 8.0133E-03 (2002,191,0000) | 6.3125E-03 (2002,330,0000) |
| 2207 | -325.362 | -273.448 | 1.3257E-02 (2002,358,0000) | 9.3934E-03 (2002,343,0000) | 8.2797E-03 (2002,191,0000) | 6.8122E-03 (2002,330,0000) |
| 2208 | -323.892 | -273.508 | 1.2693E-02 (2002,358,0000) | 9.4901E-03 (2002,343,0000) | 8.4489E-03 (2002,191,0000) | 7.1276E-03 (2002,330,0000) |
| 2209 | -322.422 | -273.569 | 1.2082E-02 (2002,358,0000) | 9.4914E-03 (2002,343,0000) | 8.4822E-03 (2002,191,0000) | 7.4120E-03 (2002,330,0000) |
| 2210 | -325.285 | -271.595 | 1.3833E-02 (2002,358,0000) | 9.2599E-03 (2002,343,0000) | 8.4065E-03 (2002,191,0000) | 6.6670E-03 (2002,330,0000) |
| 2211 | -323.816 | -271.656 | 1.3282E-02 (2002,358,0000) | 9.1920E-03 (2002,343,0000) | 8.5260E-03 (2002,191,0000) | 6.9528E-03 (2002,330,0000) |
| 2212 | -322.346 | -271.717 | 1.2732E-02 (2002,358,0000) | 9.6352E-03 (2002,343,0000) | 8.8047E-03 (2002,191,0000) | 7.3349E-03 (2002,330,0000) |

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CALPOST Version 5.6394 Level 070622
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8759 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2002 DAY: 365 HOUR(0-23): 23 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 3.4351E-04 | 2101 | -315.890 | -294.242 | 3.4255E-04 |
| 1990 | -306.221 | -311.322 | 3.4916E-04 | 2102 | -314.417 | -294.301 | 3.7076E-04 |
| 1991 | -304.745 | -311.379 | 3.7159E-04 | 2103 | -312.943 | -294.359 | 3.6861E-04 |
| 1992 | -303.268 | -311.436 | 4.0221E-04 | 2104 | -311.470 | -294.418 | 3.8145E-04 |
| 1993 | -301.791 | -311.492 | 4.0507E-04 | 2105 | -309.996 | -294.476 | 3.8650E-04 |
| 1994 | -307.626 | -309.412 | 3.4222E-04 | 2106 | -308.522 | -294.534 | 3.9406E-04 |
| 1995 | -306.150 | -309.469 | 3.4534E-04 | 2107 | -307.049 | -294.591 | 4.0065E-04 |
| 1996 | -304.673 | -309.526 | 3.6360E-04 | 2108 | -305.575 | -294.648 | 3.9826E-04 |
| 1997 | -303.197 | -309.583 | 3.9823E-04 | 2109 | -304.101 | -294.705 | 4.0589E-04 |
| 1998 | -301.720 | -309.640 | 3.8474E-04 | 2110 | -302.627 | -294.762 | 4.2079E-04 |
| 1999 | -300.244 | -309.696 | 4.1098E-04 | 2111 | -301.154 | -294.819 | 4.2676E-04 |
| 2000 | -298.767 | -309.752 | 4.1810E-04 | 2112 | -318.763 | -292.271 | 3.5721E-04 |
| 2001 | -317.886 | -307.150 | 3.1412E-04 | 2113 | -317.289 | -292.330 | 3.5707E-04 |
| 2002 | -316.410 | -307.209 | 3.1792E-04 | 2114 | -315.816 | -292.389 | 3.6550E-04 |
| 2003 | -314.934 | -307.268 | 3.2117E-04 | 2115 | -314.343 | -292.448 | 3.7107E-04 |
| 2004 | -313.458 | -307.327 | 3.2775E-04 | 2116 | -312.870 | -292.507 | 3.7293E-04 |
| 2005 | -311.982 | -307.385 | 3.3451E-04 | 2117 | -311.396 | -292.565 | 3.8190E-04 |
| 2006 | -309.030 | -307.501 | 3.4684E-04 | 2118 | -309.923 | -292.623 | 3.8489E-04 |
| 2007 | -307.554 | -307.559 | 3.8907E-04 | 2119 | -308.450 | -292.681 | 3.9407E-04 |
| 2008 | -306.078 | -307.616 | 3.6458E-04 | 2120 | -306.976 | -292.739 | 3.9670E-04 |
| 2009 | -304.602 | -307.673 | 3.9489E-04 | 2121 | -305.503 | -292.796 | 3.7698E-04 |
| 2010 | -303.125 | -307.730 | 3.7049E-04 | 2122 | -304.030 | -292.853 | 3.8129E-04 |
| 2011 | -301.649 | -307.787 | 3.6032E-04 | 2123 | -302.556 | -292.910 | 3.8173E-04 |
| 2012 | -300.173 | -307.843 | 3.8756E-04 | 2124 | -301.083 | -292.966 | 3.9401E-04 |
| 2013 | -298.697 | -307.899 | 3.7558E-04 | 2125 | -318.688 | -290.418 | 3.6070E-04 |
| 2014 | -317.812 | -305.297 | 3.1959E-04 | 2126 | -317.215 | -290.478 | 3.6293E-04 |
| 2015 | -316.336 | -305.356 | 3.1710E-04 | 2127 | -315.742 | -290.537 | 3.6787E-04 |
| 2016 | -314.860 | -305.415 | 3.2732E-04 | 2128 | -314.269 | -290.596 | 3.7191E-04 |
| 2017 | -313.385 | -305.474 | 3.6235E-04 | 2129 | -312.796 | -290.654 | 3.7619E-04 |
| 2018 | -311.909 | -305.533 | 3.7016E-04 | 2130 | -311.323 | -290.713 | 3.7736E-04 |
| 2019 | -308.957 | -305.649 | 3.3651E-04 | 2131 | -309.850 | -290.771 | 3.8734E-04 |
| 2020 | -307.482 | -305.706 | 3.5108E-04 | 2132 | -308.377 | -290.829 | 3.9349E-04 |
| 2021 | -306.006 | -305.764 | 3.9279E-04 | 2133 | -306.904 | -290.886 | 3.9963E-04 |
| 2022 | -304.530 | -305.821 | 4.0339E-04 | 2134 | -305.431 | -290.943 | 3.6543E-04 |
| 2023 | -303.054 | -305.878 | 3.9137E-04 | 2135 | -303.958 | -291.000 | 4.1217E-04 |
| 2024 | -301.579 | -305.934 | 4.0927E-04 | 2136 | -302.485 | -291.057 | 4.1976E-04 |
| 2025 | -300.103 | -305.990 | 4.1204E-04 | 2137 | -301.012 | -291.114 | 4.2712E-04 |
| 2026 | -298.627 | -306.046 | 4.0678E-04 | 2138 | -318.613 | -288.566 | 3.6276E-04 |
| 2027 | -319.212 | -303.385 | 3.2398E-04 | 2139 | -317.140 | -288.625 | 3.6541E-04 |
| 2028 | -317.737 | -303.445 | 3.2161E-04 | 2140 | -315.668 | -288.684 | 3.6896E-04 |
| 2029 | -316.262 | -303.504 | 3.2596E-04 | 2141 | -314.195 | -288.743 | 3.7280E-04 |
| 2030 | -314.786 | -303.563 | 3.2669E-04 | 2142 | -312.722 | -288.802 | 3.7710E-04 |
| 2031 | -313.311 | -303.622 | 3.3337E-04 | 2143 | -311.250 | -288.860 | 3.8158E-04 |
| 2032 | -311.836 | -303.680 | 3.7963E-04 | 2144 | -309.777 | -288.918 | 3.8721E-04 |
| 2033 | -310.360 | -303.738 | 3.4409E-04 | 2145 | -308.305 | -288.976 | 3.9296E-04 |
| 2034 | -308.885 | -303.796 | 3.4069E-04 | 2146 | -306.832 | -289.034 | 3.9600E-04 |
| 2035 | -307.409 | -303.854 | 3.4433E-04 | 2147 | -305.359 | -289.091 | 4.0238E-04 |
| 2036 | -305.934 | -303.911 | 3.6292E-04 | 2148 | -303.887 | -289.148 | 4.0758E-04 |
| 2037 | -304.459 | -303.968 | 3.8012E-04 | 2149 | -302.414 | -289.205 | 4.1975E-04 |
| 2038 | -302.983 | -304.025 | 3.9461E-04 | 2150 | -300.941 | -289.261 | 4.2724E-04 |
| 2039 | -301.508 | -304.082 | 4.1635E-04 | 2151 | -320.010 | -286.654 | 3.6186E-04 |
| 2040 | -300.032 | -304.138 | 4.2745E-04 | 2152 | -318.538 | -286.714 | 3.6470E-04 |
| 2041 | -298.557 | -304.194 | 4.2850E-04 | 2153 | -317.066 | -286.773 | 3.6739E-04 |
| 2042 | -319.137 | -301.533 | 3.2277E-04 | 2154 | -315.593 | -286.832 | 3.7029E-04 |
| 2043 | -317.662 | -301.592 | 3.2280E-04 | 2155 | -314.121 | -286.891 | 3.7366E-04 |
| 2044 | -316.187 | -301.651 | 3.2856E-04 | 2156 | -312.649 | -286.950 | 3.7764E-04 |
| 2045 | -314.712 | -301.710 | 3.2923E-04 | 2157 | -311.177 | -287.008 | 3.8207E-04 |
| 2046 | -313.237 | -301.769 | 3.3797E-04 | 2158 | -309.704 | -287.066 | 3.8705E-04 |
| 2047 | -311.762 | -301.827 | 3.7981E-04 | 2159 | -308.232 | -287.124 | 3.8541E-04 |
| 2048 | -310.287 | -301.886 | 3.8608E-04 | 2160 | -306.760 | -287.181 | 3.9864E-04 |
| 2049 | -308.812 | -301.944 | 3.9245E-04 | 2161 | -305.288 | -287.239 | 4.0064E-04 |
| 2050 | -307.337 | -302.001 | 3.5722E-04 | 2162 | -303.815 | -287.296 | 3.8921E-04 |
| 2051 | -305.862 | -302.059 | 3.9229E-04 | 2163 | -302.343 | -287.352 | 4.1851E-04 |
| 2052 | -304.387 | -302.116 | 4.0384E-04 | 2164 | -300.871 | -287.409 | 4.2463E-04 |
| 2053 | -302.912 | -302.172 | 4.1518E-04 | 2165 | -325.822 | -284.560 | 3.3868E-04 |
| 2054 | -301.437 | -302.229 | 4.1697E-04 | 2166 | -324.350 | -284.621 | 3.4636E-04 |
| 2055 | -299.962 | -302.285 | 4.2250E-04 | 2167 | -322.878 | -284.681 | 3.5932E-04 |
| 2056 | -298.487 | -302.341 | 4.2308E-04 | 2168 | -321.407 | -284.742 | 3.6263E-04 |
| 2057 | -319.062 | -299.680 | 3.3745E-04 | 2169 | -319.935 | -284.802 | 3.6177E-04 |
| 2058 | -317.588 | -299.740 | 3.4748E-04 | 2170 | -318.463 | -284.861 | 3.6684E-04 |
| 2059 | -316.113 | -299.799 | 3.5872E-04 | 2171 | -314.047 | -285.039 | 3.7504E-04 |
| 2060 | -314.639 | -299.858 | 3.3854E-04 | 2172 | -312.575 | -285.097 | 3.7863E-04 |
| 2061 | -313.164 | -299.917 | 3.4894E-04 | 2173 | -311.103 | -285.156 | 3.8273E-04 |
| 2062 | -311.689 | -299.975 | 3.5307E-04 | 2174 | -309.632 | -285.214 | 3.8721E-04 |
| 2063 | -310.214 | -300.033 | 3.8615E-04 | 2175 | -327.217 | -282.647 | 3.5932E-04 |
| 2064 | -308.740 | -300.091 | 3.9313E-04 | 2176 | -325.745 | -282.708 | 3.4606E-04 |
| 2065 | -307.265 | -300.149 | 3.9719E-04 | 2177 | -324.274 | -282.769 | 3.6063E-04 |
| 2066 | -305.790 | -300.206 | 3.5393E-04 | 2178 | -322.802 | -282.829 | 3.6458E-04 |
| 2067 | -304.316 | -300.263 | 4.0737E-04 | 2179 | -321.331 | -282.889 | 3.6279E-04 |
| 2068 | -302.841 | -300.320 | 4.1849E-04 | 2180 | -319.859 | -282.949 | 3.6647E-04 |
| 2069 | -301.366 | -300.376 | 4.2373E-04 | 2181 | -318.388 | -283.009 | 3.6941E-04 |
| 2070 | -299.891 | -300.432 | 4.3070E-04 | 2182 | -309.559 | -283.361 | 3.8587E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | 4.3439E-04 | 2183 | -327.140 | -280.795 | 3.6292E-04 |
| 2072 | -318.988 | -297.828 | 3.1935E-04 | 2184 | -325.669 | -280.856 | 3.5831E-04 |
| 2073 | -317.513 | -297.887 | 3.3313E-04 | 2185 | -324.198 | -280.917 | 3.5614E-04 |
| 2074 | -316.039 | -297.946 | 3.3564E-04 | 2186 | -322.726 | -280.977 | 3.5418E-04 |
| 2075 | -314.565 | -298.005 | 3.6876E-04 | 2187 | -321.255 | -281.037 | 3.6803E-04 |
| 2076 | -313.090 | -298.064 | 3.6703E-04 | 2188 | -319.784 | -281.097 | 3.7059E-04 |
| 2077 | -311.616 | -298.122 | 3.8111E-04 | 2189 | -318.313 | -281.157 | 3.7229E-04 |
| 2078 | -310.142 | -298.181 | 3.8737E-04 | 2190 | -327.063 | -278.943 | 3.6805E-04 |
| 2079 | -308.667 | -298.238 | 3.9301E-04 | 2191 | -325.592 | -279.004 | 3.6232E-04 |
| 2080 | -307.193 | -298.296 | 3.9668E-04 | 2192 | -324.121 | -279.064 | 3.7090E-04 |
| 2081 | -305.719 | -298.353 | 3.9243E-04 | 2193 | -322.650 | -279.125 | 3.7123E-04 |
| 2082 | -304.244 | -298.410 | 4.1027E-04 | 2194 | -321.180 | -279.185 | 3.7217E-04 |
| 2083 | -302.770 | -298.467 | 4.1808E-04 | 2195 | -319.709 | -279.245 | 3.7080E-04 |
| 2084 | -301.295 | -298.524 | 4.2554E-04 | 2196 | -318.238 | -279.305 | 3.7414E-04 |
| 2085 | -299.821 | -298.580 | 4.3230E-04 | 2197 | -326.986 | -277.091 | 3.7345E-04 |
| 2086 | -318.913 | -295.975 | 3.2846E-04 | 2198 | -325.515 | -277.152 | 3.7077E-04 |
| 2087 | -317.439 | -296.035 | 3.3940E-04 | 2199 | -324.045 | -277.212 | 3.7424E-04 |
| 2088 | -315.965 | -296.094 | 3.3083E-04 | 2200 | -322.574 | -277.273 | 3.7603E-04 |
| 2089 | -314.491 | -296.153 | 3.4350E-04 | 2201 | -328.379 | -275.177 | 3.6262E-04 |
| 2090 | -313.017 | -296.212 | 3.4337E-04 | 2202 | -326.909 | -275.239 | 3.6878E-04 |
| 2091 | -311.543 | -296.270 | 3.5884E-04 | 2203 | -325.439 | -275.300 | 3.7286E-04 |
| 2092 | -310.069 | -296.328 | 3.8783E-04 | 2204 | -323.969 | -275.360 | 3.7998E-04 |
| 2093 | -308.595 | -296.386 | 3.9137E-04 | 2205 | -322.498 | -275.421 | 3.8089E-04 |
| 2094 | -307.121 | -296.444 | 4.0053E-04 | 2206 | -326.832 | -273.387 | 3.7974E-04 |
| 2095 | -305.647 | -296.501 | 4.0125E-04 | 2207 | -325.362 | -273.448 | 3.8401E-04 |
| 2096 | -304.173 | -296.558 | 4.0769E-04 | 2208 | -323.892 | -273.508 | 3.8557E-04 |
| 2097 | -302.699 | -296.615 | 4.0199E-04 | 2209 | -322.422 | -273.569 | 3.8644E-04 |
| 2098 | -301.225 | -296.671 | 4.2676E-04 | 2210 | -325.285 | -271.595 | 3.8820E-04 |
| 2099 | -318.838 | -294.123 | 3.4979E-04 | 2211 | -323.816 | -271.656 | 3.8777E-04 |
| 2100 | -317.364 | -294.182 | 3.5903E-04 | 2212 | -322.346 | -271.717 | 3.9178E-04 |

**********
CALPOST Version 5.6394 Level 070622
**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 2111 | -301.154 | -294.819 | DISCRETE | 1.4643E-02 (2002,078,0000) | RANK 1 | 24 | HOUR |
| 2212 | -322.346 | -271.717 | DISCRETE | 9.6352E-03 (2002,343,0000) | RANK 2 | 24 | HOUR |
| 2212 | -322.346 | -271.717 | DISCRETE | 8.8047E-03 (2002,191,0000) | RANK 3 | 24 | HOUR |
| 2205 | -322.498 | -275.421 | DISCRETE | 7.4504E-03 (2002,330,0000) | RANK 4 | 24 | HOUR |
| 2071 | -298.417 | -300.488 | DISCRETE | 4.3439E-04 | RANK 1 | 8759 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Arches

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1


  Visibility Processing is NOT Selected



  Output options
                      Units requested for output:   (ug/m**3)
```

```
 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                   1-hr averages:     F
                                   3-hr averages:     F
                                  24-hr averages:     T
                                 NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                   Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                   Echo tables for selected days:     F
                   Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                              Plot files created:     T
                        Plot file format is DATA:  .DAT


 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2003 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8736

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1


 ------------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2003\POST_2003_PM_AR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2003\SPC2003.CON


 ------------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2003\2003_ARCH_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_AR.DAT

*****************************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR      COORDINATES (km)             1 RANK                    2 RANK                    3 RANK                    4 RANK
      1       -9.046  -154.175   1.2113E-02 (2003,006,0000)  7.8333E-03 (2003,012,0000)  7.7528E-03 (2003,046,0000)  6.7407E-03 (2003,023,0000)
      2       -7.599  -154.176   1.1994E-02 (2003,006,0000)  7.7472E-03 (2003,012,0000)  7.6950E-03 (2003,046,0000)  6.9128E-03 (2003,059,0000)
      3       -6.152  -154.178   1.1877E-02 (2003,006,0000)  7.6596E-03 (2003,012,0000)  7.6395E-03 (2003,046,0000)  6.9409E-03 (2003,059,0000)
      4       -3.257  -154.179   1.1615E-02 (2003,006,0000)  7.4688E-03 (2003,012,0000)  7.3808E-03 (2003,046,0000)  6.3211E-03 (2003,059,0000)
      5      -10.491  -152.321   1.2514E-02 (2003,006,0000)  8.0925E-03 (2003,046,0000)  7.9835E-03 (2003,012,0000)  6.9444E-03 (2003,023,0000)
      6       -9.044  -152.322   1.2379E-02 (2003,006,0000)  7.8934E-03 (2003,012,0000)  7.8578E-03 (2003,046,0000)  6.7625E-03 (2003,023,0000)
      7       -7.597  -152.324   1.2242E-02 (2003,006,0000)  7.8013E-03 (2003,012,0000)  7.7651E-03 (2003,046,0000)  6.6014E-03 (2003,059,0000)
      8       -6.150  -152.325   1.2110E-02 (2003,006,0000)  7.7083E-03 (2003,012,0000)  7.6844E-03 (2003,046,0000)  6.4176E-03 (2003,059,0000)
      9       -4.703  -152.326   1.1988E-02 (2003,006,0000)  7.6247E-03 (2003,046,0000)  7.6194E-03 (2003,012,0000)  6.7734E-03 (2003,059,0000)
     10       -3.256  -152.327   1.1862E-02 (2003,006,0000)  7.5544E-03 (2003,046,0000)  7.5252E-03 (2003,012,0000)  6.7984E-03 (2003,059,0000)
     11       -1.809  -152.328   1.1736E-02 (2003,006,0000)  7.4866E-03 (2003,046,0000)  7.4293E-03 (2003,012,0000)  6.8438E-03 (2003,059,0000)
     12       -0.362  -152.328   1.1587E-02 (2003,006,0000)  7.3262E-03 (2003,012,0000)  7.2782E-03 (2003,046,0000)  6.2130E-03 (2003,059,0000)
     13      -11.936  -150.466   1.2896E-02 (2003,006,0000)  8.1260E-03 (2003,012,0000)  8.0408E-03 (2003,046,0000)  7.1000E-03 (2003,023,0000)
     14      -10.489  -150.468   1.2749E-02 (2003,006,0000)  8.0350E-03 (2003,012,0000)  7.9575E-03 (2003,046,0000)  6.9082E-03 (2003,023,0000)
     15       -9.042  -150.470   1.2618E-02 (2003,006,0000)  7.9414E-03 (2003,012,0000)  7.8897E-03 (2003,046,0000)  6.7387E-03 (2003,023,0000)
     16       -7.595  -150.472   1.2488E-02 (2003,006,0000)  7.8486E-03 (2003,012,0000)  7.8197E-03 (2003,046,0000)  6.5726E-03 (2003,023,0000)
     17       -6.149  -150.473   1.2354E-02 (2003,006,0000)  7.7545E-03 (2003,012,0000)  7.7443E-03 (2003,046,0000)  6.4103E-03 (2003,023,0000)
     18       -4.702  -150.474   1.2226E-02 (2003,006,0000)  7.6793E-03 (2003,046,0000)  7.6641E-03 (2003,012,0000)  6.5914E-03 (2003,059,0000)
     19       -3.255  -150.475   1.2101E-02 (2003,006,0000)  7.7532E-03 (2003,046,0000)  7.5722E-03 (2003,012,0000)  6.6904E-03 (2003,059,0000)
     20       -1.808  -150.475   1.1974E-02 (2003,006,0000)  7.7011E-03 (2003,046,0000)  7.4764E-03 (2003,012,0000)  6.7594E-03 (2003,059,0000)
     21        1.085  -150.475   1.1683E-02 (2003,006,0000)  7.3304E-03 (2003,046,0000)  7.2696E-03 (2003,012,0000)  6.5787E-03 (2003,059,0000)
     22      -11.933  -148.614   1.3150E-02 (2003,006,0000)  8.1768E-03 (2003,012,0000)  8.0915E-03 (2003,046,0000)  7.0717E-03 (2003,023,0000)
     23      -10.486  -148.616   1.3027E-02 (2003,006,0000)  8.0896E-03 (2003,012,0000)  8.0391E-03 (2003,046,0000)  6.9132E-03 (2003,023,0000)
     24       -9.040  -148.618   1.2889E-02 (2003,006,0000)  7.9997E-03 (2003,012,0000)  7.9808E-03 (2003,046,0000)  6.7506E-03 (2003,023,0000)
     25       -7.594  -148.619   1.2742E-02 (2003,006,0000)  7.9040E-03 (2003,012,0000)  7.8832E-03 (2003,046,0000)  6.5745E-03 (2003,023,0000)
     26       -6.147  -148.621   1.2606E-02 (2003,006,0000)  7.8033E-03 (2003,046,0000)  7.8024E-03 (2003,012,0000)  6.4181E-03 (2003,023,0000)
     27       -4.701  -148.622   1.2476E-02 (2003,006,0000)  7.7401E-03 (2003,046,0000)  7.7063E-03 (2003,012,0000)  6.4334E-03 (2003,059,0000)
     28       -3.254  -148.622   1.2335E-02 (2003,006,0000)  7.8048E-03 (2003,046,0000)  7.6125E-03 (2003,012,0000)  6.5227E-03 (2003,059,0000)
     29       -1.808  -148.623   1.2204E-02 (2003,006,0000)  7.7346E-03 (2003,046,0000)  7.5166E-03 (2003,012,0000)  6.5726E-03 (2003,059,0000)
     30       -0.362  -148.623   1.2048E-02 (2003,006,0000)  7.4600E-03 (2003,046,0000)  7.4050E-03 (2003,012,0000)  6.4696E-03 (2003,059,0000)
     31      -11.930  -146.762   1.3430E-02 (2003,006,0000)  8.2334E-03 (2003,012,0000)  8.1623E-03 (2003,046,0000)  7.0665E-03 (2003,023,0000)
     32      -10.484  -146.764   1.3293E-02 (2003,006,0000)  8.1432E-03 (2003,012,0000)  8.1005E-03 (2003,046,0000)  6.9011E-03 (2003,023,0000)
     33       -9.038  -146.765   1.3156E-02 (2003,006,0000)  8.2033E-03 (2003,046,0000)  8.0486E-03 (2003,012,0000)  6.7436E-03 (2003,023,0000)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 34 | -7.592 | -146.767 | 1.3003E-02 (2003,006,0000) | 7.9493E-03 (2003,012,0000) | 7.9475E-03 (2003,046,0000) | 6.5760E-03 (2003,023,0000) |
| 35 | -6.146 | -146.768 | 1.2859E-02 (2003,006,0000) | 7.8656E-03 (2003,046,0000) | 7.8528E-03 (2003,012,0000) | 6.4190E-03 (2003,023,0000) |
| 36 | -4.700 | -146.769 | 1.2721E-02 (2003,006,0000) | 7.9404E-03 (2003,046,0000) | 7.7532E-03 (2003,012,0000) | 6.3254E-03 (2003,059,0000) |
| 37 | -3.254 | -146.770 | 1.2580E-02 (2003,006,0000) | 7.8614E-03 (2003,046,0000) | 7.6517E-03 (2003,012,0000) | 6.3705E-03 (2003,059,0000) |
| 38 | -1.808 | -146.770 | 1.2433E-02 (2003,006,0000) | 7.7615E-03 (2003,046,0000) | 7.5517E-03 (2003,012,0000) | 6.3904E-03 (2003,059,0000) |
| 39 | -0.362 | -146.771 | 1.2259E-02 (2003,006,0000) | 7.4348E-03 (2003,012,0000) | 7.4302E-03 (2003,046,0000) | 6.0203E-03 (2003,059,0000) |
| 40 | -10.481 | -144.911 | 1.3557E-02 (2003,006,0000) | 8.1929E-03 (2003,012,0000) | 8.1570E-03 (2003,046,0000) | 6.8856E-03 (2003,023,0000) |
| 41 | -9.036 | -144.913 | 1.3413E-02 (2003,006,0000) | 8.2460E-03 (2003,046,0000) | 8.0968E-03 (2003,012,0000) | 6.7292E-03 (2003,023,0000) |
| 42 | -7.590 | -144.915 | 1.3267E-02 (2003,006,0000) | 8.1661E-03 (2003,046,0000) | 7.9974E-03 (2003,012,0000) | 6.5759E-03 (2003,023,0000) |
| 43 | -6.144 | -144.916 | 1.3115E-02 (2003,006,0000) | 8.0680E-03 (2003,046,0000) | 7.8952E-03 (2003,012,0000) | 6.4396E-03 (2003,031,0000) |
| 44 | -4.699 | -144.917 | 1.2965E-02 (2003,006,0000) | 7.9782E-03 (2003,046,0000) | 7.7943E-03 (2003,012,0000) | 6.3583E-03 (2003,031,0000) |
| 45 | -3.253 | -144.918 | 1.2810E-02 (2003,006,0000) | 7.8794E-03 (2003,046,0000) | 7.6890E-03 (2003,012,0000) | 6.2747E-03 (2003,031,0000) |
| 46 | -1.807 | -144.918 | 1.2647E-02 (2003,006,0000) | 7.6499E-03 (2003,046,0000) | 7.5754E-03 (2003,012,0000) | 6.1787E-03 (2003,031,0000) |
| 47 | -10.479 | -143.059 | 1.3821E-02 (2003,006,0000) | 8.3744E-03 (2003,046,0000) | 8.2364E-03 (2003,012,0000) | 6.8620E-03 (2003,023,0000) |
| 48 | -9.033 | -143.061 | 1.3672E-02 (2003,006,0000) | 8.2905E-03 (2003,046,0000) | 8.1398E-03 (2003,012,0000) | 6.7110E-03 (2003,023,0000) |
| 49 | -7.588 | -143.062 | 1.3512E-02 (2003,006,0000) | 8.1901E-03 (2003,046,0000) | 8.0366E-03 (2003,012,0000) | 6.6067E-03 (2003,031,0000) |
| 50 | -6.143 | -143.064 | 1.3347E-02 (2003,006,0000) | 8.0733E-03 (2003,046,0000) | 7.9302E-03 (2003,012,0000) | 6.5247E-03 (2003,031,0000) |
| 51 | -4.697 | -143.065 | 1.3189E-02 (2003,006,0000) | 7.9689E-03 (2003,046,0000) | 7.8231E-03 (2003,012,0000) | 6.4434E-03 (2003,031,0000) |
| 52 | -3.252 | -143.065 | 1.3032E-02 (2003,006,0000) | 7.8591E-03 (2003,046,0000) | 7.7157E-03 (2003,012,0000) | 6.3588E-03 (2003,031,0000) |
| 53 | -1.807 | -143.066 | 1.2860E-02 (2003,006,0000) | 7.5992E-03 (2003,012,0000) | 7.5946E-03 (2003,046,0000) | 6.2673E-03 (2003,031,0000) |
| 54 | -10.476 | -141.207 | 1.4084E-02 (2003,006,0000) | 8.4141E-03 (2003,046,0000) | 8.2813E-03 (2003,012,0000) | 6.8340E-03 (2003,023,0000) |
| 55 | -9.031 | -141.209 | 1.3920E-02 (2003,006,0000) | 8.3107E-03 (2003,046,0000) | 8.1771E-03 (2003,012,0000) | 6.7587E-03 (2003,031,0000) |
| 56 | -7.586 | -141.210 | 1.3735E-02 (2003,006,0000) | 8.0630E-03 (2003,012,0000) | 8.0158E-03 (2003,046,0000) | 6.6770E-03 (2003,031,0000) |
| 57 | -6.141 | -141.211 | 1.3574E-02 (2003,006,0000) | 7.9552E-03 (2003,012,0000) | 7.9150E-03 (2003,046,0000) | 6.5997E-03 (2003,031,0000) |
| 58 | -4.696 | -141.212 | 1.3412E-02 (2003,006,0000) | 7.8463E-03 (2003,012,0000) | 7.8032E-03 (2003,046,0000) | 6.5186E-03 (2003,031,0000) |
| 59 | -3.251 | -141.213 | 1.3243E-02 (2003,006,0000) | 7.7360E-03 (2003,012,0000) | 7.6966E-03 (2003,046,0000) | 6.4352E-03 (2003,031,0000) |
| 60 | -1.806 | -141.214 | 1.3082E-02 (2003,006,0000) | 7.6250E-03 (2003,012,0000) | 7.5909E-03 (2003,046,0000) | 6.3519E-03 (2003,031,0000) |
| 61 | -0.361 | -141.214 | 1.2924E-02 (2003,006,0000) | 7.5158E-03 (2003,012,0000) | 7.4829E-03 (2003,046,0000) | 6.2659E-03 (2003,031,0000) |
| 62 | -14.808 | -139.347 | 1.4806E-02 (2003,006,0000) | 8.7173E-03 (2003,046,0000) | 8.6203E-03 (2003,012,0000) | 7.2533E-03 (2003,023,0000) |
| 63 | -13.363 | -139.350 | 1.4650E-02 (2003,006,0000) | 8.6194E-03 (2003,046,0000) | 8.5182E-03 (2003,012,0000) | 7.0920E-03 (2003,023,0000) |
| 64 | -11.918 | -139.352 | 1.4501E-02 (2003,006,0000) | 8.5295E-03 (2003,046,0000) | 8.4205E-03 (2003,012,0000) | 6.9595E-03 (2003,031,0000) |
| 65 | -10.474 | -139.354 | 1.4327E-02 (2003,006,0000) | 8.4179E-03 (2003,046,0000) | 8.3098E-03 (2003,012,0000) | 6.8904E-03 (2003,031,0000) |
| 66 | -9.029 | -139.356 | 1.4144E-02 (2003,006,0000) | 8.1994E-03 (2003,012,0000) | 8.1189E-03 (2003,046,0000) | 6.8153E-03 (2003,031,0000) |
| 67 | -7.584 | -139.358 | 1.3975E-02 (2003,006,0000) | 8.0916E-03 (2003,012,0000) | 8.0183E-03 (2003,046,0000) | 6.7437E-03 (2003,031,0000) |
| 68 | -6.140 | -139.359 | 1.3817E-02 (2003,006,0000) | 8.0823E-03 (2003,046,0000) | 7.9881E-03 (2003,012,0000) | 6.6710E-03 (2003,031,0000) |
| 69 | -4.695 | -139.360 | 1.3655E-02 (2003,006,0000) | 7.9775E-03 (2003,046,0000) | 7.8794E-03 (2003,012,0000) | 6.5956E-03 (2003,031,0000) |
| 70 | -3.250 | -139.361 | 1.3479E-02 (2003,006,0000) | 7.7647E-03 (2003,012,0000) | 7.7006E-03 (2003,046,0000) | 6.5107E-03 (2003,031,0000) |
| 71 | -1.806 | -139.361 | 1.3309E-02 (2003,006,0000) | 7.6511E-03 (2003,012,0000) | 7.5908E-03 (2003,046,0000) | 6.4284E-03 (2003,031,0000) |
| 72 | -0.361 | -139.361 | 1.3148E-02 (2003,006,0000) | 7.6140E-03 (2003,046,0000) | 7.5415E-03 (2003,012,0000) | 6.3454E-03 (2003,031,0000) |
| 73 | 1.083 | -139.361 | 1.2981E-02 (2003,006,0000) | 7.4269E-03 (2003,012,0000) | 7.3685E-03 (2003,046,0000) | 6.2576E-03 (2003,031,0000) |
| 74 | -14.804 | -137.495 | 1.5076E-02 (2003,006,0000) | 8.7466E-03 (2003,046,0000) | 8.6658E-03 (2003,012,0000) | 7.1936E-03 (2003,023,0000) |
| 75 | -13.360 | -137.498 | 1.4913E-02 (2003,006,0000) | 8.6437E-03 (2003,046,0000) | 8.5610E-03 (2003,012,0000) | 7.0723E-03 (2003,031,0000) |
| 76 | -11.915 | -137.500 | 1.4731E-02 (2003,006,0000) | 8.5254E-03 (2003,046,0000) | 8.4461E-03 (2003,012,0000) | 7.0066E-03 (2003,031,0000) |
| 77 | -10.471 | -137.502 | 1.4562E-02 (2003,006,0000) | 8.4151E-03 (2003,046,0000) | 8.3404E-03 (2003,012,0000) | 6.9408E-03 (2003,031,0000) |
| 78 | -9.027 | -137.504 | 1.4398E-02 (2003,006,0000) | 8.3092E-03 (2003,046,0000) | 8.2309E-03 (2003,012,0000) | 6.8752E-03 (2003,031,0000) |
| 79 | -7.583 | -137.506 | 1.4237E-02 (2003,006,0000) | 8.2070E-03 (2003,046,0000) | 8.1275E-03 (2003,012,0000) | 6.8089E-03 (2003,031,0000) |
| 80 | -6.138 | -137.507 | 1.4064E-02 (2003,006,0000) | 8.0934E-03 (2003,046,0000) | 8.0189E-03 (2003,012,0000) | 6.7380E-03 (2003,031,0000) |
| 81 | -4.694 | -137.508 | 1.3880E-02 (2003,006,0000) | 7.9588E-03 (2003,046,0000) | 7.8982E-03 (2003,012,0000) | 6.6557E-03 (2003,031,0000) |
| 82 | -3.250 | -137.509 | 1.3708E-02 (2003,006,0000) | 7.8319E-03 (2003,046,0000) | 7.7829E-03 (2003,012,0000) | 6.5760E-03 (2003,031,0000) |
| 83 | -1.805 | -137.509 | 1.3527E-02 (2003,006,0000) | 7.6680E-03 (2003,012,0000) | 7.5630E-03 (2003,046,0000) | 6.4939E-03 (2003,031,0000) |
| 84 | -16.245 | -135.640 | 1.5465E-02 (2003,006,0000) | 8.8540E-03 (2003,046,0000) | 8.7966E-03 (2003,012,0000) | 7.2583E-03 (2003,023,0000) |
| 85 | -14.801 | -135.643 | 1.5317E-02 (2003,006,0000) | 8.7559E-03 (2003,046,0000) | 8.7024E-03 (2003,012,0000) | 7.1691E-03 (2003,031,0000) |
| 86 | -13.357 | -135.645 | 1.5140E-02 (2003,006,0000) | 8.6397E-03 (2003,046,0000) | 8.5894E-03 (2003,012,0000) | 7.1101E-03 (2003,031,0000) |
| 87 | -11.913 | -135.648 | 1.4973E-02 (2003,006,0000) | 8.5254E-03 (2003,046,0000) | 8.4782E-03 (2003,012,0000) | 7.0494E-03 (2003,031,0000) |
| 88 | -10.469 | -135.650 | 1.4802E-02 (2003,006,0000) | 8.4129E-03 (2003,046,0000) | 8.3684E-03 (2003,012,0000) | 6.9870E-03 (2003,031,0000) |
| 89 | -9.025 | -135.652 | 1.4640E-02 (2003,006,0000) | 8.3060E-03 (2003,046,0000) | 8.2636E-03 (2003,012,0000) | 6.9263E-03 (2003,031,0000) |
| 90 | -7.581 | -135.653 | 1.4475E-02 (2003,006,0000) | 8.1890E-03 (2003,046,0000) | 8.1525E-03 (2003,012,0000) | 6.8606E-03 (2003,031,0000) |
| 91 | -6.137 | -135.655 | 1.4282E-02 (2003,006,0000) | 8.0539E-03 (2003,046,0000) | 8.0271E-03 (2003,012,0000) | 6.7812E-03 (2003,031,0000) |
| 92 | -4.693 | -135.656 | 1.4098E-02 (2003,006,0000) | 7.9106E-03 (2003,012,0000) | 7.8160E-03 (2003,046,0000) | 6.7064E-03 (2003,031,0000) |
| 93 | -3.249 | -135.656 | 1.3919E-02 (2003,006,0000) | 7.7942E-03 (2003,012,0000) | 7.6514E-03 (2003,046,0000) | 6.6297E-03 (2003,031,0000) |
| 94 | -1.805 | -135.657 | 1.3736E-02 (2003,006,0000) | 7.6755E-03 (2003,012,0000) | 7.5234E-03 (2003,046,0000) | 6.5493E-03 (2003,031,0000) |
| 95 | -16.241 | -133.788 | 1.5732E-02 (2003,006,0000) | 8.8642E-03 (2003,046,0000) | 8.8469E-03 (2003,012,0000) | 7.2517E-03 (2003,031,0000) |
| 96 | -14.797 | -133.791 | 1.5548E-02 (2003,006,0000) | 8.7459E-03 (2003,046,0000) | 8.7286E-03 (2003,012,0000) | 7.1946E-03 (2003,031,0000) |
| 97 | -13.353 | -133.793 | 1.5374E-02 (2003,006,0000) | 8.6295E-03 (2003,046,0000) | 8.6174E-03 (2003,012,0000) | 7.1391E-03 (2003,031,0000) |
| 98 | -11.910 | -133.796 | 1.5210E-02 (2003,006,0000) | 8.5182E-03 (2003,046,0000) | 8.5093E-03 (2003,012,0000) | 7.0847E-03 (2003,031,0000) |
| 99 | -10.466 | -133.798 | 1.5067E-02 (2003,006,0000) | 8.4065E-03 (2003,012,0000) | 8.4046E-03 (2003,046,0000) | 7.0314E-03 (2003,031,0000) |
| 100 | -9.023 | -133.799 | 1.4878E-02 (2003,006,0000) | 8.2891E-03 (2003,012,0000) | 8.2830E-03 (2003,046,0000) | 6.9650E-03 (2003,031,0000) |
| 101 | -7.579 | -133.801 | 1.4679E-02 (2003,006,0000) | 8.1595E-03 (2003,012,0000) | 8.1458E-03 (2003,046,0000) | 6.8929E-03 (2003,031,0000) |
| 102 | -4.692 | -133.803 | 1.4312E-02 (2003,006,0000) | 7.9199E-03 (2003,012,0000) | 7.7298E-03 (2003,046,0000) | 6.7494E-03 (2003,031,0000) |
| 103 | -3.248 | -133.804 | 1.4125E-02 (2003,006,0000) | 7.7999E-03 (2003,012,0000) | 7.6041E-03 (2003,046,0000) | 6.6743E-03 (2003,031,0000) |
| 104 | -14.793 | -131.938 | 1.5773E-02 (2003,006,0000) | 8.7492E-03 (2003,012,0000) | 8.7262E-03 (2003,046,0000) | 7.2114E-03 (2003,031,0000) |
| 105 | -13.350 | -131.941 | 1.5619E-02 (2003,006,0000) | 8.6521E-03 (2003,012,0000) | 8.6141E-03 (2003,046,0000) | 7.1649E-03 (2003,031,0000) |
| 106 | -11.907 | -131.943 | 1.5473E-02 (2003,006,0000) | 8.5445E-03 (2003,012,0000) | 8.4961E-03 (2003,046,0000) | 7.1156E-03 (2003,031,0000) |
| 107 | -10.464 | -131.945 | 1.5259E-02 (2003,006,0000) | 8.4132E-03 (2003,012,0000) | 8.3634E-03 (2003,046,0000) | 7.0483E-03 (2003,031,0000) |
| 108 | -9.020 | -131.947 | 1.5068E-02 (2003,006,0000) | 8.2857E-03 (2003,012,0000) | 8.2292E-03 (2003,046,0000) | 6.9830E-03 (2003,031,0000) |
| 109 | -16.233 | -130.083 | 1.6193E-02 (2003,006,0000) | 8.8888E-03 (2003,012,0000) | 8.8225E-03 (2003,046,0000) | 7.2819E-03 (2003,031,0000) |
| 110 | -14.790 | -130.086 | 1.6012E-02 (2003,006,0000) | 8.7795E-03 (2003,012,0000) | 8.7024E-03 (2003,046,0000) | 7.2336E-03 (2003,031,0000) |
| 111 | -13.347 | -130.089 | 1.5834E-02 (2003,006,0000) | 8.6643E-03 (2003,012,0000) | 8.5773E-03 (2003,046,0000) | 7.1797E-03 (2003,031,0000) |
| 112 | -11.904 | -130.091 | 1.5635E-02 (2003,006,0000) | 8.5312E-03 (2003,012,0000) | 8.4424E-03 (2003,046,0000) | 7.1171E-03 (2003,031,0000) |
| 113 | -17.671 | -128.228 | 1.6627E-02 (2003,006,0000) | 9.0155E-03 (2003,012,0000) | 8.9096E-03 (2003,046,0000) | 7.3433E-03 (2003,031,0000) |
| 114 | -16.229 | -128.231 | 1.6417E-02 (2003,006,0000) | 8.8947E-03 (2003,012,0000) | 8.7816E-03 (2003,046,0000) | 7.2841E-03 (2003,031,0000) |
| 115 | -14.786 | -128.234 | 1.6218E-02 (2003,006,0000) | 8.7757E-03 (2003,012,0000) | 8.6518E-03 (2003,046,0000) | 7.2301E-03 (2003,031,0000) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1 | -9.046 | -154.175 | 7.7794E-04 | 58 | -4.696 | -141.212 | 7.7739E-04 |
| 2 | -7.599 | -154.176 | 7.7050E-04 | 59 | -3.251 | -141.213 | 7.6689E-04 |
| 3 | -6.152 | -154.178 | 7.6266E-04 | 60 | -1.806 | -141.214 | 7.5767E-04 |
| 4 | -3.257 | -154.179 | 7.3222E-04 | 61 | -0.361 | -141.214 | 7.4858E-04 |
| 5 | -10.491 | -152.321 | 7.9977E-04 | 62 | -14.808 | -139.347 | 8.5386E-04 |
| 6 | -9.044 | -152.322 | 7.8704E-04 | 63 | -13.363 | -139.350 | 8.4430E-04 |
| 7 | -7.597 | -152.324 | 7.7415E-04 | 64 | -11.918 | -139.352 | 8.3802E-04 |
| 8 | -6.150 | -152.325 | 7.5968E-04 | 65 | -10.474 | -139.354 | 8.2591E-04 |
| 9 | -4.703 | -152.326 | 7.5708E-04 | 66 | -9.029 | -139.356 | 8.1087E-04 |
| 10 | -3.256 | -152.327 | 7.4897E-04 | 67 | -7.584 | -139.358 | 8.0110E-04 |
| 11 | -1.809 | -152.328 | 7.4069E-04 | 68 | -6.140 | -139.359 | 7.9483E-04 |
| 12 | -0.362 | -152.328 | 7.1925E-04 | 69 | -4.695 | -139.360 | 7.8727E-04 |
| 13 | -11.936 | -150.466 | 8.0897E-04 | 70 | -3.250 | -139.361 | 7.7243E-04 |
| 14 | -10.489 | -150.468 | 7.9214E-04 | 71 | -1.806 | -139.361 | 7.6308E-04 |
| 15 | -9.042 | -150.470 | 7.8266E-04 | 72 | -0.361 | -139.361 | 7.5610E-04 |
| 16 | -7.595 | -150.472 | 7.7383E-04 | 73 | 1.083 | -139.361 | 7.4527E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | -6.149 | -150.473 | 7.6419E-04 | 74 | -14.804 | -137.495 | 8.6167E-04 |
| 18 | -4.702 | -150.474 | 7.6196E-04 | 75 | -13.360 | -137.498 | 8.5158E-04 |
| 19 | -3.255 | -150.475 | 7.5698E-04 | 76 | -11.915 | -137.500 | 8.3718E-04 |
| 20 | -1.808 | -150.475 | 7.5279E-04 | 77 | -10.471 | -137.502 | 8.2665E-04 |
| 21 | 1.085 | -150.475 | 7.2448E-04 | 78 | -9.027 | -137.504 | 8.1887E-04 |
| 22 | -11.933 | -148.614 | 8.0560E-04 | 79 | -7.583 | -137.506 | 8.1269E-04 |
| 23 | -10.486 | -148.616 | 8.0333E-04 | 80 | -6.138 | -137.507 | 8.0508E-04 |
| 24 | -9.040 | -148.618 | 7.9564E-04 | 81 | -4.694 | -137.508 | 7.8882E-04 |
| 25 | -7.594 | -148.619 | 7.8287E-04 | 82 | -3.250 | -137.509 | 7.7699E-04 |
| 26 | -6.147 | -148.621 | 7.7354E-04 | 83 | -1.805 | -137.509 | 7.6480E-04 |
| 27 | -4.701 | -148.622 | 7.6733E-04 | 84 | -16.245 | -135.640 | 8.7243E-04 |
| 28 | -3.254 | -148.622 | 7.6213E-04 | 85 | -14.801 | -135.643 | 8.6488E-04 |
| 29 | -1.808 | -148.623 | 7.5745E-04 | 86 | -13.357 | -135.645 | 8.5216E-04 |
| 30 | -0.362 | -148.623 | 7.3921E-04 | 87 | -11.913 | -135.648 | 8.4129E-04 |
| 31 | -11.930 | -146.762 | 8.1495E-04 | 88 | -10.469 | -135.650 | 8.3111E-04 |
| 32 | -10.484 | -146.764 | 8.0828E-04 | 89 | -9.025 | -135.652 | 8.2424E-04 |
| 33 | -9.038 | -146.765 | 8.0165E-04 | 90 | -7.581 | -135.653 | 8.1769E-04 |
| 34 | -7.592 | -146.767 | 7.8970E-04 | 91 | -6.137 | -135.655 | 8.0008E-04 |
| 35 | -6.146 | -146.768 | 7.8115E-04 | 92 | -4.693 | -135.656 | 7.8774E-04 |
| 36 | -4.700 | -146.769 | 7.7604E-04 | 93 | -3.249 | -135.656 | 7.7632E-04 |
| 37 | -3.254 | -146.770 | 7.7089E-04 | 94 | -1.805 | -135.657 | 7.6373E-04 |
| 38 | -1.808 | -146.770 | 7.6257E-04 | 95 | -16.241 | -133.788 | 8.8256E-04 |
| 39 | -0.362 | -146.771 | 7.3547E-04 | 96 | -14.797 | -133.791 | 8.6670E-04 |
| 40 | -10.481 | -144.911 | 8.1350E-04 | 97 | -13.353 | -133.793 | 8.5516E-04 |
| 41 | -9.036 | -144.913 | 8.0612E-04 | 98 | -11.910 | -133.796 | 8.4642E-04 |
| 42 | -7.590 | -144.915 | 7.9878E-04 | 99 | -10.466 | -133.798 | 8.4311E-04 |
| 43 | -6.144 | -144.916 | 7.8980E-04 | 100 | -9.023 | -133.799 | 8.3000E-04 |
| 44 | -4.699 | -144.917 | 7.8208E-04 | 101 | -7.579 | -133.801 | 8.1243E-04 |
| 45 | -3.253 | -144.918 | 7.7439E-04 | 102 | -4.692 | -133.803 | 7.8754E-04 |
| 46 | -1.807 | -144.918 | 7.5711E-04 | 103 | -3.248 | -133.804 | 7.7575E-04 |
| 47 | -10.479 | -143.059 | 8.1892E-04 | 104 | -14.793 | -131.938 | 8.6882E-04 |
| 48 | -9.033 | -143.061 | 8.1241E-04 | 105 | -13.350 | -131.941 | 8.6336E-04 |
| 49 | -7.588 | -143.062 | 8.0237E-04 | 106 | -11.907 | -131.943 | 8.5778E-04 |
| 50 | -6.143 | -143.064 | 7.8979E-04 | 107 | -10.464 | -131.945 | 8.3747E-04 |
| 51 | -4.697 | -143.065 | 7.8042E-04 | 108 | -9.020 | -131.947 | 8.2239E-04 |
| 52 | -3.252 | -143.065 | 7.7039E-04 | 109 | -16.233 | -130.083 | 8.8713E-04 |
| 53 | -1.807 | -143.066 | 7.5538E-04 | 110 | -14.790 | -130.086 | 8.7633E-04 |
| 54 | -10.476 | -141.207 | 8.2547E-04 | 111 | -13.347 | -130.089 | 8.6436E-04 |
| 55 | -9.031 | -141.209 | 8.1574E-04 | 112 | -11.904 | -130.091 | 8.4696E-04 |
| 56 | -7.586 | -141.210 | 7.9853E-04 | 113 | -17.671 | -128.228 | 9.0543E-04 |
| 57 | -6.141 | -141.211 | 7.8886E-04 | 114 | -16.229 | -128.231 | 8.8661E-04 |
| | | | | 115 | -14.786 | -128.234 | 8.7163E-04 |

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CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 113 | -17.671 | -128.228 | DISCRETE | 1.6627E-02 (2003,006,0000) | RANK 1 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 9.0155E-03 (2003,012,0000) | RANK 2 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 8.9096E-03 (2003,046,0000) | RANK 3 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 7.3433E-03 (2003,031,0000) | RANK 4 | 24 | HOUR |
| 113 | -17.671 | -128.228 | DISCRETE | 9.0543E-04 | RANK 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Bryce Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  115*0, 213*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -       second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                        Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                  Multiplicative scaling factor: 0.0000E+00
                        Additive scaling factor: 0.0000E+00
                 Hourly background values used?: F


  Source information
                 Source contribution processing: 0
                  0= No source contributions
                  1= Contributions are summed
                  2= TRACEBACK mode for 1 receptor
                  3= Reported TOTAL is processed


  Receptor information
                   Gridded receptors processed?: F
                  Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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1 1 1 1 1 1 1 1

  Visibility Processing is NOT Selected
```

```
 Output options
                    Units requested for output:   (ug/m**3)

 Averaging time(s) selected
     User-specified averaging time (NAVG hours):     0
                                  1-hr averages:     F
                                  3-hr averages:     F
                                 24-hr averages:     T
                               NAVG-hr averages:     F
                         Length of run averages:     T

 Output components selected
                                          Top-50:     F
                  Top-N values at each receptor:     T
             Exceedance counts at each receptor:     F
      Output selected information for debugging:     F
                  Echo tables for selected days:     F
                  Time-series for selected days:     F
       Peak value Time-series for selected days:     F

 Top "n" table control
        Number of "top" values at each receptor:     4
        Specific ranks of "top" values reported:   1   2   3   4


 Plot file option
                               Plot files created:     T
                        Plot file format is DATA:  .DAT



 IDENTIFICATION OF PROCESSED MODEL FILE ----------

 CALPUFF     5.8         070623

 CALPUFF SPC Facility
 2003 MM5 data
 Discrete receptors for CL, AR, CR, BR, GC, ZI NP

 Averaging time for values reported from model:
       1    HOUR

 Number of averaging periods in file from model:
       8736

 Chemical species names for each layer in model:
 SO2           1
 SO4           1
 NOX           1
 HNO3          1
 NO3           1
 PM10          1




 ------------------------------------------------------------------------------------------------------------------------------------
          INPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.INP         5        C:\SPC_FF\CALPOST\2003\POST_2003_PM_BR.INP
    MODEL.DAT         4        C:\SPC_FF\CALPUFF\2003\SPC2003.CON


 ------------------------------------------------------------------------------------------------------------------------------------
          OUTPUT FILES

 Default Name     Unit No.     File Name and Path
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2003\2003_BRYCE_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_BR.DAT

*************************************************************************************************************************************
                                                   CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************************


                                                          PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
    116     -243.891  -280.107   1.1477E-02 (2003,027,0000)  1.1094E-02 (2003,209,0000)  1.0279E-02 (2003,019,0000)  1.0026E-02 (2003,089,0000)
    117     -243.156  -280.129   1.1644E-02 (2003,027,0000)  1.1277E-02 (2003,209,0000)  1.0330E-02 (2003,019,0000)  1.0328E-02 (2003,089,0000)
    118     -242.420  -280.152   1.1816E-02 (2003,027,0000)  1.1464E-02 (2003,209,0000)  1.0617E-02 (2003,089,0000)  1.0446E-02 (2003,110,0000)
    119     -241.685  -280.175   1.2009E-02 (2003,027,0000)  1.1631E-02 (2003,209,0000)  1.0889E-02 (2003,089,0000)  1.0786E-02 (2003,110,0000)
    120     -243.862  -279.180   1.1543E-02 (2003,027,0000)  1.1266E-02 (2003,209,0000)  1.0410E-02 (2003,019,0000)  9.9483E-03 (2003,089,0000)
    121     -243.127  -279.203   1.1726E-02 (2003,027,0000)  1.1463E-02 (2003,209,0000)  1.0486E-02 (2003,019,0000)  1.0255E-02 (2003,089,0000)
    122     -242.392  -279.226   1.1916E-02 (2003,027,0000)  1.1656E-02 (2003,209,0000)  1.0557E-02 (2003,019,0000)  1.0552E-02 (2003,089,0000)
    123     -241.656  -279.248   1.2099E-02 (2003,027,0000)  1.1845E-02 (2003,209,0000)  1.0839E-02 (2003,089,0000)  1.0784E-02 (2003,110,0000)
    124     -240.921  -279.271   1.2277E-02 (2003,027,0000)  1.2032E-02 (2003,209,0000)  1.1111E-02 (2003,110,0000)  1.1108E-02 (2003,089,0000)
    125     -243.834  -278.254   1.1641E-02 (2003,027,0000)  1.1452E-02 (2003,209,0000)  1.0560E-02 (2003,019,0000)  9.8648E-03 (2003,089,0000)
    126     -243.098  -278.277   1.1818E-02 (2003,027,0000)  1.1673E-02 (2003,209,0000)  1.0639E-02 (2003,019,0000)  1.0206E-02 (2003,110,0000)
    127     -242.363  -278.299   1.1986E-02 (2003,027,0000)  1.1883E-02 (2003,209,0000)  1.0715E-02 (2003,019,0000)  1.0542E-02 (2003,110,0000)
    128     -241.628  -278.322   1.2169E-02 (2003,027,0000)  1.2082E-02 (2003,209,0000)  1.0843E-02 (2003,110,0000)  1.0787E-02 (2003,089,0000)
    129     -240.892  -278.345   1.2355E-02 (2003,027,0000)  1.2270E-02 (2003,209,0000)  1.1178E-02 (2003,110,0000)  1.1064E-02 (2003,089,0000)
    130     -240.157  -278.367   1.2540E-02 (2003,027,0000)  1.2444E-02 (2003,209,0000)  1.1532E-02 (2003,110,0000)  1.1319E-02 (2003,089,0000)
    131     -243.805  -277.328   1.1704E-02 (2003,027,0000)  1.1651E-02 (2003,209,0000)  1.0707E-02 (2003,019,0000)  9.8803E-03 (2003,020,0000)
    132     -243.070  -277.350   1.1878E-02 (2003,027,0000)  1.1877E-02 (2003,209,0000)  1.0790E-02 (2003,019,0000)  1.0233E-02 (2003,110,0000)
    133     -242.335  -277.373   1.2099E-02 (2003,209,0000)  1.2060E-02 (2003,027,0000)  1.0867E-02 (2003,019,0000)  1.0586E-02 (2003,110,0000)
    134     -241.599  -277.396   1.2310E-02 (2003,209,0000)  1.2245E-02 (2003,027,0000)  1.0940E-02 (2003,019,0000)  1.0930E-02 (2003,110,0000)
    135     -240.864  -277.418   1.2509E-02 (2003,209,0000)  1.2433E-02 (2003,027,0000)  1.1269E-02 (2003,110,0000)  1.1006E-02 (2003,019,0000)
    136     -240.129  -277.441   1.2702E-02 (2003,209,0000)  1.2625E-02 (2003,027,0000)  1.1598E-02 (2003,110,0000)  1.1274E-02 (2003,089,0000)
    137     -243.776  -276.401   1.1844E-02 (2003,209,0000)  1.1751E-02 (2003,027,0000)  1.0849E-02 (2003,019,0000)  9.9153E-03 (2003,020,0000)
    138     -243.041  -276.424   1.2092E-02 (2003,209,0000)  1.1935E-02 (2003,027,0000)  1.0938E-02 (2003,019,0000)  1.0256E-02 (2003,110,0000)
    139     -242.306  -276.447   1.2327E-02 (2003,209,0000)  1.2126E-02 (2003,027,0000)  1.1022E-02 (2003,019,0000)  1.0609E-02 (2003,110,0000)
    140     -241.571  -276.469   1.2561E-02 (2003,209,0000)  1.2323E-02 (2003,027,0000)  1.1096E-02 (2003,019,0000)  1.0959E-02 (2003,110,0000)
    141     -240.836  -276.492   1.2775E-02 (2003,209,0000)  1.2516E-02 (2003,027,0000)  1.1301E-02 (2003,110,0000)  1.1164E-02 (2003,019,0000)
    142     -240.101  -276.514   1.2975E-02 (2003,209,0000)  1.2702E-02 (2003,027,0000)  1.1604E-02 (2003,110,0000)  1.1232E-02 (2003,089,0000)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| 143 | -243.747 | -275.475 | 1.2054E-02 (2003,209,0000) | 1.1816E-02 (2003,027,0000) | 1.0998E-02 (2003,019,0000) | 9.9473E-03 (2003,020,0000) |
| 144 | -243.012 | -275.498 | 1.2314E-02 (2003,209,0000) | 1.2011E-02 (2003,027,0000) | 1.1091E-02 (2003,019,0000) | 1.0285E-02 (2003,110,0000) |
| 145 | -242.277 | -275.520 | 1.2569E-02 (2003,209,0000) | 1.2195E-02 (2003,027,0000) | 1.1175E-02 (2003,019,0000) | 1.0644E-02 (2003,110,0000) |
| 146 | -241.542 | -275.543 | 1.2810E-02 (2003,209,0000) | 1.2392E-02 (2003,027,0000) | 1.1250E-02 (2003,019,0000) | 1.0949E-02 (2003,110,0000) |
| 147 | -240.807 | -275.565 | 1.3035E-02 (2003,209,0000) | 1.2583E-02 (2003,027,0000) | 1.1320E-02 (2003,019,0000) | 1.1312E-02 (2003,110,0000) |
| 148 | -240.072 | -275.588 | 1.3247E-02 (2003,209,0000) | 1.2771E-02 (2003,027,0000) | 1.1649E-02 (2003,110,0000) | 1.1370E-02 (2003,019,0000) |
| 149 | -244.454 | -274.526 | 1.1974E-02 (2003,209,0000) | 1.1671E-02 (2003,027,0000) | 1.1042E-02 (2003,019,0000) | 9.7862E-03 (2003,020,0000) |
| 150 | -243.719 | -274.548 | 1.2262E-02 (2003,209,0000) | 1.1878E-02 (2003,027,0000) | 1.1140E-02 (2003,019,0000) | 9.9792E-03 (2003,020,0000) |
| 151 | -242.984 | -274.571 | 1.2539E-02 (2003,209,0000) | 1.2082E-02 (2003,027,0000) | 1.1234E-02 (2003,019,0000) | 1.0314E-02 (2003,110,0000) |
| 152 | -244.425 | -273.599 | 1.2163E-02 (2003,209,0000) | 1.1684E-02 (2003,027,0000) | 1.1175E-02 (2003,019,0000) | 9.8086E-03 (2003,020,0000) |
| 153 | -243.690 | -273.622 | 1.2466E-02 (2003,209,0000) | 1.1903E-02 (2003,027,0000) | 1.1276E-02 (2003,019,0000) | 1.0001E-02 (2003,020,0000) |
| 154 | -242.955 | -273.645 | 1.2769E-02 (2003,209,0000) | 1.2117E-02 (2003,027,0000) | 1.1368E-02 (2003,019,0000) | 1.0321E-02 (2003,110,0000) |
| 155 | -244.396 | -272.673 | 1.2364E-02 (2003,209,0000) | 1.1705E-02 (2003,027,0000) | 1.1304E-02 (2003,019,0000) | 9.9149E-03 (2003,300,0000) |
| 156 | -243.661 | -272.696 | 1.2687E-02 (2003,209,0000) | 1.1922E-02 (2003,027,0000) | 1.1406E-02 (2003,019,0000) | 1.0017E-02 (2003,020,0000) |
| 157 | -242.927 | -272.719 | 1.2998E-02 (2003,209,0000) | 1.2135E-02 (2003,027,0000) | 1.1500E-02 (2003,019,0000) | 1.0374E-02 (2003,110,0000) |
| 158 | -244.367 | -271.747 | 1.2573E-02 (2003,209,0000) | 1.1712E-02 (2003,027,0000) | 1.1428E-02 (2003,019,0000) | 1.0103E-02 (2003,300,0000) |
| 159 | -243.633 | -271.769 | 1.2913E-02 (2003,209,0000) | 1.1938E-02 (2003,027,0000) | 1.1527E-02 (2003,019,0000) | 1.0034E-02 (2003,110,0000) |
| 160 | -242.898 | -271.792 | 1.3238E-02 (2003,209,0000) | 1.2156E-02 (2003,027,0000) | 1.1611E-02 (2003,019,0000) | 1.0380E-02 (2003,110,0000) |
| 161 | -244.339 | -270.820 | 1.2801E-02 (2003,209,0000) | 1.1740E-02 (2003,027,0000) | 1.1545E-02 (2003,019,0000) | 1.0294E-02 (2003,300,0000) |
| 162 | -243.604 | -270.843 | 1.3155E-02 (2003,209,0000) | 1.1956E-02 (2003,027,0000) | 1.1640E-02 (2003,019,0000) | 1.0185E-02 (2003,300,0000) |
| 163 | -242.869 | -270.866 | 1.3496E-02 (2003,209,0000) | 1.2169E-02 (2003,027,0000) | 1.1727E-02 (2003,019,0000) | 1.0410E-02 (2003,110,0000) |
| 164 | -242.135 | -270.889 | 1.3829E-02 (2003,209,0000) | 1.2390E-02 (2003,027,0000) | 1.1809E-02 (2003,019,0000) | 1.0756E-02 (2003,110,0000) |
| 165 | -244.310 | -269.894 | 1.3023E-02 (2003,209,0000) | 1.1759E-02 (2003,027,0000) | 1.1655E-02 (2003,019,0000) | 1.0490E-02 (2003,300,0000) |
| 166 | -243.575 | -269.917 | 1.3417E-02 (2003,209,0000) | 1.1972E-02 (2003,027,0000) | 1.1747E-02 (2003,019,0000) | 1.0378E-02 (2003,300,0000) |
| 167 | -242.841 | -269.940 | 1.3786E-02 (2003,209,0000) | 1.2192E-02 (2003,027,0000) | 1.1838E-02 (2003,019,0000) | 1.0480E-02 (2003,110,0000) |
| 168 | -242.106 | -269.962 | 1.4134E-02 (2003,209,0000) | 1.2425E-02 (2003,027,0000) | 1.1932E-02 (2003,019,0000) | 1.0851E-02 (2003,110,0000) |
| 169 | -242.812 | -269.013 | 1.4095E-02 (2003,209,0000) | 1.2207E-02 (2003,027,0000) | 1.1959E-02 (2003,019,0000) | 1.0521E-02 (2003,110,0000) |
| 170 | -242.078 | -269.036 | 1.4469E-02 (2003,209,0000) | 1.2440E-02 (2003,027,0000) | 1.2063E-02 (2003,019,0000) | 1.0893E-02 (2003,110,0000) |
| 171 | -241.343 | -269.059 | 1.4794E-02 (2003,209,0000) | 1.2663E-02 (2003,027,0000) | 1.2160E-02 (2003,019,0000) | 1.1237E-02 (2003,110,0000) |
| 172 | -240.609 | -269.081 | 1.5130E-02 (2003,209,0000) | 1.2891E-02 (2003,027,0000) | 1.2250E-02 (2003,019,0000) | 1.1570E-02 (2003,110,0000) |
| 173 | -239.874 | -269.104 | 1.5448E-02 (2003,209,0000) | 1.3107E-02 (2003,027,0000) | 1.2336E-02 (2003,019,0000) | 1.1909E-02 (2003,110,0000) |
| 174 | -242.049 | -268.110 | 1.4804E-02 (2003,209,0000) | 1.2448E-02 (2003,027,0000) | 1.2197E-02 (2003,019,0000) | 1.0936E-02 (2003,110,0000) |
| 175 | -241.315 | -268.132 | 1.5186E-02 (2003,209,0000) | 1.2670E-02 (2003,027,0000) | 1.2298E-02 (2003,019,0000) | 1.1304E-02 (2003,110,0000) |
| 176 | -240.580 | -268.155 | 1.5525E-02 (2003,209,0000) | 1.2901E-02 (2003,027,0000) | 1.2397E-02 (2003,019,0000) | 1.1647E-02 (2003,110,0000) |
| 177 | -239.846 | -268.177 | 1.5817E-02 (2003,209,0000) | 1.3128E-02 (2003,027,0000) | 1.2489E-02 (2003,019,0000) | 1.1962E-02 (2003,110,0000) |
| 178 | -239.112 | -268.200 | 1.6101E-02 (2003,209,0000) | 1.3356E-02 (2003,027,0000) | 1.2569E-02 (2003,019,0000) | 1.2269E-02 (2003,110,0000) |
| 179 | -242.020 | -267.183 | 1.5051E-02 (2003,209,0000) | 1.2451E-02 (2003,027,0000) | 1.2332E-02 (2003,019,0000) | 1.0988E-02 (2003,110,0000) |
| 180 | -241.286 | -267.206 | 1.5502E-02 (2003,209,0000) | 1.2684E-02 (2003,027,0000) | 1.2438E-02 (2003,019,0000) | 1.1357E-02 (2003,110,0000) |
| 181 | -240.552 | -267.228 | 1.5920E-02 (2003,209,0000) | 1.2906E-02 (2003,027,0000) | 1.2539E-02 (2003,019,0000) | 1.1716E-02 (2003,110,0000) |
| 182 | -239.818 | -267.251 | 1.6261E-02 (2003,209,0000) | 1.3131E-02 (2003,027,0000) | 1.2619E-02 (2003,019,0000) | 1.2028E-02 (2003,110,0000) |
| 183 | -239.083 | -267.273 | 1.6527E-02 (2003,209,0000) | 1.3367E-02 (2003,027,0000) | 1.2665E-02 (2003,019,0000) | 1.2317E-02 (2003,110,0000) |
| 184 | -241.258 | -266.280 | 1.5597E-02 (2003,209,0000) | 1.2668E-02 (2003,027,0000) | 1.2573E-02 (2003,019,0000) | 1.1410E-02 (2003,110,0000) |
| 185 | -240.524 | -266.302 | 1.6182E-02 (2003,209,0000) | 1.2911E-02 (2003,027,0000) | 1.2649E-02 (2003,019,0000) | 1.1776E-02 (2003,110,0000) |
| 186 | -239.789 | -266.325 | 1.6653E-02 (2003,209,0000) | 1.3137E-02 (2003,027,0000) | 1.2696E-02 (2003,019,0000) | 1.2097E-02 (2003,110,0000) |
| 187 | -239.055 | -266.347 | 1.7005E-02 (2003,209,0000) | 1.3381E-02 (2003,027,0000) | 1.2758E-02 (2003,019,0000) | 1.2432E-02 (2003,110,0000) |
| 188 | -238.321 | -266.369 | 1.7271E-02 (2003,209,0000) | 1.3617E-02 (2003,027,0000) | 1.2809E-02 (2003,019,0000) | 1.2729E-02 (2003,110,0000) |
| 189 | -237.587 | -266.392 | 1.7462E-02 (2003,209,0000) | 1.3845E-02 (2003,027,0000) | 1.3026E-02 (2003,110,0000) | 1.2848E-02 (2003,019,0000) |
| 190 | -236.853 | -266.414 | 1.7643E-02 (2003,209,0000) | 1.4072E-02 (2003,027,0000) | 1.3292E-02 (2003,110,0000) | 1.2904E-02 (2003,019,0000) |
| 191 | -236.118 | -266.436 | 1.7842E-02 (2003,209,0000) | 1.4308E-02 (2003,027,0000) | 1.3575E-02 (2003,110,0000) | 1.2957E-02 (2003,019,0000) |
| 192 | -235.384 | -266.458 | 1.8029E-02 (2003,209,0000) | 1.4532E-02 (2003,027,0000) | 1.3820E-02 (2003,110,0000) | 1.2997E-02 (2003,019,0000) |
| 193 | -234.650 | -266.480 | 1.8207E-02 (2003,209,0000) | 1.4738E-02 (2003,027,0000) | 1.4041E-02 (2003,110,0000) | 1.3023E-02 (2003,019,0000) |
| 194 | -233.916 | -266.502 | 1.8352E-02 (2003,209,0000) | 1.4938E-02 (2003,027,0000) | 1.4208E-02 (2003,110,0000) | 1.3041E-02 (2003,019,0000) |
| 195 | -233.181 | -266.524 | 1.8485E-02 (2003,209,0000) | 1.5114E-02 (2003,027,0000) | 1.4394E-02 (2003,110,0000) | 1.3140E-02 (2003,089,0000) |
| 196 | -232.447 | -266.545 | 1.8569E-02 (2003,209,0000) | 1.5285E-02 (2003,027,0000) | 1.4523E-02 (2003,110,0000) | 1.3306E-02 (2003,089,0000) |
| 197 | -231.713 | -266.567 | 1.8616E-02 (2003,209,0000) | 1.5440E-02 (2003,027,0000) | 1.4654E-02 (2003,110,0000) | 1.3438E-02 (2003,089,0000) |
| 198 | -241.229 | -265.353 | 1.5758E-02 (2003,209,0000) | 1.2654E-02 (2003,019,0000) | 1.2631E-02 (2003,027,0000) | 1.1453E-02 (2003,110,0000) |
| 199 | -240.495 | -265.376 | 1.6188E-02 (2003,209,0000) | 1.2898E-02 (2003,027,0000) | 1.2727E-02 (2003,019,0000) | 1.1821E-02 (2003,110,0000) |
| 200 | -239.761 | -265.398 | 1.6719E-02 (2003,209,0000) | 1.3149E-02 (2003,027,0000) | 1.2802E-02 (2003,019,0000) | 1.2175E-02 (2003,110,0000) |
| 201 | -239.027 | -265.421 | 1.7290E-02 (2003,209,0000) | 1.3392E-02 (2003,027,0000) | 1.2851E-02 (2003,019,0000) | 1.2460E-02 (2003,110,0000) |
| 202 | -238.293 | -265.443 | 1.7751E-02 (2003,209,0000) | 1.3617E-02 (2003,027,0000) | 1.2910E-02 (2003,019,0000) | 1.2788E-02 (2003,110,0000) |
| 203 | -237.559 | -265.465 | 1.8026E-02 (2003,209,0000) | 1.3845E-02 (2003,027,0000) | 1.3108E-02 (2003,110,0000) | 1.2980E-02 (2003,019,0000) |
| 204 | -236.825 | -265.487 | 1.8220E-02 (2003,209,0000) | 1.4073E-02 (2003,027,0000) | 1.3375E-02 (2003,110,0000) | 1.3044E-02 (2003,019,0000) |
| 205 | -236.090 | -265.509 | 1.8367E-02 (2003,209,0000) | 1.4310E-02 (2003,027,0000) | 1.3703E-02 (2003,110,0000) | 1.3097E-02 (2003,019,0000) |
| 206 | -235.356 | -265.532 | 1.8515E-02 (2003,209,0000) | 1.4539E-02 (2003,027,0000) | 1.3962E-02 (2003,110,0000) | 1.3130E-02 (2003,019,0000) |
| 207 | -234.622 | -265.553 | 1.8673E-02 (2003,209,0000) | 1.4760E-02 (2003,027,0000) | 1.4134E-02 (2003,110,0000) | 1.3157E-02 (2003,019,0000) |
| 208 | -233.888 | -265.575 | 1.8813E-02 (2003,209,0000) | 1.4974E-02 (2003,027,0000) | 1.4286E-02 (2003,110,0000) | 1.3187E-02 (2003,019,0000) |
| 209 | -233.154 | -265.597 | 1.8938E-02 (2003,209,0000) | 1.5168E-02 (2003,027,0000) | 1.4492E-02 (2003,110,0000) | 1.3206E-02 (2003,019,0000) |
| 210 | -232.420 | -265.619 | 1.9013E-02 (2003,209,0000) | 1.5346E-02 (2003,027,0000) | 1.4613E-02 (2003,110,0000) | 1.3299E-02 (2003,089,0000) |
| 211 | -231.686 | -265.641 | 1.9061E-02 (2003,209,0000) | 1.5507E-02 (2003,027,0000) | 1.4745E-02 (2003,110,0000) | 1.3443E-02 (2003,089,0000) |
| 212 | -240.467 | -264.449 | 1.6507E-02 (2003,209,0000) | 1.2871E-02 (2003,027,0000) | 1.2823E-02 (2003,019,0000) | 1.1870E-02 (2003,110,0000) |
| 213 | -239.733 | -264.472 | 1.6904E-02 (2003,209,0000) | 1.3120E-02 (2003,027,0000) | 1.2887E-02 (2003,019,0000) | 1.2226E-02 (2003,110,0000) |
| 214 | -238.999 | -264.494 | 1.7288E-02 (2003,209,0000) | 1.3380E-02 (2003,027,0000) | 1.2965E-02 (2003,019,0000) | 1.2554E-02 (2003,110,0000) |
| 215 | -238.265 | -264.517 | 1.7780E-02 (2003,209,0000) | 1.3622E-02 (2003,027,0000) | 1.3043E-02 (2003,019,0000) | 1.2902E-02 (2003,110,0000) |
| 216 | -237.531 | -264.539 | 1.8371E-02 (2003,209,0000) | 1.3842E-02 (2003,027,0000) | 1.3204E-02 (2003,110,0000) | 1.3111E-02 (2003,019,0000) |
| 217 | -236.797 | -264.561 | 1.8793E-02 (2003,209,0000) | 1.4076E-02 (2003,027,0000) | 1.3503E-02 (2003,110,0000) | 1.3175E-02 (2003,019,0000) |
| 218 | -236.063 | -264.583 | 1.9022E-02 (2003,209,0000) | 1.4317E-02 (2003,027,0000) | 1.3794E-02 (2003,110,0000) | 1.3216E-02 (2003,019,0000) |
| 219 | -235.329 | -264.605 | 1.9141E-02 (2003,209,0000) | 1.4545E-02 (2003,027,0000) | 1.4029E-02 (2003,110,0000) | 1.3253E-02 (2003,019,0000) |
| 220 | -234.595 | -264.627 | 1.9225E-02 (2003,209,0000) | 1.4769E-02 (2003,027,0000) | 1.4186E-02 (2003,110,0000) | 1.3288E-02 (2003,019,0000) |
| 221 | -233.860 | -264.649 | 1.9317E-02 (2003,209,0000) | 1.4991E-02 (2003,027,0000) | 1.4402E-02 (2003,110,0000) | 1.3319E-02 (2003,019,0000) |
| 222 | -233.126 | -264.671 | 1.9421E-02 (2003,209,0000) | 1.5203E-02 (2003,027,0000) | 1.4538E-02 (2003,110,0000) | 1.3340E-02 (2003,019,0000) |
| 223 | -232.392 | -264.693 | 1.9495E-02 (2003,209,0000) | 1.5389E-02 (2003,027,0000) | 1.4722E-02 (2003,110,0000) | 1.3354E-02 (2003,019,0000) |
| 224 | -231.658 | -264.714 | 1.9556E-02 (2003,209,0000) | 1.5571E-02 (2003,027,0000) | 1.4804E-02 (2003,110,0000) | 1.3464E-02 (2003,089,0000) |
| 225 | -238.971 | -263.568 | 1.7653E-02 (2003,209,0000) | 1.3343E-02 (2003,027,0000) | 1.3088E-02 (2003,019,0000) | 1.2631E-02 (2003,110,0000) |
| 226 | -238.237 | -263.590 | 1.8003E-02 (2003,209,0000) | 1.3600E-02 (2003,027,0000) | 1.3169E-02 (2003,019,0000) | 1.2954E-02 (2003,110,0000) |
| 227 | -237.503 | -263.613 | 1.8340E-02 (2003,209,0000) | 1.3843E-02 (2003,027,0000) | 1.3293E-02 (2003,110,0000) | 1.3239E-02 (2003,019,0000) |
| 228 | -236.769 | -263.635 | 1.8805E-02 (2003,209,0000) | 1.4082E-02 (2003,027,0000) | 1.3592E-02 (2003,110,0000) | 1.3288E-02 (2003,019,0000) |
| 229 | -236.035 | -263.657 | 1.9437E-02 (2003,209,0000) | 1.4314E-02 (2003,027,0000) | 1.3859E-02 (2003,110,0000) | 1.3330E-02 (2003,019,0000) |
| 230 | -235.301 | -263.679 | 1.9793E-02 (2003,209,0000) | 1.4547E-02 (2003,027,0000) | 1.4107E-02 (2003,110,0000) | 1.3374E-02 (2003,019,0000) |
| 231 | -234.567 | -263.701 | 1.9940E-02 (2003,209,0000) | 1.4779E-02 (2003,027,0000) | 1.4353E-02 (2003,110,0000) | 1.3418E-02 (2003,019,0000) |
| 232 | -233.833 | -263.723 | 1.9972E-02 (2003,209,0000) | 1.4996E-02 (2003,027,0000) | 1.4567E-02 (2003,110,0000) | 1.3449E-02 (2003,019,0000) |
| 233 | -233.099 | -263.745 | 1.9989E-02 (2003,209,0000) | 1.5214E-02 (2003,027,0000) | 1.4671E-02 (2003,110,0000) | 1.3469E-02 (2003,019,0000) |
| 234 | -232.365 | -263.766 | 2.0015E-02 (2003,209,0000) | 1.5411E-02 (2003,027,0000) | 1.4802E-02 (2003,110,0000) | 1.3488E-02 (2003,019,0000) |
| 235 | -231.631 | -263.788 | 2.0058E-02 (2003,209,0000) | 1.5598E-02 (2003,027,0000) | 1.4897E-02 (2003,110,0000) | 1.3500E-02 (2003,019,0000) |
| 236 | -238.208 | -262.664 | 1.8468E-02 (2003,209,0000) | 1.3556E-02 (2003,027,0000) | 1.3288E-02 (2003,019,0000) | 1.3023E-02 (2003,110,0000) |
| 237 | -237.475 | -262.686 | 1.8801E-02 (2003,209,0000) | 1.3817E-02 (2003,027,0000) | 1.3354E-02 (2003,110,0000) | 1.3346E-02 (2003,019,0000) |
| 238 | -236.741 | -262.708 | 1.9110E-02 (2003,209,0000) | 1.4071E-02 (2003,027,0000) | 1.3645E-02 (2003,110,0000) | 1.3402E-02 (2003,019,0000) |
| 239 | -236.007 | -262.731 | 1.9402E-02 (2003,209,0000) | 1.4314E-02 (2003,027,0000) | 1.3944E-02 (2003,110,0000) | 1.3458E-02 (2003,019,0000) |
| 240 | -235.273 | -262.753 | 1.9826E-02 (2003,209,0000) | 1.4542E-02 (2003,027,0000) | 1.4201E-02 (2003,110,0000) | 1.3508E-02 (2003,019,0000) |
| 241 | -234.539 | -262.775 | 2.0430E-02 (2003,209,0000) | 1.4771E-02 (2003,027,0000) | 1.4441E-02 (2003,110,0000) | 1.3546E-02 (2003,019,0000) |
| 242 | -233.805 | -262.796 | 2.0699E-02 (2003,209,0000) | 1.4998E-02 (2003,027,0000) | 1.4643E-02 (2003,110,0000) | 1.3576E-02 (2003,019,0000) |
| 243 | -233.071 | -262.818 | 2.0731E-02 (2003,209,0000) | 1.5215E-02 (2003,027,0000) | 1.4800E-02 (2003,110,0000) | 1.3601E-02 (2003,019,0000) |
| 244 | -232.338 | -262.840 | 2.0676E-02 (2003,209,0000) | 1.5426E-02 (2003,027,0000) | 1.4909E-02 (2003,110,0000) | 1.3616E-02 (2003,019,0000) |
| 245 | -238.180 | -261.738 | 1.8990E-02 (2003,209,0000) | 1.3511E-02 (2003,027,0000) | 1.3399E-02 (2003,019,0000) | 1.3091E-02 (2003,110,0000) |
| 246 | -237.447 | -261.760 | 1.9336E-02 (2003,209,0000) | 1.3774E-02 (2003,027,0000) | 1.3462E-02 (2003,019,0000) | 1.3417E-02 (2003,110,0000) |
| 247 | -236.713 | -261.782 | 1.9650E-02 (2003,209,0000) | 1.4035E-02 (2003,027,0000) | 1.3721E-02 (2003,110,0000) | 1.3524E-02 (2003,019,0000) |
| 248 | -235.979 | -261.804 | 1.9926E-02 (2003,209,0000) | 1.4286E-02 (2003,027,0000) | 1.4004E-02 (2003,110,0000) | 1.3584E-02 (2003,019,0000) |
| 249 | -235.245 | -261.826 | 2.0167E-02 (2003,209,0000) | 1.4532E-02 (2003,027,0000) | 1.4280E-02 (2003,110,0000) | 1.3633E-02 (2003,019,0000) |
| 250 | -234.511 | -261.848 | 2.0383E-02 (2003,209,0000) | 1.4762E-02 (2003,027,0000) | 1.4469E-02 (2003,110,0000) | 1.3674E-02 (2003,019,0000) |
| 251 | -233.778 | -261.870 | 2.0775E-02 (2003,209,0000) | 1.4987E-02 (2003,027,0000) | 1.4664E-02 (2003,110,0000) | 1.3708E-02 (2003,019,0000) |
| 252 | -233.044 | -261.892 | 2.1285E-02 (2003,209,0000) | 1.5210E-02 (2003,027,0000) | 1.4857E-02 (2003,110,0000) | 1.3731E-02 (2003,019,0000) |
| 253 | -232.310 | -261.914 | 2.1467E-02 (2003,209,0000) | 1.5426E-02 (2003,027,0000) | 1.4998E-02 (2003,110,0000) | 1.3748E-02 (2003,019,0000) |
| 254 | -235.951 | -260.878 | 2.0536E-02 (2003,209,0000) | 1.4236E-02 (2003,027,0000) | 1.4078E-02 (2003,110,0000) | 1.3709E-02 (2003,019,0000) |
| 255 | -235.217 | -260.900 | 2.0770E-02 (2003,209,0000) | 1.4492E-02 (2003,027,0000) | 1.4340E-02 (2003,110,0000) | 1.3762E-02 (2003,019,0000) |
| 256 | -234.484 | -260.922 | 2.0963E-02 (2003,209,0000) | 1.4740E-02 (2003,027,0000) | 1.4559E-02 (2003,110,0000) | 1.3805E-02 (2003,019,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 257 | -233.750 | -260.944 | 2.1119E-02 (2003,209,0000) | 1.4973E-02 (2003,027,0000) | 1.4741E-02 (2003,110,0000) | 1.3835E-02 (2003,019,0000) |
| 258 | -233.016 | -260.966 | 2.1248E-02 (2003,209,0000) | 1.5203E-02 (2003,027,0000) | 1.4909E-02 (2003,110,0000) | 1.3860E-02 (2003,019,0000) |
| 259 | -232.283 | -260.987 | 2.1608E-02 (2003,209,0000) | 1.5419E-02 (2003,027,0000) | 1.5065E-02 (2003,110,0000) | 1.3882E-02 (2003,019,0000) |
| 260 | -231.549 | -261.009 | 2.1993E-02 (2003,209,0000) | 1.5626E-02 (2003,027,0000) | 1.5201E-02 (2003,110,0000) | 1.3896E-02 (2003,019,0000) |
| 261 | -230.815 | -261.031 | 2.2069E-02 (2003,209,0000) | 1.5819E-02 (2003,027,0000) | 1.5269E-02 (2003,110,0000) | 1.3896E-02 (2003,019,0000) |
| 262 | -235.923 | -259.952 | 2.1233E-02 (2003,209,0000) | 1.4183E-02 (2003,027,0000) | 1.4176E-02 (2003,110,0000) | 1.3831E-02 (2003,019,0000) |
| 263 | -235.190 | -259.974 | 2.1449E-02 (2003,209,0000) | 1.4441E-02 (2003,027,0000) | 1.4440E-02 (2003,110,0000) | 1.3880E-02 (2003,019,0000) |
| 264 | -234.456 | -259.996 | 2.1627E-02 (2003,209,0000) | 1.4698E-02 (2003,027,0000) | 1.4671E-02 (2003,110,0000) | 1.3925E-02 (2003,019,0000) |
| 265 | -233.723 | -260.018 | 2.1767E-02 (2003,209,0000) | 1.4948E-02 (2003,027,0000) | 1.4853E-02 (2003,110,0000) | 1.3960E-02 (2003,019,0000) |
| 266 | -232.989 | -260.039 | 2.1869E-02 (2003,209,0000) | 1.5195E-02 (2003,027,0000) | 1.5033E-02 (2003,110,0000) | 1.3993E-02 (2003,019,0000) |
| 267 | -232.255 | -260.061 | 2.1939E-02 (2003,209,0000) | 1.5407E-02 (2003,027,0000) | 1.5183E-02 (2003,110,0000) | 1.4013E-02 (2003,019,0000) |
| 268 | -231.522 | -260.083 | 2.2010E-02 (2003,209,0000) | 1.5616E-02 (2003,027,0000) | 1.5296E-02 (2003,110,0000) | 1.4027E-02 (2003,019,0000) |
| 269 | -230.788 | -260.104 | 2.2240E-02 (2003,209,0000) | 1.5824E-02 (2003,027,0000) | 1.5373E-02 (2003,110,0000) | 1.4033E-02 (2003,019,0000) |
| 270 | -230.054 | -260.126 | 2.2395E-02 (2003,209,0000) | 1.6005E-02 (2003,027,0000) | 1.5432E-02 (2003,110,0000) | 1.4033E-02 (2003,019,0000) |
| 271 | -235.895 | -259.025 | 2.2055E-02 (2003,209,0000) | 1.4292E-02 (2003,110,0000) | 1.4133E-02 (2003,027,0000) | 1.3950E-02 (2003,019,0000) |
| 272 | -235.162 | -259.047 | 2.2252E-02 (2003,209,0000) | 1.4563E-02 (2003,110,0000) | 1.4406E-02 (2003,027,0000) | 1.4002E-02 (2003,019,0000) |
| 273 | -234.428 | -259.069 | 2.2403E-02 (2003,209,0000) | 1.4799E-02 (2003,110,0000) | 1.4657E-02 (2003,027,0000) | 1.4047E-02 (2003,019,0000) |
| 274 | -233.695 | -259.091 | 2.2515E-02 (2003,209,0000) | 1.4978E-02 (2003,110,0000) | 1.4906E-02 (2003,027,0000) | 1.4084E-02 (2003,019,0000) |
| 275 | -232.961 | -259.113 | 2.2588E-02 (2003,209,0000) | 1.5157E-02 (2003,027,0000) | 1.5154E-02 (2003,110,0000) | 1.4116E-02 (2003,019,0000) |
| 276 | -232.228 | -259.135 | 2.2635E-02 (2003,209,0000) | 1.5392E-02 (2003,027,0000) | 1.5304E-02 (2003,110,0000) | 1.4137E-02 (2003,019,0000) |
| 277 | -231.494 | -259.156 | 2.2636E-02 (2003,209,0000) | 1.5610E-02 (2003,027,0000) | 1.5415E-02 (2003,110,0000) | 1.4156E-02 (2003,019,0000) |
| 278 | -230.761 | -259.178 | 2.2520E-02 (2003,209,0000) | 1.5806E-02 (2003,027,0000) | 1.5497E-02 (2003,110,0000) | 1.4169E-02 (2003,019,0000) |
| 279 | -230.027 | -259.200 | 2.2357E-02 (2003,209,0000) | 1.6003E-02 (2003,027,0000) | 1.5587E-02 (2003,110,0000) | 1.4173E-02 (2003,019,0000) |
| 280 | -229.294 | -259.221 | 2.2402E-02 (2003,209,0000) | 1.6182E-02 (2003,027,0000) | 1.5610E-02 (2003,110,0000) | 1.4167E-02 (2003,019,0000) |
| 281 | -235.134 | -258.121 | 2.3186E-02 (2003,209,0000) | 1.4694E-02 (2003,110,0000) | 1.4330E-02 (2003,027,0000) | 1.4123E-02 (2003,019,0000) |
| 282 | -234.401 | -258.143 | 2.3318E-02 (2003,209,0000) | 1.4935E-02 (2003,110,0000) | 1.4579E-02 (2003,027,0000) | 1.4171E-02 (2003,019,0000) |
| 283 | -233.667 | -258.165 | 2.3397E-02 (2003,209,0000) | 1.5144E-02 (2003,110,0000) | 1.4834E-02 (2003,027,0000) | 1.4212E-02 (2003,019,0000) |
| 284 | -232.934 | -258.187 | 2.3440E-02 (2003,209,0000) | 1.5327E-02 (2003,110,0000) | 1.5083E-02 (2003,027,0000) | 1.4249E-02 (2003,019,0000) |
| 285 | -232.200 | -258.208 | 2.3451E-02 (2003,209,0000) | 1.5441E-02 (2003,110,0000) | 1.5331E-02 (2003,027,0000) | 1.4274E-02 (2003,019,0000) |
| 286 | -231.467 | -258.230 | 2.3357E-02 (2003,209,0000) | 1.5576E-02 (2003,110,0000) | 1.5576E-02 (2003,027,0000) | 1.4291E-02 (2003,019,0000) |
| 287 | -230.734 | -258.252 | 2.3128E-02 (2003,209,0000) | 1.5797E-02 (2003,027,0000) | 1.5658E-02 (2003,110,0000) | 1.4302E-02 (2003,019,0000) |
| 288 | -230.000 | -258.273 | 2.2931E-02 (2003,209,0000) | 1.5997E-02 (2003,027,0000) | 1.5749E-02 (2003,110,0000) | 1.4307E-02 (2003,019,0000) |
| 289 | -229.267 | -258.295 | 2.2728E-02 (2003,209,0000) | 1.6192E-02 (2003,027,0000) | 1.5774E-02 (2003,110,0000) | 1.4304E-02 (2003,019,0000) |
| 290 | -234.373 | -257.217 | 2.4335E-02 (2003,209,0000) | 1.5063E-02 (2003,110,0000) | 1.4495E-02 (2003,027,0000) | 1.4302E-02 (2003,019,0000) |
| 291 | -233.640 | -257.239 | 2.4415E-02 (2003,209,0000) | 1.5280E-02 (2003,110,0000) | 1.4754E-02 (2003,027,0000) | 1.4341E-02 (2003,019,0000) |
| 292 | -232.906 | -257.260 | 2.4431E-02 (2003,209,0000) | 1.5463E-02 (2003,110,0000) | 1.5010E-02 (2003,027,0000) | 1.4373E-02 (2003,019,0000) |
| 293 | -232.173 | -257.282 | 2.4379E-02 (2003,209,0000) | 1.5602E-02 (2003,110,0000) | 1.5256E-02 (2003,027,0000) | 1.4400E-02 (2003,019,0000) |
| 294 | -231.440 | -257.304 | 2.4147E-02 (2003,209,0000) | 1.5735E-02 (2003,110,0000) | 1.5501E-02 (2003,027,0000) | 1.4423E-02 (2003,019,0000) |
| 295 | -230.706 | -257.326 | 2.3909E-02 (2003,209,0000) | 1.5819E-02 (2003,110,0000) | 1.5733E-02 (2003,027,0000) | 1.4437E-02 (2003,019,0000) |
| 296 | -229.973 | -257.347 | 2.3687E-02 (2003,209,0000) | 1.5955E-02 (2003,027,0000) | 1.5873E-02 (2003,110,0000) | 1.4439E-02 (2003,019,0000) |
| 297 | -229.240 | -257.369 | 2.3433E-02 (2003,209,0000) | 1.6172E-02 (2003,027,0000) | 1.5903E-02 (2003,110,0000) | 1.4431E-02 (2003,019,0000) |
| 298 | -232.879 | -256.334 | 2.5454E-02 (2003,209,0000) | 1.5621E-02 (2003,110,0000) | 1.4925E-02 (2003,027,0000) | 1.4507E-02 (2003,019,0000) |
| 299 | -232.146 | -256.356 | 2.5311E-02 (2003,209,0000) | 1.5768E-02 (2003,110,0000) | 1.5178E-02 (2003,027,0000) | 1.4537E-02 (2003,019,0000) |
| 300 | -231.412 | -256.378 | 2.5076E-02 (2003,209,0000) | 1.5873E-02 (2003,110,0000) | 1.5431E-02 (2003,027,0000) | 1.4559E-02 (2003,019,0000) |
| 301 | -230.679 | -256.399 | 2.4851E-02 (2003,209,0000) | 1.5968E-02 (2003,110,0000) | 1.5669E-02 (2003,027,0000) | 1.4568E-02 (2003,019,0000) |
| 302 | -229.946 | -256.421 | 2.4576E-02 (2003,209,0000) | 1.6008E-02 (2003,110,0000) | 1.5899E-02 (2003,027,0000) | 1.4556E-02 (2003,019,0000) |
| 303 | -229.213 | -256.442 | 2.4260E-02 (2003,209,0000) | 1.6126E-02 (2003,027,0000) | 1.6023E-02 (2003,110,0000) | 1.4533E-02 (2003,019,0000) |
| 304 | -232.118 | -255.430 | 2.5924E-02 (2003,209,0000) | 1.5924E-02 (2003,110,0000) | 1.5095E-02 (2003,027,0000) | 1.4667E-02 (2003,019,0000) |
| 305 | -231.385 | -255.451 | 2.5880E-02 (2003,209,0000) | 1.6033E-02 (2003,110,0000) | 1.5344E-02 (2003,027,0000) | 1.4678E-02 (2003,019,0000) |
| 306 | -230.652 | -255.473 | 2.5722E-02 (2003,209,0000) | 1.6123E-02 (2003,110,0000) | 1.5590E-02 (2003,027,0000) | 1.4670E-02 (2003,019,0000) |
| 307 | -229.919 | -255.494 | 2.5467E-02 (2003,209,0000) | 1.6172E-02 (2003,110,0000) | 1.5838E-02 (2003,027,0000) | 1.4641E-02 (2003,019,0000) |
| 308 | -229.185 | -255.516 | 2.5137E-02 (2003,209,0000) | 1.6211E-02 (2003,110,0000) | 1.6061E-02 (2003,027,0000) | 1.4611E-02 (2003,019,0000) |
| 309 | -228.452 | -255.537 | 2.4681E-02 (2003,209,0000) | 1.6275E-02 (2003,027,0000) | 1.6214E-02 (2003,110,0000) | 1.4581E-02 (2003,019,0000) |
| 310 | -227.719 | -255.559 | 2.4196E-02 (2003,209,0000) | 1.6472E-02 (2003,027,0000) | 1.6170E-02 (2003,110,0000) | 1.4548E-02 (2003,019,0000) |
| 311 | -232.091 | -254.503 | 2.5895E-02 (2003,209,0000) | 1.6077E-02 (2003,110,0000) | 1.4997E-02 (2003,027,0000) | 1.4768E-02 (2003,019,0000) |
| 312 | -231.358 | -254.525 | 2.6134E-02 (2003,209,0000) | 1.6194E-02 (2003,110,0000) | 1.5246E-02 (2003,027,0000) | 1.4758E-02 (2003,019,0000) |
| 313 | -230.625 | -254.547 | 2.6145E-02 (2003,209,0000) | 1.6279E-02 (2003,110,0000) | 1.5502E-02 (2003,027,0000) | 1.4735E-02 (2003,019,0000) |
| 314 | -229.891 | -254.568 | 2.5981E-02 (2003,209,0000) | 1.6337E-02 (2003,110,0000) | 1.5748E-02 (2003,027,0000) | 1.4723E-02 (2003,019,0000) |
| 315 | -229.158 | -254.590 | 2.5646E-02 (2003,209,0000) | 1.6384E-02 (2003,110,0000) | 1.5980E-02 (2003,027,0000) | 1.4712E-02 (2003,019,0000) |
| 316 | -228.425 | -254.611 | 2.5250E-02 (2003,209,0000) | 1.6368E-02 (2003,110,0000) | 1.6203E-02 (2003,027,0000) | 1.4696E-02 (2003,019,0000) |
| 317 | -227.692 | -254.632 | 2.4822E-02 (2003,209,0000) | 1.6409E-02 (2003,027,0000) | 1.6329E-02 (2003,110,0000) | 1.4670E-02 (2003,019,0000) |
| 318 | -232.063 | -253.577 | 2.5481E-02 (2003,209,0000) | 1.6177E-02 (2003,110,0000) | 1.4887E-02 (2003,027,0000) | 1.4832E-02 (2003,019,0000) |
| 319 | -231.330 | -253.599 | 2.5682E-02 (2003,209,0000) | 1.6309E-02 (2003,110,0000) | 1.5146E-02 (2003,027,0000) | 1.4825E-02 (2003,019,0000) |
| 320 | -230.597 | -253.620 | 2.5878E-02 (2003,209,0000) | 1.6413E-02 (2003,110,0000) | 1.5403E-02 (2003,027,0000) | 1.4830E-02 (2003,019,0000) |
| 321 | -229.864 | -253.642 | 2.5942E-02 (2003,209,0000) | 1.6462E-02 (2003,110,0000) | 1.5655E-02 (2003,027,0000) | 1.4831E-02 (2003,019,0000) |
| 322 | -229.131 | -253.663 | 2.5841E-02 (2003,209,0000) | 1.6504E-02 (2003,110,0000) | 1.5893E-02 (2003,027,0000) | 1.4821E-02 (2003,019,0000) |
| 323 | -228.398 | -253.685 | 2.5574E-02 (2003,209,0000) | 1.6516E-02 (2003,110,0000) | 1.6118E-02 (2003,027,0000) | 1.4808E-02 (2003,019,0000) |
| 324 | -227.665 | -253.706 | 2.5172E-02 (2003,209,0000) | 1.6480E-02 (2003,110,0000) | 1.6344E-02 (2003,027,0000) | 1.4778E-02 (2003,019,0000) |
| 325 | -229.837 | -252.716 | 2.5644E-02 (2003,209,0000) | 1.6529E-02 (2003,110,0000) | 1.5566E-02 (2003,027,0000) | 1.4937E-02 (2003,019,0000) |
| 326 | -229.104 | -252.737 | 2.5597E-02 (2003,209,0000) | 1.6576E-02 (2003,110,0000) | 1.5811E-02 (2003,027,0000) | 1.4923E-02 (2003,019,0000) |
| 327 | -228.371 | -252.759 | 2.5489E-02 (2003,209,0000) | 1.6595E-02 (2003,110,0000) | 1.6042E-02 (2003,027,0000) | 1.4891E-02 (2003,019,0000) |
| 328 | -227.638 | -252.780 | 2.5301E-02 (2003,209,0000) | 1.6576E-02 (2003,110,0000) | 1.6276E-02 (2003,027,0000) | 1.4849E-02 (2003,019,0000) |

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CALPOST Version 5.6394 Level 070622
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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 116 | -243.891 | -280.107 | 7.2964E-04 | 222 | -233.126 | -264.671 | 9.3879E-04 |
| 117 | -243.156 | -280.129 | 7.3621E-04 | 223 | -232.392 | -264.693 | 9.4759E-04 |
| 118 | -242.420 | -280.152 | 7.4169E-04 | 224 | -231.658 | -264.714 | 9.5287E-04 |
| 119 | -241.685 | -280.175 | 7.4863E-04 | 225 | -238.971 | -263.568 | 8.8383E-04 |
| 120 | -243.862 | -279.180 | 7.3461E-04 | 226 | -238.237 | -263.590 | 8.9177E-04 |
| 121 | -243.127 | -279.203 | 7.4035E-04 | 227 | -237.503 | -263.613 | 9.0069E-04 |
| 122 | -242.392 | -279.226 | 7.4671E-04 | 228 | -236.769 | -263.635 | 9.0948E-04 |
| 123 | -241.656 | -279.248 | 7.5324E-04 | 229 | -236.035 | -263.657 | 9.1860E-04 |
| 124 | -240.921 | -279.271 | 7.6021E-04 | 230 | -235.301 | -263.679 | 9.2690E-04 |
| 125 | -243.834 | -278.254 | 7.4000E-04 | 231 | -234.567 | -263.701 | 9.3551E-04 |
| 126 | -243.098 | -278.277 | 7.4683E-04 | 232 | -233.833 | -263.723 | 9.4360E-04 |
| 127 | -242.363 | -278.299 | 7.5348E-04 | 233 | -233.099 | -263.745 | 9.4868E-04 |
| 128 | -241.628 | -278.322 | 7.5941E-04 | 234 | -232.365 | -263.766 | 9.5548E-04 |
| 129 | -240.892 | -278.345 | 7.6648E-04 | 235 | -231.631 | -263.788 | 9.6134E-04 |
| 130 | -240.157 | -278.367 | 7.7452E-04 | 236 | -238.208 | -262.664 | 8.9902E-04 |
| 131 | -243.805 | -277.328 | 7.4547E-04 | 237 | -237.475 | -262.686 | 9.0782E-04 |
| 132 | -243.070 | -277.350 | 7.5234E-04 | 238 | -236.741 | -262.708 | 9.1585E-04 |
| 133 | -242.335 | -277.373 | 7.5931E-04 | 239 | -236.007 | -262.731 | 9.2477E-04 |
| 134 | -241.599 | -277.396 | 7.6636E-04 | 240 | -235.273 | -262.753 | 9.3362E-04 |
| 135 | -240.864 | -277.418 | 7.7363E-04 | 241 | -234.539 | -262.775 | 9.4328E-04 |
| 136 | -240.129 | -277.441 | 7.8096E-04 | 242 | -233.805 | -262.796 | 9.5187E-04 |
| 137 | -243.776 | -276.401 | 7.5086E-04 | 243 | -233.071 | -262.818 | 9.5869E-04 |
| 138 | -243.041 | -276.424 | 7.5777E-04 | 244 | -232.338 | -262.840 | 9.6426E-04 |
| 139 | -242.306 | -276.447 | 7.6483E-04 | 245 | -238.180 | -261.738 | 9.0636E-04 |
| 140 | -241.571 | -276.469 | 7.7222E-04 | 246 | -237.447 | -261.760 | 9.1502E-04 |
| 141 | -240.836 | -276.492 | 7.7963E-04 | 247 | -236.713 | -261.782 | 9.2347E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 142 | -240.101 | -276.514 | 7.8644E-04 | 248 | -235.979 | -261.804 | 9.3208E-04 |
| 143 | -243.747 | -275.475 | 7.5626E-04 | 249 | -235.245 | -261.826 | 9.4124E-04 |
| 144 | -243.012 | -275.498 | 7.6344E-04 | 250 | -234.511 | -261.848 | 9.4788E-04 |
| 145 | -242.277 | -275.520 | 7.7071E-04 | 251 | -233.778 | -261.870 | 9.5608E-04 |
| 146 | -241.542 | -275.543 | 7.7702E-04 | 252 | -233.044 | -261.892 | 9.6557E-04 |
| 147 | -240.807 | -275.565 | 7.8503E-04 | 253 | -232.310 | -261.914 | 9.7290E-04 |
| 148 | -240.072 | -275.588 | 7.9282E-04 | 254 | -235.951 | -260.878 | 9.4009E-04 |
| 149 | -244.454 | -274.526 | 7.5488E-04 | 255 | -235.217 | -260.900 | 9.4877E-04 |
| 150 | -243.719 | -274.548 | 7.6181E-04 | 256 | -234.484 | -260.922 | 9.5607E-04 |
| 151 | -242.984 | -274.571 | 7.6900E-04 | 257 | -233.750 | -260.944 | 9.6307E-04 |
| 152 | -244.425 | -273.599 | 7.6043E-04 | 258 | -233.016 | -260.966 | 9.7042E-04 |
| 153 | -243.690 | -273.622 | 7.6751E-04 | 259 | -232.283 | -260.987 | 9.7906E-04 |
| 154 | -242.955 | -273.645 | 7.7424E-04 | 260 | -231.549 | -261.009 | 9.8801E-04 |
| 155 | -244.396 | -272.673 | 7.6625E-04 | 261 | -230.815 | -261.031 | 9.9383E-04 |
| 156 | -243.661 | -272.696 | 7.7333E-04 | 262 | -235.923 | -259.952 | 9.4845E-04 |
| 157 | -242.927 | -272.719 | 7.8059E-04 | 263 | -235.190 | -259.974 | 9.5707E-04 |
| 158 | -244.367 | -271.747 | 7.7215E-04 | 264 | -234.456 | -259.996 | 9.6526E-04 |
| 159 | -243.633 | -271.769 | 7.7928E-04 | 265 | -233.723 | -260.018 | 9.7237E-04 |
| 160 | -242.898 | -271.792 | 7.8598E-04 | 266 | -232.989 | -260.039 | 9.8048E-04 |
| 161 | -244.339 | -270.820 | 7.7827E-04 | 267 | -232.255 | -260.061 | 9.8825E-04 |
| 162 | -243.604 | -270.843 | 7.8542E-04 | 268 | -231.522 | -260.083 | 9.9537E-04 |
| 163 | -242.869 | -270.866 | 7.9190E-04 | 269 | -230.788 | -260.104 | 1.0022E-03 |
| 164 | -242.135 | -270.889 | 7.9862E-04 | 270 | -230.054 | -260.126 | 1.0089E-03 |
| 165 | -244.310 | -269.894 | 7.8463E-04 | 271 | -235.895 | -259.025 | 9.5747E-04 |
| 166 | -243.575 | -269.917 | 7.9185E-04 | 272 | -235.162 | -259.047 | 9.6600E-04 |
| 167 | -242.841 | -269.940 | 7.9916E-04 | 273 | -234.428 | -259.069 | 9.7454E-04 |
| 168 | -242.106 | -269.962 | 8.0632E-04 | 274 | -233.695 | -259.091 | 9.8153E-04 |
| 169 | -242.812 | -269.013 | 8.0539E-04 | 275 | -232.961 | -259.113 | 9.8954E-04 |
| 170 | -242.078 | -269.036 | 8.1290E-04 | 276 | -232.228 | -259.135 | 9.9763E-04 |
| 171 | -241.343 | -269.059 | 8.1990E-04 | 277 | -231.494 | -259.156 | 1.0047E-03 |
| 172 | -240.609 | -269.081 | 8.2707E-04 | 278 | -230.761 | -259.178 | 1.0109E-03 |
| 173 | -239.874 | -269.104 | 8.3505E-04 | 279 | -230.027 | -259.200 | 1.0188E-03 |
| 174 | -242.049 | -268.110 | 8.1946E-04 | 280 | -229.294 | -259.221 | 1.0247E-03 |
| 175 | -241.315 | -268.132 | 8.2726E-04 | 281 | -235.134 | -258.121 | 9.7568E-04 |
| 176 | -240.580 | -268.155 | 8.3487E-04 | 282 | -234.401 | -258.143 | 9.8441E-04 |
| 177 | -239.846 | -268.177 | 8.4165E-04 | 283 | -233.667 | -258.165 | 9.9270E-04 |
| 178 | -239.112 | -268.200 | 8.4887E-04 | 284 | -232.934 | -258.187 | 1.0008E-03 |
| 179 | -242.020 | -267.183 | 8.2606E-04 | 285 | -232.200 | -258.208 | 1.0071E-03 |
| 180 | -241.286 | -267.206 | 8.3405E-04 | 286 | -231.467 | -258.230 | 1.0151E-03 |
| 181 | -240.552 | -267.228 | 8.4199E-04 | 287 | -230.734 | -258.252 | 1.0215E-03 |
| 182 | -239.818 | -267.251 | 8.4880E-04 | 288 | -230.000 | -258.273 | 1.0295E-03 |
| 183 | -239.083 | -267.273 | 8.5518E-04 | 289 | -229.267 | -258.295 | 1.0352E-03 |
| 184 | -241.258 | -266.280 | 8.4010E-04 | 290 | -234.373 | -257.217 | 9.9370E-04 |
| 185 | -240.524 | -266.302 | 8.4859E-04 | 291 | -233.640 | -257.239 | 1.0022E-03 |
| 186 | -239.789 | -266.325 | 8.5578E-04 | 292 | -232.906 | -257.260 | 1.0102E-03 |
| 187 | -239.055 | -266.347 | 8.6377E-04 | 293 | -232.173 | -257.282 | 1.0175E-03 |
| 188 | -238.321 | -266.369 | 8.7074E-04 | 294 | -231.440 | -257.304 | 1.0254E-03 |
| 189 | -237.587 | -266.392 | 8.7823E-04 | 295 | -230.706 | -257.326 | 1.0319E-03 |
| 190 | -236.853 | -266.414 | 8.8556E-04 | 296 | -229.973 | -257.347 | 1.0381E-03 |
| 191 | -236.118 | -266.436 | 8.9424E-04 | 297 | -229.240 | -257.369 | 1.0441E-03 |
| 192 | -235.384 | -266.458 | 9.0205E-04 | 298 | -232.879 | -256.334 | 1.0207E-03 |
| 193 | -234.650 | -266.480 | 9.0967E-04 | 299 | -232.146 | -256.356 | 1.0280E-03 |
| 194 | -233.916 | -266.502 | 9.1614E-04 | 300 | -231.412 | -256.378 | 1.0347E-03 |
| 195 | -233.181 | -266.524 | 9.2420E-04 | 301 | -230.679 | -256.399 | 1.0417E-03 |
| 196 | -232.447 | -266.545 | 9.3064E-04 | 302 | -229.946 | -256.421 | 1.0473E-03 |
| 197 | -231.713 | -266.567 | 9.3782E-04 | 303 | -229.213 | -256.442 | 1.0526E-03 |
| 198 | -241.229 | -265.353 | 8.4631E-04 | 304 | -232.118 | -255.430 | 1.0374E-03 |
| 199 | -240.495 | -265.376 | 8.5418E-04 | 305 | -231.385 | -255.451 | 1.0446E-03 |
| 200 | -239.761 | -265.398 | 8.6258E-04 | 306 | -230.652 | -255.473 | 1.0516E-03 |
| 201 | -239.027 | -265.421 | 8.6942E-04 | 307 | -229.919 | -255.494 | 1.0577E-03 |
| 202 | -238.293 | -265.443 | 8.7793E-04 | 308 | -229.185 | -255.516 | 1.0646E-03 |
| 203 | -237.559 | -265.465 | 8.8632E-04 | 309 | -228.452 | -255.537 | 1.0705E-03 |
| 204 | -236.825 | -265.487 | 8.9349E-04 | 310 | -227.719 | -255.559 | 1.0748E-03 |
| 205 | -236.090 | -265.509 | 9.0333E-04 | 311 | -232.091 | -254.503 | 1.0450E-03 |
| 206 | -235.356 | -265.532 | 9.1158E-04 | 312 | -231.358 | -254.525 | 1.0532E-03 |
| 207 | -234.622 | -265.553 | 9.1758E-04 | 313 | -230.625 | -254.547 | 1.0609E-03 |
| 208 | -233.888 | -265.575 | 9.2350E-04 | 314 | -229.891 | -254.568 | 1.0680E-03 |
| 209 | -233.154 | -265.597 | 9.3215E-04 | 315 | -229.158 | -254.590 | 1.0758E-03 |
| 210 | -232.420 | -265.619 | 9.3843E-04 | 316 | -228.425 | -254.611 | 1.0810E-03 |
| 211 | -231.686 | -265.641 | 9.4588E-04 | 317 | -227.692 | -254.632 | 1.0862E-03 |
| 212 | -240.467 | -264.449 | 8.6093E-04 | 318 | -232.063 | -253.577 | 1.0513E-03 |
| 213 | -239.733 | -264.472 | 8.6887E-04 | 319 | -231.330 | -253.599 | 1.0608E-03 |
| 214 | -238.999 | -264.494 | 8.7675E-04 | 320 | -230.597 | -253.620 | 1.0700E-03 |
| 215 | -238.265 | -264.517 | 8.8601E-04 | 321 | -229.864 | -253.642 | 1.0772E-03 |
| 216 | -237.531 | -264.539 | 8.9435E-04 | 322 | -229.131 | -253.663 | 1.0854E-03 |
| 217 | -236.797 | -264.561 | 9.0326E-04 | 323 | -228.398 | -253.685 | 1.0927E-03 |
| 218 | -236.063 | -264.583 | 9.1188E-04 | 324 | -227.665 | -253.706 | 1.0983E-03 |
| 219 | -235.329 | -264.605 | 9.1920E-04 | 325 | -229.837 | -252.716 | 1.0858E-03 |
| 220 | -234.595 | -264.627 | 9.2428E-04 | 326 | -229.104 | -252.737 | 1.0939E-03 |
| 221 | -233.860 | -264.649 | 9.3265E-04 | 327 | -228.371 | -252.759 | 1.1019E-03 |
| | | | | 328 | -227.638 | -252.780 | 1.1091E-03 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 313 | -230.625 | -254.547 | DISCRETE | 2.6145E-02 (2003,209,0000) | RANK | 1 | 24 | HOUR |
| 327 | -228.371 | -252.759 | DISCRETE | 1.6595E-02 (2003,110,0000) | RANK | 2 | 24 | HOUR |
| 324 | -227.665 | -253.706 | DISCRETE | 1.6344E-02 (2003,027,0000) | RANK | 3 | 24 | HOUR |
| 325 | -229.837 | -252.716 | DISCRETE | 1.4937E-02 (2003,019,0000) | RANK | 4 | 24 | HOUR |
| 328 | -227.638 | -252.780 | DISCRETE | 1.1091E-03 | RANK | 1 | 8736 | HOUR |

```
*************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Canyonlands

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  328*0, 506*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
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*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                        Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                          Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                   Multiplicative scaling factor: 0.0000E+00
                         Additive scaling factor: 0.0000E+00
                  Hourly background values used?: F


  Source information
                  Source contribution processing: 0
                   0= No source contributions
                   1= Contributions are summed
                   2= TRACEBACK mode for 1 receptor
                   3= Reported TOTAL is processed


  Receptor information
                    Gridded receptors processed?: F
                   Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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| 345 | -20.803 | -220.848 | 9.8808E-03 (2003,077,0000) | 7.0947E-03 (2003,060,0000) | 6.8732E-03 (2003,041,0000) | 5.5827E-03 (2003,006,0000) |
| 346 | -19.344 | -220.851 | 9.7498E-03 (2003,077,0000) | 7.0245E-03 (2003,060,0000) | 6.8024E-03 (2003,041,0000) | 5.5990E-03 (2003,006,0000) |
| 347 | -17.884 | -220.855 | 9.6235E-03 (2003,077,0000) | 6.9495E-03 (2003,060,0000) | 6.7320E-03 (2003,041,0000) | 5.6164E-03 (2003,006,0000) |
| 348 | -16.424 | -220.858 | 9.5018E-03 (2003,077,0000) | 6.8707E-03 (2003,060,0000) | 6.6643E-03 (2003,041,0000) | 5.6317E-03 (2003,006,0000) |
| 349 | -14.964 | -220.861 | 9.3854E-03 (2003,077,0000) | 6.7977E-03 (2003,060,0000) | 6.5985E-03 (2003,041,0000) | 5.6458E-03 (2003,006,0000) |
| 350 | -25.177 | -218.982 | 1.0374E-02 (2003,077,0000) | 7.2953E-03 (2003,060,0000) | 7.0135E-03 (2003,041,0000) | 5.6512E-03 (2003,006,0000) |
| 351 | -23.718 | -218.986 | 1.0218E-02 (2003,077,0000) | 7.2240E-03 (2003,060,0000) | 6.9306E-03 (2003,041,0000) | 5.6707E-03 (2003,006,0000) |
| 352 | -22.258 | -218.991 | 1.0068E-02 (2003,077,0000) | 7.1531E-03 (2003,060,0000) | 6.8482E-03 (2003,041,0000) | 5.6870E-03 (2003,006,0000) |
| 353 | -20.799 | -218.995 | 9.9241E-03 (2003,077,0000) | 7.0779E-03 (2003,060,0000) | 6.7744E-03 (2003,041,0000) | 5.7050E-03 (2003,006,0000) |
| 354 | -19.339 | -218.998 | 9.7851E-03 (2003,077,0000) | 7.0049E-03 (2003,060,0000) | 6.7062E-03 (2003,041,0000) | 5.7212E-03 (2003,006,0000) |
| 355 | -17.879 | -219.002 | 9.6518E-03 (2003,077,0000) | 6.9285E-03 (2003,060,0000) | 6.6367E-03 (2003,041,0000) | 5.7345E-03 (2003,006,0000) |
| 356 | -16.420 | -219.005 | 9.5233E-03 (2003,077,0000) | 6.8519E-03 (2003,060,0000) | 6.5743E-03 (2003,041,0000) | 5.7487E-03 (2003,006,0000) |
| 357 | -26.630 | -217.124 | 1.0591E-02 (2003,077,0000) | 7.3468E-03 (2003,060,0000) | 6.9807E-03 (2003,041,0000) | 5.7680E-03 (2003,006,0000) |
| 358 | -25.171 | -217.129 | 1.0422E-02 (2003,077,0000) | 7.2750E-03 (2003,060,0000) | 6.8940E-03 (2003,041,0000) | 5.7823E-03 (2003,006,0000) |
| 359 | -23.712 | -217.133 | 1.0258E-02 (2003,077,0000) | 7.2026E-03 (2003,060,0000) | 6.8147E-03 (2003,041,0000) | 5.7963E-03 (2003,006,0000) |
| 360 | -22.253 | -217.138 | 1.0101E-02 (2003,077,0000) | 7.1264E-03 (2003,060,0000) | 6.7384E-03 (2003,041,0000) | 5.8142E-03 (2003,006,0000) |
| 361 | -20.794 | -217.142 | 9.9504E-03 (2003,077,0000) | 7.0545E-03 (2003,060,0000) | 6.6701E-03 (2003,041,0000) | 5.8290E-03 (2003,006,0000) |
| 362 | -19.334 | -217.145 | 9.8041E-03 (2003,077,0000) | 6.9816E-03 (2003,060,0000) | 6.6016E-03 (2003,041,0000) | 5.8441E-03 (2003,006,0000) |
| 363 | -17.875 | -217.149 | 9.6636E-03 (2003,077,0000) | 6.9011E-03 (2003,060,0000) | 6.5352E-03 (2003,041,0000) | 5.8577E-03 (2003,006,0000) |
| 364 | -16.416 | -217.152 | 9.5294E-03 (2003,077,0000) | 6.8263E-03 (2003,060,0000) | 6.4707E-03 (2003,041,0000) | 5.8696E-03 (2003,006,0000) |
| 365 | -47.048 | -215.175 | 1.3516E-02 (2003,077,0000) | 9.0609E-03 (2003,041,0000) | 8.3628E-03 (2003,060,0000) | 6.6769E-03 (2003,338,0000) |
| 366 | -45.589 | -215.183 | 1.3308E-02 (2003,077,0000) | 8.7884E-03 (2003,041,0000) | 8.3026E-03 (2003,060,0000) | 6.5470E-03 (2003,058,0000) |
| 367 | -44.130 | -215.192 | 1.3093E-02 (2003,077,0000) | 8.5472E-03 (2003,041,0000) | 8.2204E-03 (2003,060,0000) | 6.4657E-03 (2003,058,0000) |
| 368 | -42.671 | -215.200 | 1.2876E-02 (2003,077,0000) | 8.3308E-03 (2003,041,0000) | 8.1366E-03 (2003,060,0000) | 6.3862E-03 (2003,058,0000) |
| 369 | -41.212 | -215.208 | 1.2660E-02 (2003,077,0000) | 8.1257E-03 (2003,041,0000) | 8.0608E-03 (2003,060,0000) | 6.3064E-03 (2003,058,0000) |
| 370 | -39.754 | -215.215 | 1.2442E-02 (2003,077,0000) | 7.9818E-03 (2003,060,0000) | 7.9362E-03 (2003,041,0000) | 6.2292E-03 (2003,058,0000) |
| 371 | -38.295 | -215.223 | 1.2225E-02 (2003,077,0000) | 7.9059E-03 (2003,060,0000) | 7.7654E-03 (2003,041,0000) | 6.1523E-03 (2003,058,0000) |
| 372 | -36.836 | -215.230 | 1.2012E-02 (2003,077,0000) | 7.8307E-03 (2003,060,0000) | 7.6122E-03 (2003,041,0000) | 6.0759E-03 (2003,058,0000) |
| 373 | -35.377 | -215.236 | 1.1801E-02 (2003,077,0000) | 7.7584E-03 (2003,060,0000) | 7.4747E-03 (2003,041,0000) | 6.0020E-03 (2003,058,0000) |
| 374 | -33.918 | -215.243 | 1.1593E-02 (2003,077,0000) | 7.6827E-03 (2003,060,0000) | 7.3477E-03 (2003,041,0000) | 5.9278E-03 (2003,058,0000) |
| 375 | -32.459 | -215.249 | 1.1390E-02 (2003,077,0000) | 7.6098E-03 (2003,060,0000) | 7.2303E-03 (2003,041,0000) | 5.8751E-03 (2003,006,0000) |
| 376 | -31.001 | -215.255 | 1.1191E-02 (2003,077,0000) | 7.5374E-03 (2003,060,0000) | 7.1278E-03 (2003,041,0000) | 5.8740E-03 (2003,006,0000) |
| 377 | -29.542 | -215.261 | 1.0998E-02 (2003,077,0000) | 7.4640E-03 (2003,060,0000) | 7.0223E-03 (2003,041,0000) | 5.8846E-03 (2003,006,0000) |
| 378 | -28.083 | -215.266 | 1.0810E-02 (2003,077,0000) | 7.3926E-03 (2003,060,0000) | 6.9370E-03 (2003,041,0000) | 5.8927E-03 (2003,006,0000) |
| 379 | -26.624 | -215.271 | 1.0627E-02 (2003,077,0000) | 7.3170E-03 (2003,060,0000) | 6.8452E-03 (2003,041,0000) | 5.9039E-03 (2003,006,0000) |
| 380 | -25.165 | -215.276 | 1.0450E-02 (2003,077,0000) | 7.2462E-03 (2003,060,0000) | 6.7655E-03 (2003,041,0000) | 5.9170E-03 (2003,006,0000) |
| 381 | -23.706 | -215.280 | 1.0280E-02 (2003,077,0000) | 7.1729E-03 (2003,060,0000) | 6.6900E-03 (2003,041,0000) | 5.9302E-03 (2003,006,0000) |
| 382 | -22.247 | -215.285 | 1.0115E-02 (2003,077,0000) | 7.0965E-03 (2003,060,0000) | 6.6195E-03 (2003,041,0000) | 5.9458E-03 (2003,006,0000) |
| 383 | -20.789 | -215.289 | 9.9575E-03 (2003,077,0000) | 7.0246E-03 (2003,060,0000) | 6.5494E-03 (2003,041,0000) | 5.9593E-03 (2003,006,0000) |
| 384 | -19.330 | -215.293 | 9.8054E-03 (2003,077,0000) | 6.9489E-03 (2003,060,0000) | 6.4871E-03 (2003,041,0000) | 5.9712E-03 (2003,006,0000) |
| 385 | -17.871 | -215.296 | 9.6602E-03 (2003,077,0000) | 6.8687E-03 (2003,060,0000) | 6.4232E-03 (2003,041,0000) | 5.9827E-03 (2003,006,0000) |
| 386 | -16.412 | -215.299 | 9.5194E-03 (2003,077,0000) | 6.7950E-03 (2003,060,0000) | 6.3584E-03 (2003,041,0000) | 5.9916E-03 (2003,006,0000) |
| 387 | -51.412 | -213.294 | 1.4260E-02 (2003,077,0000) | 9.6668E-03 (2003,041,0000) | 8.6503E-03 (2003,060,0000) | 7.1530E-03 (2003,338,0000) |
| 388 | -49.953 | -213.304 | 1.4060E-02 (2003,077,0000) | 9.3361E-03 (2003,041,0000) | 8.5524E-03 (2003,060,0000) | 7.0080E-03 (2003,338,0000) |
| 389 | -48.495 | -213.313 | 1.3853E-02 (2003,077,0000) | 9.0284E-03 (2003,041,0000) | 8.4571E-03 (2003,060,0000) | 6.8676E-03 (2003,338,0000) |
| 390 | -47.037 | -213.322 | 1.3639E-02 (2003,077,0000) | 8.5302E-03 (2003,041,0000) | 8.3196E-03 (2003,060,0000) | 6.7176E-03 (2003,338,0000) |
| 391 | -45.578 | -213.330 | 1.3420E-02 (2003,077,0000) | 8.4947E-03 (2003,041,0000) | 8.2852E-03 (2003,060,0000) | 6.5872E-03 (2003,338,0000) |
| 392 | -44.120 | -213.339 | 1.3199E-02 (2003,077,0000) | 8.2629E-03 (2003,041,0000) | 8.1970E-03 (2003,060,0000) | 6.4972E-03 (2003,058,0000) |
| 393 | -42.661 | -213.347 | 1.2972E-02 (2003,077,0000) | 8.1131E-03 (2003,060,0000) | 8.0508E-03 (2003,041,0000) | 6.4166E-03 (2003,058,0000) |
| 394 | -41.203 | -213.355 | 1.2748E-02 (2003,077,0000) | 8.0409E-03 (2003,060,0000) | 7.8645E-03 (2003,041,0000) | 6.3350E-03 (2003,058,0000) |
| 395 | -39.744 | -213.362 | 1.2523E-02 (2003,077,0000) | 7.9586E-03 (2003,060,0000) | 7.7017E-03 (2003,041,0000) | 6.2562E-03 (2003,058,0000) |
| 396 | -38.286 | -213.370 | 1.2297E-02 (2003,077,0000) | 7.8817E-03 (2003,060,0000) | 7.5492E-03 (2003,041,0000) | 6.1774E-03 (2003,058,0000) |
| 397 | -36.827 | -213.377 | 1.2076E-02 (2003,077,0000) | 7.8032E-03 (2003,060,0000) | 7.4072E-03 (2003,041,0000) | 6.0994E-03 (2003,058,0000) |
| 398 | -35.369 | -213.383 | 1.1858E-02 (2003,077,0000) | 7.7292E-03 (2003,060,0000) | 7.2822E-03 (2003,041,0000) | 6.0228E-03 (2003,058,0000) |
| 399 | -33.910 | -213.390 | 1.1641E-02 (2003,077,0000) | 7.6560E-03 (2003,060,0000) | 7.1612E-03 (2003,041,0000) | 6.0258E-03 (2003,006,0000) |
| 400 | -32.452 | -213.396 | 1.1432E-02 (2003,077,0000) | 7.5805E-03 (2003,060,0000) | 7.0558E-03 (2003,041,0000) | 6.0312E-03 (2003,006,0000) |
| 401 | -30.993 | -213.402 | 1.1227E-02 (2003,077,0000) | 7.5065E-03 (2003,060,0000) | 6.9653E-03 (2003,041,0000) | 6.0270E-03 (2003,006,0000) |
| 402 | -29.535 | -213.408 | 1.1024E-02 (2003,077,0000) | 7.4336E-03 (2003,060,0000) | 6.8672E-03 (2003,041,0000) | 6.0247E-03 (2003,006,0000) |
| 403 | -28.076 | -213.413 | 1.0830E-02 (2003,077,0000) | 7.3598E-03 (2003,060,0000) | 6.7848E-03 (2003,041,0000) | 6.0390E-03 (2003,006,0000) |
| 404 | -26.618 | -213.418 | 1.0641E-02 (2003,077,0000) | 7.2836E-03 (2003,060,0000) | 6.7019E-03 (2003,041,0000) | 6.0506E-03 (2003,006,0000) |
| 405 | -25.159 | -213.423 | 1.0457E-02 (2003,077,0000) | 7.2127E-03 (2003,060,0000) | 6.6262E-03 (2003,041,0000) | 6.0594E-03 (2003,006,0000) |
| 406 | -23.701 | -213.428 | 1.0281E-02 (2003,077,0000) | 7.1365E-03 (2003,060,0000) | 6.5540E-03 (2003,041,0000) | 6.0683E-03 (2003,006,0000) |
| 407 | -22.242 | -213.432 | 1.0111E-02 (2003,077,0000) | 7.0609E-03 (2003,060,0000) | 6.4884E-03 (2003,041,0000) | 6.0779E-03 (2003,006,0000) |
| 408 | -20.784 | -213.436 | 9.9469E-03 (2003,077,0000) | 6.9878E-03 (2003,060,0000) | 6.4236E-03 (2003,041,0000) | 6.0893E-03 (2003,006,0000) |
| 409 | -19.325 | -213.440 | 9.7901E-03 (2003,077,0000) | 6.9093E-03 (2003,060,0000) | 6.3614E-03 (2003,041,0000) | 6.0997E-03 (2003,006,0000) |
| 410 | -17.867 | -213.443 | 9.6382E-03 (2003,077,0000) | 6.8331E-03 (2003,060,0000) | 6.3011E-03 (2003,041,0000) | 6.1094E-03 (2003,006,0000) |
| 411 | -16.408 | -213.446 | 9.4932E-03 (2003,077,0000) | 6.7564E-03 (2003,060,0000) | 6.2399E-03 (2003,041,0000) | 6.1164E-03 (2003,006,0000) |
| 412 | -51.400 | -211.441 | 1.4366E-02 (2003,077,0000) | 9.2661E-03 (2003,041,0000) | 8.6388E-03 (2003,060,0000) | 7.1887E-03 (2003,338,0000) |
| 413 | -49.942 | -211.451 | 1.4158E-02 (2003,077,0000) | 8.9577E-03 (2003,041,0000) | 8.5368E-03 (2003,060,0000) | 7.0412E-03 (2003,338,0000) |
| 414 | -48.483 | -211.460 | 1.3942E-02 (2003,077,0000) | 8.6779E-03 (2003,041,0000) | 8.4409E-03 (2003,060,0000) | 6.9069E-03 (2003,338,0000) |
| 415 | -47.025 | -211.469 | 1.3722E-02 (2003,077,0000) | 8.4240E-03 (2003,041,0000) | 8.3509E-03 (2003,060,0000) | 6.7664E-03 (2003,338,0000) |
| 416 | -45.567 | -211.478 | 1.3495E-02 (2003,077,0000) | 8.2385E-03 (2003,060,0000) | 8.0081E-03 (2003,041,0000) | 6.6097E-03 (2003,338,0000) |
| 417 | -44.109 | -211.486 | 1.3267E-02 (2003,077,0000) | 8.1746E-03 (2003,060,0000) | 7.9687E-03 (2003,041,0000) | 6.5132E-03 (2003,058,0000) |
| 418 | -42.651 | -211.494 | 1.3034E-02 (2003,077,0000) | 8.0680E-03 (2003,060,0000) | 7.6251E-03 (2003,041,0000) | 6.4284E-03 (2003,058,0000) |
| 419 | -41.193 | -211.502 | 1.2801E-02 (2003,077,0000) | 8.0087E-03 (2003,060,0000) | 7.6121E-03 (2003,041,0000) | 6.3494E-03 (2003,058,0000) |
| 420 | -39.735 | -211.510 | 1.2570E-02 (2003,077,0000) | 7.9303E-03 (2003,060,0000) | 7.4581E-03 (2003,041,0000) | 6.2682E-03 (2003,058,0000) |
| 421 | -38.277 | -211.517 | 1.2339E-02 (2003,077,0000) | 7.8495E-03 (2003,060,0000) | 7.3188E-03 (2003,041,0000) | 6.1888E-03 (2003,058,0000) |
| 422 | -36.818 | -211.524 | 1.2110E-02 (2003,077,0000) | 7.7742E-03 (2003,060,0000) | 7.1960E-03 (2003,041,0000) | 6.1504E-03 (2003,006,0000) |
| 423 | -35.360 | -211.531 | 1.1886E-02 (2003,077,0000) | 7.6980E-03 (2003,060,0000) | 7.0834E-03 (2003,041,0000) | 6.1327E-03 (2003,006,0000) |
| 424 | -33.902 | -211.537 | 1.1663E-02 (2003,077,0000) | 7.6231E-03 (2003,060,0000) | 6.9746E-03 (2003,041,0000) | 6.1780E-03 (2003,006,0000) |
| 425 | -32.444 | -211.543 | 1.1446E-02 (2003,077,0000) | 7.5445E-03 (2003,060,0000) | 6.8763E-03 (2003,041,0000) | 6.1889E-03 (2003,006,0000) |
| 426 | -30.986 | -211.549 | 1.1236E-02 (2003,077,0000) | 7.4692E-03 (2003,060,0000) | 6.7880E-03 (2003,041,0000) | 6.1757E-03 (2003,006,0000) |
| 427 | -29.528 | -211.555 | 1.1028E-02 (2003,077,0000) | 7.3968E-03 (2003,060,0000) | 6.7040E-03 (2003,041,0000) | 6.1794E-03 (2003,006,0000) |
| 428 | -28.070 | -211.560 | 1.0827E-02 (2003,077,0000) | 7.3199E-03 (2003,060,0000) | 6.6276E-03 (2003,041,0000) | 6.1799E-03 (2003,006,0000) |
| 429 | -26.611 | -211.565 | 1.0633E-02 (2003,077,0000) | 7.2465E-03 (2003,060,0000) | 6.5491E-03 (2003,041,0000) | 6.1852E-03 (2003,006,0000) |
| 430 | -25.153 | -211.570 | 1.0444E-02 (2003,077,0000) | 7.1701E-03 (2003,060,0000) | 6.4814E-03 (2003,041,0000) | 6.1959E-03 (2003,006,0000) |
| 431 | -23.695 | -211.575 | 1.0262E-02 (2003,077,0000) | 7.0948E-03 (2003,060,0000) | 6.4137E-03 (2003,041,0000) | 6.2065E-03 (2003,006,0000) |
| 432 | -22.237 | -211.579 | 1.0087E-02 (2003,077,0000) | 7.0193E-03 (2003,060,0000) | 6.3504E-03 (2003,041,0000) | 6.2190E-03 (2003,006,0000) |
| 433 | -20.779 | -211.583 | 9.9179E-03 (2003,077,0000) | 6.9438E-03 (2003,060,0000) | 6.2876E-03 (2003,041,0000) | 6.2241E-03 (2003,006,0000) |
| 434 | -19.321 | -211.587 | 9.7556E-03 (2003,077,0000) | 6.8651E-03 (2003,060,0000) | 6.2348E-03 (2003,006,0000) | 6.2287E-03 (2003,041,0000) |
| 435 | -17.862 | -211.590 | 9.6001E-03 (2003,077,0000) | 6.7906E-03 (2003,060,0000) | 6.2421E-03 (2003,006,0000) | 6.1696E-03 (2003,041,0000) |
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| 437 | -48.472 | -209.607 | 1.3989E-02 (2003,077,0000) | 8.4172E-03 (2003,060,0000) | 8.3092E-03 (2003,041,0000) | 6.9263E-03 (2003,338,0000) |
| 438 | -47.014 | -209.616 | 1.3762E-02 (2003,077,0000) | 8.3237E-03 (2003,060,0000) | 8.0726E-03 (2003,041,0000) | 6.7881E-03 (2003,338,0000) |
| 439 | -45.556 | -209.625 | 1.3531E-02 (2003,077,0000) | 8.2342E-03 (2003,060,0000) | 7.8670E-03 (2003,041,0000) | 6.6456E-03 (2003,338,0000) |
| 440 | -44.099 | -209.633 | 1.3297E-02 (2003,077,0000) | 8.1322E-03 (2003,060,0000) | 7.6544E-03 (2003,041,0000) | 6.5118E-03 (2003,058,0000) |
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| 442 | -41.183 | -209.649 | 1.2820E-02 (2003,077,0000) | 7.9504E-03 (2003,060,0000) | 7.2274E-03 (2003,041,0000) | 6.3445E-03 (2003,058,0000) |
| 443 | -39.725 | -209.657 | 1.2584E-02 (2003,077,0000) | 7.8848E-03 (2003,060,0000) | 7.1571E-03 (2003,041,0000) | 6.2635E-03 (2003,058,0000) |
| 444 | -38.267 | -209.664 | 1.2348E-02 (2003,077,0000) | 7.8154E-03 (2003,060,0000) | 7.0926E-03 (2003,041,0000) | 6.2183E-03 (2003,006,0000) |
| 445 | -36.810 | -209.671 | 1.2112E-02 (2003,077,0000) | 7.7345E-03 (2003,060,0000) | 6.9753E-03 (2003,041,0000) | 6.2745E-03 (2003,006,0000) |
| 446 | -35.352 | -209.678 | 1.1882E-02 (2003,077,0000) | 7.6575E-03 (2003,060,0000) | 6.8770E-03 (2003,041,0000) | 6.3097E-03 (2003,006,0000) |
| 447 | -33.894 | -209.684 | 1.1657E-02 (2003,077,0000) | 7.5819E-03 (2003,060,0000) | 6.7805E-03 (2003,041,0000) | 6.3201E-03 (2003,006,0000) |
| 448 | -32.436 | -209.690 | 1.1433E-02 (2003,077,0000) | 7.5037E-03 (2003,060,0000) | 6.6929E-03 (2003,041,0000) | 6.3490E-03 (2003,006,0000) |
| 449 | -30.978 | -209.696 | 1.1218E-02 (2003,077,0000) | 7.4279E-03 (2003,060,0000) | 6.6095E-03 (2003,041,0000) | 6.3373E-03 (2003,006,0000) |
| 450 | -29.521 | -209.702 | 1.1007E-02 (2003,077,0000) | 7.3514E-03 (2003,060,0000) | 6.5341E-03 (2003,041,0000) | 6.3279E-03 (2003,006,0000) |
| 451 | -28.063 | -209.707 | 1.0801E-02 (2003,077,0000) | 7.2767E-03 (2003,060,0000) | 6.4621E-03 (2003,041,0000) | 6.3342E-03 (2003,006,0000) |
| 452 | -26.605 | -209.713 | 1.0602E-02 (2003,077,0000) | 7.2015E-03 (2003,060,0000) | 6.3927E-03 (2003,041,0000) | 6.3383E-03 (2003,006,0000) |
| 453 | -25.147 | -209.717 | 1.0409E-02 (2003,077,0000) | 7.1224E-03 (2003,060,0000) | 6.3425E-03 (2003,006,0000) | 6.3256E-03 (2003,041,0000) |
| 454 | -23.689 | -209.722 | 1.0222E-02 (2003,077,0000) | 7.0476E-03 (2003,060,0000) | 6.3487E-03 (2003,006,0000) | 6.2662E-03 (2003,041,0000) |
| 455 | -22.232 | -209.726 | 1.0043E-02 (2003,077,0000) | 6.9711E-03 (2003,060,0000) | 6.3567E-03 (2003,006,0000) | 6.2032E-03 (2003,041,0000) |
| 456 | -20.774 | -209.730 | 9.8706E-03 (2003,077,0000) | 6.8930E-03 (2003,060,0000) | 6.3660E-03 (2003,006,0000) | 6.1441E-03 (2003,041,0000) |
| 457 | -19.316 | -209.734 | 9.7047E-03 (2003,077,0000) | 6.8178E-03 (2003,060,0000) | 6.3712E-03 (2003,006,0000) | 6.0863E-03 (2003,041,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 458 | -17.858 | -209.737 | 9.5451E-03 (2003,077,0000) | 6.7385E-03 (2003,060,0000) | 6.3753E-03 (2003,006,0000) | 6.0290E-03 (2003,041,0000) |
| 459 | -16.400 | -209.741 | 9.3923E-03 (2003,077,0000) | 6.6608E-03 (2003,060,0000) | 6.3803E-03 (2003,006,0000) | 5.9734E-03 (2003,041,0000) |
| 460 | -48.460 | -207.754 | 1.3993E-02 (2003,077,0000) | 8.3934E-03 (2003,060,0000) | 7.9485E-03 (2003,041,0000) | 6.9421E-03 (2003,338,0000) |
| 461 | -47.003 | -207.763 | 1.3763E-02 (2003,077,0000) | 8.2988E-03 (2003,060,0000) | 7.7355E-03 (2003,041,0000) | 6.8058E-03 (2003,338,0000) |
| 462 | -45.546 | -207.772 | 1.3526E-02 (2003,077,0000) | 8.1998E-03 (2003,060,0000) | 7.5499E-03 (2003,041,0000) | 6.6664E-03 (2003,338,0000) |
| 463 | -44.088 | -207.780 | 1.3287E-02 (2003,077,0000) | 8.1152E-03 (2003,060,0000) | 7.3774E-03 (2003,041,0000) | 6.5218E-03 (2003,338,0000) |
| 464 | -42.631 | -207.789 | 1.3047E-02 (2003,077,0000) | 8.0275E-03 (2003,060,0000) | 7.2353E-03 (2003,041,0000) | 6.4090E-03 (2003,058,0000) |
| 465 | -41.173 | -207.796 | 1.2804E-02 (2003,077,0000) | 7.9424E-03 (2003,060,0000) | 7.0960E-03 (2003,041,0000) | 6.3283E-03 (2003,058,0000) |
| 466 | -39.716 | -207.804 | 1.2563E-02 (2003,077,0000) | 7.8461E-03 (2003,060,0000) | 6.9002E-03 (2003,041,0000) | 6.2940E-03 (2003,006,0000) |
| 467 | -38.258 | -207.811 | 1.2324E-02 (2003,077,0000) | 7.7646E-03 (2003,060,0000) | 6.8613E-03 (2003,041,0000) | 6.3259E-03 (2003,006,0000) |
| 468 | -36.801 | -207.818 | 1.2086E-02 (2003,077,0000) | 7.6945E-03 (2003,060,0000) | 6.7586E-03 (2003,041,0000) | 6.4297E-03 (2003,006,0000) |
| 469 | -35.343 | -207.825 | 1.1851E-02 (2003,077,0000) | 7.6152E-03 (2003,060,0000) | 6.6643E-03 (2003,041,0000) | 6.4604E-03 (2003,006,0000) |
| 470 | -33.886 | -207.831 | 1.1622E-02 (2003,077,0000) | 7.5370E-03 (2003,060,0000) | 6.5825E-03 (2003,041,0000) | 6.4746E-03 (2003,006,0000) |
| 471 | -32.429 | -207.838 | 1.1395E-02 (2003,077,0000) | 7.4576E-03 (2003,060,0000) | 6.5217E-03 (2003,006,0000) | 6.5032E-03 (2003,041,0000) |
| 472 | -30.971 | -207.844 | 1.1176E-02 (2003,077,0000) | 7.3813E-03 (2003,060,0000) | 6.5058E-03 (2003,006,0000) | 6.4291E-03 (2003,041,0000) |
| 473 | -29.514 | -207.849 | 1.0961E-02 (2003,077,0000) | 7.3031E-03 (2003,060,0000) | 6.4890E-03 (2003,006,0000) | 6.3572E-03 (2003,041,0000) |
| 474 | -28.056 | -207.855 | 1.0751E-02 (2003,077,0000) | 7.2260E-03 (2003,060,0000) | 6.4868E-03 (2003,006,0000) | 6.2891E-03 (2003,041,0000) |
| 475 | -26.599 | -207.860 | 1.0548E-02 (2003,077,0000) | 7.1492E-03 (2003,060,0000) | 6.4875E-03 (2003,006,0000) | 6.2267E-03 (2003,041,0000) |
| 476 | -25.141 | -207.865 | 1.0353E-02 (2003,077,0000) | 7.0715E-03 (2003,060,0000) | 6.4954E-03 (2003,006,0000) | 6.1669E-03 (2003,041,0000) |
| 477 | -23.684 | -207.869 | 1.0162E-02 (2003,077,0000) | 6.9956E-03 (2003,060,0000) | 6.4983E-03 (2003,006,0000) | 6.1075E-03 (2003,041,0000) |
| 478 | -22.226 | -207.873 | 9.9807E-03 (2003,077,0000) | 6.9177E-03 (2003,060,0000) | 6.5016E-03 (2003,006,0000) | 6.0490E-03 (2003,041,0000) |
| 479 | -20.769 | -207.877 | 9.8047E-03 (2003,077,0000) | 6.8388E-03 (2003,060,0000) | 6.5091E-03 (2003,006,0000) | 5.9941E-03 (2003,041,0000) |
| 480 | -19.311 | -207.881 | 9.6352E-03 (2003,077,0000) | 6.7642E-03 (2003,060,0000) | 6.5166E-03 (2003,006,0000) | 5.9382E-03 (2003,041,0000) |
| 481 | -48.449 | -205.902 | 1.3955E-02 (2003,077,0000) | 8.3631E-03 (2003,060,0000) | 7.5877E-03 (2003,041,0000) | 6.9503E-03 (2003,338,0000) |
| 482 | -46.992 | -205.911 | 1.3720E-02 (2003,077,0000) | 8.2639E-03 (2003,060,0000) | 7.3986E-03 (2003,041,0000) | 6.8136E-03 (2003,023,0000) |
| 483 | -45.535 | -205.919 | 1.3481E-02 (2003,077,0000) | 8.1670E-03 (2003,060,0000) | 7.2366E-03 (2003,041,0000) | 6.8121E-03 (2003,023,0000) |
| 484 | -44.078 | -205.928 | 1.3240E-02 (2003,077,0000) | 8.0781E-03 (2003,060,0000) | 7.0832E-03 (2003,041,0000) | 6.7736E-03 (2003,023,0000) |
| 485 | -42.621 | -205.936 | 1.2997E-02 (2003,077,0000) | 7.9863E-03 (2003,060,0000) | 6.9539E-03 (2003,041,0000) | 6.7237E-03 (2003,023,0000) |
| 486 | -41.163 | -205.944 | 1.2754E-02 (2003,077,0000) | 7.9007E-03 (2003,060,0000) | 6.8366E-03 (2003,041,0000) | 6.6538E-03 (2003,023,0000) |
| 487 | -39.706 | -205.951 | 1.2509E-02 (2003,077,0000) | 7.8139E-03 (2003,060,0000) | 6.7263E-03 (2003,041,0000) | 6.5737E-03 (2003,023,0000) |
| 488 | -38.249 | -205.958 | 1.2267E-02 (2003,077,0000) | 7.7291E-03 (2003,060,0000) | 6.6290E-03 (2003,041,0000) | 6.4860E-03 (2003,023,0000) |
| 489 | -36.792 | -205.965 | 1.2028E-02 (2003,077,0000) | 7.6478E-03 (2003,060,0000) | 6.5858E-03 (2003,006,0000) | 6.5376E-03 (2003,041,0000) |
| 490 | -35.335 | -205.972 | 1.1791E-02 (2003,077,0000) | 7.5663E-03 (2003,060,0000) | 6.6292E-03 (2003,006,0000) | 6.4536E-03 (2003,041,0000) |
| 491 | -33.878 | -205.979 | 1.1558E-02 (2003,077,0000) | 7.4836E-03 (2003,060,0000) | 6.6283E-03 (2003,006,0000) | 6.3755E-03 (2003,041,0000) |
| 492 | -32.421 | -205.985 | 1.1332E-02 (2003,077,0000) | 7.4065E-03 (2003,060,0000) | 6.6736E-03 (2003,006,0000) | 6.3086E-03 (2003,041,0000) |
| 493 | -30.964 | -205.991 | 1.1107E-02 (2003,077,0000) | 7.3279E-03 (2003,060,0000) | 6.6745E-03 (2003,006,0000) | 6.2383E-03 (2003,041,0000) |
| 494 | -29.507 | -205.996 | 1.0892E-02 (2003,077,0000) | 7.2498E-03 (2003,060,0000) | 6.6578E-03 (2003,006,0000) | 6.1757E-03 (2003,041,0000) |
| 495 | -28.049 | -206.002 | 1.0681E-02 (2003,077,0000) | 7.1710E-03 (2003,060,0000) | 6.6473E-03 (2003,006,0000) | 6.1166E-03 (2003,041,0000) |
| 496 | -26.592 | -206.007 | 1.0475E-02 (2003,077,0000) | 7.0911E-03 (2003,060,0000) | 6.6441E-03 (2003,006,0000) | 6.0564E-03 (2003,041,0000) |
| 497 | -25.135 | -206.012 | 1.0276E-02 (2003,077,0000) | 7.0139E-03 (2003,060,0000) | 6.6449E-03 (2003,006,0000) | 6.0012E-03 (2003,041,0000) |
| 498 | -23.678 | -206.016 | 1.0085E-02 (2003,077,0000) | 6.9386E-03 (2003,060,0000) | 6.6467E-03 (2003,006,0000) | 5.9440E-03 (2003,041,0000) |
| 499 | -22.221 | -206.021 | 9.8982E-03 (2003,077,0000) | 6.8585E-03 (2003,060,0000) | 6.6531E-03 (2003,006,0000) | 5.8900E-03 (2003,041,0000) |
| 500 | -20.764 | -206.025 | 9.7207E-03 (2003,077,0000) | 6.7806E-03 (2003,060,0000) | 6.6596E-03 (2003,006,0000) | 5.8363E-03 (2003,041,0000) |
| 501 | -19.307 | -206.028 | 9.5498E-03 (2003,077,0000) | 6.7045E-03 (2003,060,0000) | 6.6602E-03 (2003,006,0000) | 5.7828E-03 (2003,041,0000) |
| 502 | -46.981 | -204.058 | 1.3638E-02 (2003,077,0000) | 8.2244E-03 (2003,060,0000) | 7.3015E-03 (2003,023,0000) | 7.0659E-03 (2003,041,0000) |
| 503 | -45.524 | -204.066 | 1.3397E-02 (2003,077,0000) | 8.1298E-03 (2003,060,0000) | 7.2445E-03 (2003,023,0000) | 6.9224E-03 (2003,041,0000) |
| 504 | -44.067 | -204.075 | 1.3156E-02 (2003,077,0000) | 8.0335E-03 (2003,060,0000) | 7.1753E-03 (2003,023,0000) | 6.7920E-03 (2003,041,0000) |
| 505 | -42.610 | -204.083 | 1.2912E-02 (2003,077,0000) | 7.9451E-03 (2003,060,0000) | 7.0701E-03 (2003,023,0000) | 6.6775E-03 (2003,041,0000) |
| 506 | -41.154 | -204.091 | 1.2668E-02 (2003,077,0000) | 7.8551E-03 (2003,060,0000) | 7.0276E-03 (2003,023,0000) | 6.6276E-03 (2003,006,0000) |
| 507 | -39.697 | -204.098 | 1.2421E-02 (2003,077,0000) | 7.7655E-03 (2003,060,0000) | 6.9334E-03 (2003,023,0000) | 6.6415E-03 (2003,006,0000) |
| 508 | -38.240 | -204.106 | 1.2179E-02 (2003,077,0000) | 7.6721E-03 (2003,060,0000) | 6.7343E-03 (2003,023,0000) | 6.6287E-03 (2003,006,0000) |
| 509 | -36.783 | -204.113 | 1.1940E-02 (2003,077,0000) | 7.5865E-03 (2003,060,0000) | 6.6500E-03 (2003,006,0000) | 6.6247E-03 (2003,023,0000) |
| 510 | -35.327 | -204.119 | 1.1700E-02 (2003,077,0000) | 7.5116E-03 (2003,060,0000) | 6.7889E-03 (2003,006,0000) | 6.6421E-03 (2003,023,0000) |
| 511 | -33.870 | -204.126 | 1.1468E-02 (2003,077,0000) | 7.4302E-03 (2003,060,0000) | 6.8084E-03 (2003,006,0000) | 6.5522E-03 (2003,023,0000) |
| 512 | -32.413 | -204.132 | 1.1240E-02 (2003,077,0000) | 7.3518E-03 (2003,060,0000) | 6.8221E-03 (2003,006,0000) | 6.5225E-03 (2003,023,0000) |
| 513 | -30.956 | -204.138 | 1.1015E-02 (2003,077,0000) | 7.2686E-03 (2003,060,0000) | 6.8441E-03 (2003,006,0000) | 6.4480E-03 (2003,023,0000) |
| 514 | -29.500 | -204.144 | 1.0797E-02 (2003,077,0000) | 7.1926E-03 (2003,060,0000) | 6.8284E-03 (2003,006,0000) | 6.3415E-03 (2003,023,0000) |
| 515 | -28.043 | -204.149 | 1.0587E-02 (2003,077,0000) | 7.1110E-03 (2003,060,0000) | 6.8164E-03 (2003,006,0000) | 6.2087E-03 (2003,023,0000) |
| 516 | -26.586 | -204.154 | 1.0379E-02 (2003,077,0000) | 7.0311E-03 (2003,060,0000) | 6.8096E-03 (2003,006,0000) | 6.0783E-03 (2003,023,0000) |
| 517 | -25.129 | -204.159 | 1.0180E-02 (2003,077,0000) | 6.9549E-03 (2003,060,0000) | 6.8048E-03 (2003,006,0000) | 5.9534E-03 (2003,023,0000) |
| 518 | -23.673 | -204.164 | 9.9865E-03 (2003,077,0000) | 6.8725E-03 (2003,060,0000) | 6.8052E-03 (2003,006,0000) | 5.8334E-03 (2003,023,0000) |
| 519 | -22.216 | -204.168 | 9.7991E-03 (2003,077,0000) | 6.8054E-03 (2003,006,0000) | 6.7943E-03 (2003,060,0000) | 5.7228E-03 (2003,041,0000) |
| 520 | -20.759 | -204.172 | 9.6203E-03 (2003,077,0000) | 6.8076E-03 (2003,006,0000) | 6.7180E-03 (2003,060,0000) | 5.6727E-03 (2003,041,0000) |
| 521 | -19.302 | -204.176 | 9.4482E-03 (2003,077,0000) | 6.8122E-03 (2003,006,0000) | 6.6379E-03 (2003,060,0000) | 5.6216E-03 (2003,041,0000) |
| 522 | -46.969 | -202.205 | 1.3515E-02 (2003,077,0000) | 8.1817E-03 (2003,060,0000) | 7.6674E-03 (2003,023,0000) | 6.9544E-03 (2003,302,0000) |
| 523 | -45.513 | -202.214 | 1.3275E-02 (2003,077,0000) | 8.0842E-03 (2003,060,0000) | 7.5966E-03 (2003,023,0000) | 6.8779E-03 (2003,302,0000) |
| 524 | -44.057 | -202.222 | 1.3033E-02 (2003,077,0000) | 7.9877E-03 (2003,060,0000) | 7.5085E-03 (2003,023,0000) | 6.8086E-03 (2003,302,0000) |
| 525 | -42.600 | -202.230 | 1.2790E-02 (2003,077,0000) | 7.8946E-03 (2003,060,0000) | 7.4488E-03 (2003,023,0000) | 6.8167E-03 (2003,302,0000) |
| 526 | -41.144 | -202.238 | 1.2546E-02 (2003,077,0000) | 7.8042E-03 (2003,060,0000) | 7.3791E-03 (2003,023,0000) | 6.7903E-03 (2003,006,0000) |
| 527 | -39.687 | -202.246 | 1.2302E-02 (2003,077,0000) | 7.7138E-03 (2003,060,0000) | 7.2818E-03 (2003,023,0000) | 6.8070E-03 (2003,006,0000) |
| 528 | -38.231 | -202.253 | 1.2060E-02 (2003,077,0000) | 7.6254E-03 (2003,060,0000) | 7.1891E-03 (2003,023,0000) | 6.8195E-03 (2003,006,0000) |
| 529 | -36.775 | -202.260 | 1.1821E-02 (2003,077,0000) | 7.5412E-03 (2003,060,0000) | 7.0661E-03 (2003,023,0000) | 6.8545E-03 (2003,006,0000) |
| 530 | -35.318 | -202.267 | 1.1584E-02 (2003,077,0000) | 7.4418E-03 (2003,060,0000) | 6.8523E-03 (2003,006,0000) | 6.8247E-03 (2003,023,0000) |
| 531 | -33.862 | -202.273 | 1.1350E-02 (2003,077,0000) | 7.3714E-03 (2003,060,0000) | 6.9520E-03 (2003,006,0000) | 6.8039E-03 (2003,023,0000) |
| 532 | -32.405 | -202.279 | 1.1123E-02 (2003,077,0000) | 7.2891E-03 (2003,060,0000) | 6.9861E-03 (2003,006,0000) | 6.7873E-03 (2003,023,0000) |
| 533 | -30.949 | -202.285 | 1.0899E-02 (2003,077,0000) | 7.2077E-03 (2003,060,0000) | 7.0240E-03 (2003,006,0000) | 6.6884E-03 (2003,023,0000) |
| 534 | -29.493 | -202.291 | 1.0681E-02 (2003,077,0000) | 7.1295E-03 (2003,060,0000) | 7.0102E-03 (2003,006,0000) | 6.5655E-03 (2003,023,0000) |
| 535 | -28.036 | -202.296 | 1.0470E-02 (2003,077,0000) | 7.0437E-03 (2003,060,0000) | 6.9863E-03 (2003,006,0000) | 6.4131E-03 (2003,023,0000) |
| 536 | -26.580 | -202.301 | 1.0261E-02 (2003,077,0000) | 6.9779E-03 (2003,006,0000) | 6.9654E-03 (2003,060,0000) | 6.2840E-03 (2003,023,0000) |
| 537 | -25.123 | -202.306 | 1.0063E-02 (2003,077,0000) | 6.9710E-03 (2003,006,0000) | 6.8888E-03 (2003,060,0000) | 6.1521E-03 (2003,023,0000) |
| 538 | -23.667 | -202.311 | 9.8691E-03 (2003,077,0000) | 6.9647E-03 (2003,006,0000) | 6.8068E-03 (2003,060,0000) | 6.0172E-03 (2003,023,0000) |
| 539 | -22.210 | -202.315 | 9.6820E-03 (2003,077,0000) | 6.9606E-03 (2003,006,0000) | 6.7273E-03 (2003,060,0000) | 5.8948E-03 (2003,023,0000) |
| 540 | -46.958 | -200.352 | 1.3354E-02 (2003,077,0000) | 8.1389E-03 (2003,060,0000) | 8.1331E-03 (2003,023,0000) | 7.2473E-03 (2003,302,0000) |
| 541 | -45.502 | -200.361 | 1.3117E-02 (2003,077,0000) | 8.0356E-03 (2003,060,0000) | 7.9436E-03 (2003,023,0000) | 6.9339E-03 (2003,006,0000) |
| 542 | -44.046 | -200.369 | 1.2876E-02 (2003,077,0000) | 7.9403E-03 (2003,060,0000) | 7.8887E-03 (2003,023,0000) | 6.9907E-03 (2003,302,0000) |
| 543 | -42.590 | -200.377 | 1.2635E-02 (2003,077,0000) | 7.8399E-03 (2003,060,0000) | 7.7785E-03 (2003,023,0000) | 6.9555E-03 (2003,006,0000) |
| 544 | -41.134 | -200.385 | 1.2394E-02 (2003,077,0000) | 7.7490E-03 (2003,060,0000) | 7.7083E-03 (2003,023,0000) | 6.9669E-03 (2003,006,0000) |
| 545 | -39.678 | -200.393 | 1.2152E-02 (2003,077,0000) | 7.6579E-03 (2003,060,0000) | 7.5926E-03 (2003,023,0000) | 6.9728E-03 (2003,006,0000) |
| 546 | -38.222 | -200.400 | 1.1912E-02 (2003,077,0000) | 7.5683E-03 (2003,060,0000) | 7.4684E-03 (2003,023,0000) | 6.9818E-03 (2003,006,0000) |
| 547 | -36.766 | -200.407 | 1.1675E-02 (2003,077,0000) | 7.4777E-03 (2003,060,0000) | 7.3867E-03 (2003,023,0000) | 6.9961E-03 (2003,006,0000) |
| 548 | -35.310 | -200.414 | 1.1440E-02 (2003,077,0000) | 7.3850E-03 (2003,060,0000) | 7.1418E-03 (2003,023,0000) | 7.0116E-03 (2003,006,0000) |
| 549 | -33.854 | -200.420 | 1.1208E-02 (2003,077,0000) | 7.3085E-03 (2003,060,0000) | 7.1324E-03 (2003,006,0000) | 7.1140E-03 (2003,023,0000) |
| 550 | -32.398 | -200.427 | 1.0982E-02 (2003,077,0000) | 7.2164E-03 (2003,060,0000) | 7.1186E-03 (2003,006,0000) | 6.9617E-03 (2003,023,0000) |
| 551 | -30.942 | -200.432 | 1.0760E-02 (2003,077,0000) | 7.1604E-03 (2003,006,0000) | 7.1418E-03 (2003,060,0000) | 6.9229E-03 (2003,023,0000) |
| 552 | -29.486 | -200.438 | 1.0544E-02 (2003,077,0000) | 7.1763E-03 (2003,006,0000) | 7.0585E-03 (2003,060,0000) | 6.7857E-03 (2003,023,0000) |
| 553 | -28.030 | -200.444 | 1.0333E-02 (2003,077,0000) | 7.1466E-03 (2003,006,0000) | 6.9720E-03 (2003,060,0000) | 6.5936E-03 (2003,023,0000) |
| 554 | -26.573 | -200.449 | 1.0127E-02 (2003,077,0000) | 7.1568E-03 (2003,006,0000) | 6.8963E-03 (2003,060,0000) | 6.4835E-03 (2003,023,0000) |
| 555 | -25.117 | -200.453 | 9.9288E-03 (2003,077,0000) | 7.1421E-03 (2003,006,0000) | 6.8154E-03 (2003,060,0000) | 6.3281E-03 (2003,023,0000) |
| 556 | -23.661 | -200.458 | 9.7352E-03 (2003,077,0000) | 7.1364E-03 (2003,006,0000) | 6.7352E-03 (2003,060,0000) | 6.2042E-03 (2003,023,0000) |
| 557 | -46.947 | -198.500 | 1.3157E-02 (2003,077,0000) | 8.6317E-03 (2003,023,0000) | 8.0874E-03 (2003,060,0000) | 7.6528E-03 (2003,302,0000) |
| 558 | -45.491 | -198.508 | 1.2924E-02 (2003,077,0000) | 8.4029E-03 (2003,023,0000) | 7.9835E-03 (2003,060,0000) | 7.2600E-03 (2003,302,0000) |
| 559 | -44.036 | -198.517 | 1.2687E-02 (2003,077,0000) | 8.2333E-03 (2003,023,0000) | 7.8887E-03 (2003,060,0000) | 7.1304E-03 (2003,006,0000) |
| 560 | -42.580 | -198.525 | 1.2449E-02 (2003,077,0000) | 8.1082E-03 (2003,023,0000) | 7.7839E-03 (2003,060,0000) | 7.1397E-03 (2003,006,0000) |
| 561 | -41.124 | -198.533 | 1.2212E-02 (2003,077,0000) | 8.0414E-03 (2003,023,0000) | 7.6894E-03 (2003,060,0000) | 7.1479E-03 (2003,006,0000) |
| 562 | -39.669 | -198.540 | 1.1972E-02 (2003,077,0000) | 7.9492E-03 (2003,023,0000) | 7.5979E-03 (2003,060,0000) | 7.1532E-03 (2003,006,0000) |
| 563 | -38.213 | -198.547 | 1.1736E-02 (2003,077,0000) | 7.8122E-03 (2003,023,0000) | 7.5038E-03 (2003,060,0000) | 7.1574E-03 (2003,006,0000) |
| 564 | -36.757 | -198.554 | 1.1502E-02 (2003,077,0000) | 7.5778E-03 (2003,023,0000) | 7.4068E-03 (2003,060,0000) | 7.1519E-03 (2003,006,0000) |
| 565 | -35.301 | -198.561 | 1.1270E-02 (2003,077,0000) | 7.4387E-03 (2003,023,0000) | 7.3215E-03 (2003,060,0000) | 7.1752E-03 (2003,006,0000) |
| 566 | -33.846 | -198.568 | 1.1041E-02 (2003,077,0000) | 7.3710E-03 (2003,023,0000) | 7.2740E-03 (2003,006,0000) | 7.2377E-03 (2003,060,0000) |
| 567 | -32.390 | -198.574 | 1.0819E-02 (2003,077,0000) | 7.3316E-03 (2003,006,0000) | 7.2928E-03 (2003,023,0000) | 7.1540E-03 (2003,060,0000) |
| 568 | -30.934 | -198.580 | 1.0599E-02 (2003,077,0000) | 7.2713E-03 (2003,006,0000) | 7.0626E-03 (2003,060,0000) | 7.0106E-03 (2003,023,0000) |
| 569 | -29.479 | -198.585 | 1.0384E-02 (2003,077,0000) | 7.2897E-03 (2003,006,0000) | 6.9811E-03 (2003,060,0000) | 6.8904E-03 (2003,023,0000) |
| 570 | -28.023 | -198.591 | 1.0176E-02 (2003,077,0000) | 7.3013E-03 (2003,006,0000) | 6.9008E-03 (2003,060,0000) | 6.7865E-03 (2003,023,0000) |
| 571 | -26.567 | -198.596 | 9.9731E-03 (2003,077,0000) | 7.3093E-03 (2003,006,0000) | 6.8201E-03 (2003,060,0000) | 6.6827E-03 (2003,023,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 572 | -46.936 | -196.647 | 1.2928E-02 (2003,077,0000) | 8.8866E-03 (2003,023,0000) | 8.0338E-03 (2003,060,0000) | 7.4935E-03 (2003,302,0000) |
| 573 | -45.481 | -196.656 | 1.2700E-02 (2003,077,0000) | 8.8584E-03 (2003,023,0000) | 7.9312E-03 (2003,060,0000) | 7.6303E-03 (2003,302,0000) |
| 574 | -44.025 | -196.664 | 1.2467E-02 (2003,077,0000) | 8.5958E-03 (2003,023,0000) | 7.8259E-03 (2003,060,0000) | 7.3232E-03 (2003,006,0000) |
| 575 | -42.570 | -196.672 | 1.2234E-02 (2003,077,0000) | 8.4109E-03 (2003,023,0000) | 7.7220E-03 (2003,060,0000) | 7.3226E-03 (2003,006,0000) |
| 576 | -41.115 | -196.680 | 1.2001E-02 (2003,077,0000) | 8.3632E-03 (2003,023,0000) | 7.6305E-03 (2003,060,0000) | 7.3349E-03 (2003,006,0000) |
| 577 | -39.659 | -196.687 | 1.1767E-02 (2003,077,0000) | 8.2142E-03 (2003,023,0000) | 7.5288E-03 (2003,060,0000) | 7.3335E-03 (2003,006,0000) |
| 578 | -38.204 | -196.695 | 1.1534E-02 (2003,077,0000) | 8.1307E-03 (2003,023,0000) | 7.4359E-03 (2003,060,0000) | 7.3435E-03 (2003,006,0000) |
| 579 | -36.748 | -196.702 | 1.1306E-02 (2003,077,0000) | 7.9358E-03 (2003,023,0000) | 7.3478E-03 (2003,006,0000) | 7.3475E-03 (2003,060,0000) |
| 580 | -35.293 | -196.708 | 1.1078E-02 (2003,077,0000) | 7.6784E-03 (2003,023,0000) | 7.3344E-03 (2003,006,0000) | 7.2482E-03 (2003,060,0000) |
| 581 | -33.838 | -196.715 | 1.0853E-02 (2003,077,0000) | 7.5396E-03 (2003,023,0000) | 7.3757E-03 (2003,006,0000) | 7.1598E-03 (2003,060,0000) |
| 582 | -32.382 | -196.721 | 1.0634E-02 (2003,077,0000) | 7.5041E-03 (2003,023,0000) | 7.4893E-03 (2003,006,0000) | 7.0823E-03 (2003,060,0000) |
| 583 | -30.927 | -196.727 | 1.0418E-02 (2003,077,0000) | 7.4927E-03 (2003,006,0000) | 7.3334E-03 (2003,023,0000) | 6.9946E-03 (2003,060,0000) |
| 584 | -29.472 | -196.733 | 1.0206E-02 (2003,077,0000) | 7.4869E-03 (2003,006,0000) | 7.1737E-03 (2003,023,0000) | 6.9092E-03 (2003,060,0000) |
| 585 | -28.016 | -196.738 | 1.0003E-02 (2003,077,0000) | 7.4609E-03 (2003,006,0000) | 6.9543E-03 (2003,023,0000) | 6.8241E-03 (2003,060,0000) |
| 586 | -26.561 | -196.743 | 9.8021E-03 (2003,077,0000) | 7.4585E-03 (2003,006,0000) | 6.8172E-03 (2003,023,0000) | 6.7409E-03 (2003,060,0000) |
| 587 | -46.925 | -194.794 | 1.2670E-02 (2003,077,0000) | 9.2011E-03 (2003,023,0000) | 7.9786E-03 (2003,060,0000) | 7.5180E-03 (2003,006,0000) |
| 588 | -45.470 | -194.803 | 1.2446E-02 (2003,077,0000) | 9.1131E-03 (2003,023,0000) | 7.8677E-03 (2003,060,0000) | 7.5290E-03 (2003,006,0000) |
| 589 | -44.015 | -194.811 | 1.2219E-02 (2003,077,0000) | 8.9701E-03 (2003,023,0000) | 7.7608E-03 (2003,060,0000) | 7.5346E-03 (2003,006,0000) |
| 590 | -42.560 | -194.819 | 1.1991E-02 (2003,077,0000) | 8.7617E-03 (2003,023,0000) | 7.6613E-03 (2003,060,0000) | 7.5251E-03 (2003,006,0000) |
| 591 | -41.105 | -194.827 | 1.1764E-02 (2003,077,0000) | 8.7134E-03 (2003,023,0000) | 7.5584E-03 (2003,060,0000) | 7.5339E-03 (2003,006,0000) |
| 592 | -39.650 | -194.835 | 1.1537E-02 (2003,077,0000) | 8.6833E-03 (2003,023,0000) | 7.5436E-03 (2003,006,0000) | 7.4629E-03 (2003,060,0000) |
| 593 | -38.195 | -194.842 | 1.1310E-02 (2003,077,0000) | 8.3465E-03 (2003,023,0000) | 7.5251E-03 (2003,006,0000) | 7.3619E-03 (2003,060,0000) |
| 594 | -36.740 | -194.849 | 1.1086E-02 (2003,077,0000) | 8.1101E-03 (2003,023,0000) | 7.5220E-03 (2003,006,0000) | 7.2651E-03 (2003,060,0000) |
| 595 | -35.285 | -194.856 | 1.0863E-02 (2003,077,0000) | 7.9898E-03 (2003,023,0000) | 7.5347E-03 (2003,006,0000) | 7.1726E-03 (2003,060,0000) |
| 596 | -33.830 | -194.862 | 1.0644E-02 (2003,077,0000) | 7.8658E-03 (2003,023,0000) | 7.5748E-03 (2003,006,0000) | 7.0870E-03 (2003,060,0000) |
| 597 | -32.375 | -194.868 | 1.0430E-02 (2003,077,0000) | 7.7328E-03 (2003,023,0000) | 7.6501E-03 (2003,006,0000) | 7.0023E-03 (2003,060,0000) |
| 598 | -30.920 | -194.874 | 1.0218E-02 (2003,077,0000) | 7.6817E-03 (2003,006,0000) | 7.5632E-03 (2003,023,0000) | 6.9146E-03 (2003,060,0000) |
| 599 | -29.465 | -194.880 | 1.0011E-02 (2003,077,0000) | 7.6266E-03 (2003,006,0000) | 7.2922E-03 (2003,023,0000) | 6.8280E-03 (2003,060,0000) |
| 600 | -28.009 | -194.885 | 9.8110E-03 (2003,077,0000) | 7.6336E-03 (2003,006,0000) | 7.1476E-03 (2003,023,0000) | 6.7412E-03 (2003,060,0000) |
| 601 | -26.554 | -194.890 | 9.6144E-03 (2003,077,0000) | 7.6547E-03 (2003,006,0000) | 7.0600E-03 (2003,023,0000) | 6.6613E-03 (2003,060,0000) |
| 602 | -45.459 | -192.950 | 1.2167E-02 (2003,077,0000) | 9.4507E-03 (2003,023,0000) | 7.8031E-03 (2003,060,0000) | 7.7298E-03 (2003,006,0000) |
| 603 | -44.004 | -192.959 | 1.1946E-02 (2003,077,0000) | 9.2382E-03 (2003,023,0000) | 7.7272E-03 (2003,006,0000) | 7.6882E-03 (2003,060,0000) |
| 604 | -42.550 | -192.967 | 1.1726E-02 (2003,077,0000) | 9.0571E-03 (2003,023,0000) | 7.7250E-03 (2003,006,0000) | 7.5863E-03 (2003,060,0000) |
| 605 | -41.095 | -192.975 | 1.1505E-02 (2003,077,0000) | 8.9350E-03 (2003,023,0000) | 7.7261E-03 (2003,006,0000) | 7.4799E-03 (2003,060,0000) |
| 606 | -39.640 | -192.982 | 1.1284E-02 (2003,077,0000) | 8.8798E-03 (2003,023,0000) | 7.7416E-03 (2003,006,0000) | 7.3892E-03 (2003,060,0000) |
| 607 | -38.186 | -192.989 | 1.1063E-02 (2003,077,0000) | 8.5534E-03 (2003,023,0000) | 7.7216E-03 (2003,006,0000) | 7.2856E-03 (2003,060,0000) |
| 608 | -36.731 | -192.996 | 1.0846E-02 (2003,077,0000) | 8.3665E-03 (2003,023,0000) | 7.7202E-03 (2003,006,0000) | 7.1891E-03 (2003,060,0000) |
| 609 | -35.276 | -193.003 | 1.0629E-02 (2003,077,0000) | 8.1938E-03 (2003,023,0000) | 7.7223E-03 (2003,006,0000) | 7.0968E-03 (2003,060,0000) |
| 610 | -33.822 | -193.010 | 1.0417E-02 (2003,077,0000) | 8.1118E-03 (2003,023,0000) | 7.7568E-03 (2003,006,0000) | 7.0112E-03 (2003,060,0000) |
| 611 | -32.367 | -193.016 | 1.0207E-02 (2003,077,0000) | 7.9724E-03 (2003,023,0000) | 7.8425E-03 (2003,006,0000) | 7.0667E-03 (2003,059,0000) |
| 612 | -30.912 | -193.022 | 1.0001E-02 (2003,077,0000) | 7.8809E-03 (2003,006,0000) | 7.7945E-03 (2003,023,0000) | 7.0384E-03 (2003,059,0000) |
| 613 | -29.457 | -193.027 | 9.7989E-03 (2003,077,0000) | 7.8503E-03 (2003,006,0000) | 7.5716E-03 (2003,023,0000) | 6.9320E-03 (2003,059,0000) |
| 614 | -28.003 | -193.033 | 9.6037E-03 (2003,077,0000) | 7.8513E-03 (2003,006,0000) | 7.4038E-03 (2003,023,0000) | 6.9408E-03 (2003,059,0000) |
| 615 | -26.548 | -193.038 | 9.4110E-03 (2003,077,0000) | 7.8191E-03 (2003,006,0000) | 7.1717E-03 (2003,023,0000) | 6.5757E-03 (2003,060,0000) |
| 616 | -25.093 | -193.043 | 9.2250E-03 (2003,077,0000) | 7.8199E-03 (2003,006,0000) | 7.0563E-03 (2003,023,0000) | 6.8555E-03 (2003,059,0000) |
| 617 | -41.085 | -191.122 | 1.1224E-02 (2003,077,0000) | 9.3741E-03 (2003,023,0000) | 7.9603E-03 (2003,006,0000) | 7.5901E-03 (2003,059,0000) |
| 618 | -39.631 | -191.129 | 1.1010E-02 (2003,077,0000) | 9.0150E-03 (2003,023,0000) | 7.9340E-03 (2003,006,0000) | 7.3074E-03 (2003,060,0000) |
| 619 | -38.176 | -191.137 | 1.0798E-02 (2003,077,0000) | 8.8710E-03 (2003,023,0000) | 7.9421E-03 (2003,006,0000) | 7.2097E-03 (2003,059,0000) |
| 620 | -36.722 | -191.144 | 1.0587E-02 (2003,077,0000) | 8.6894E-03 (2003,023,0000) | 7.9389E-03 (2003,006,0000) | 7.2132E-03 (2003,059,0000) |
| 621 | -35.268 | -191.150 | 1.0378E-02 (2003,077,0000) | 8.5983E-03 (2003,023,0000) | 7.9584E-03 (2003,006,0000) | 7.4249E-03 (2003,059,0000) |
| 622 | -33.813 | -191.157 | 1.0172E-02 (2003,077,0000) | 8.3870E-03 (2003,023,0000) | 7.9741E-03 (2003,006,0000) | 7.3946E-03 (2003,059,0000) |
| 623 | -32.359 | -191.163 | 9.9687E-03 (2003,077,0000) | 8.2045E-03 (2003,023,0000) | 8.0544E-03 (2003,006,0000) | 7.3956E-03 (2003,059,0000) |
| 624 | -30.905 | -191.169 | 9.7680E-03 (2003,077,0000) | 8.0866E-03 (2003,006,0000) | 8.0080E-03 (2003,023,0000) | 7.3490E-03 (2003,059,0000) |
| 625 | -29.450 | -191.175 | 9.5731E-03 (2003,077,0000) | 8.0453E-03 (2003,006,0000) | 7.7624E-03 (2003,023,0000) | 7.2721E-03 (2003,059,0000) |
| 626 | -27.996 | -191.180 | 9.3818E-03 (2003,077,0000) | 8.0321E-03 (2003,006,0000) | 7.5853E-03 (2003,023,0000) | 7.2491E-03 (2003,059,0000) |
| 627 | -26.542 | -191.185 | 9.1958E-03 (2003,077,0000) | 8.0215E-03 (2003,006,0000) | 7.3802E-03 (2003,023,0000) | 7.0025E-03 (2003,059,0000) |
| 628 | -25.087 | -191.190 | 9.0135E-03 (2003,077,0000) | 8.0182E-03 (2003,006,0000) | 7.2268E-03 (2003,023,0000) | 7.2169E-03 (2003,059,0000) |
| 629 | -39.621 | -189.277 | 1.0719E-02 (2003,077,0000) | 9.2434E-03 (2003,023,0000) | 8.1469E-03 (2003,006,0000) | 7.2244E-03 (2003,060,0000) |
| 630 | -38.167 | -189.284 | 1.0516E-02 (2003,077,0000) | 9.1984E-03 (2003,023,0000) | 8.1766E-03 (2003,006,0000) | 7.7469E-03 (2003,059,0000) |
| 631 | -36.713 | -189.291 | 1.0312E-02 (2003,077,0000) | 8.9925E-03 (2003,023,0000) | 8.1770E-03 (2003,006,0000) | 7.6998E-03 (2003,059,0000) |
| 632 | -35.259 | -189.298 | 1.0110E-02 (2003,077,0000) | 8.7186E-03 (2003,023,0000) | 8.1597E-03 (2003,006,0000) | 7.3887E-03 (2003,059,0000) |
| 633 | -33.805 | -189.304 | 9.9106E-03 (2003,077,0000) | 8.6302E-03 (2003,023,0000) | 8.1887E-03 (2003,006,0000) | 7.7136E-03 (2003,059,0000) |
| 634 | -32.351 | -189.310 | 9.7148E-03 (2003,077,0000) | 8.4431E-03 (2003,023,0000) | 8.3061E-03 (2003,006,0000) | 7.7137E-03 (2003,059,0000) |
| 635 | -30.897 | -189.316 | 9.5215E-03 (2003,077,0000) | 8.2496E-03 (2003,006,0000) | 8.1612E-03 (2003,023,0000) | 7.5790E-03 (2003,059,0000) |
| 636 | -29.443 | -189.322 | 9.3323E-03 (2003,077,0000) | 8.2568E-03 (2003,006,0000) | 7.9471E-03 (2003,023,0000) | 7.5352E-03 (2003,059,0000) |
| 637 | -27.989 | -189.327 | 9.1466E-03 (2003,077,0000) | 8.2107E-03 (2003,006,0000) | 7.7006E-03 (2003,023,0000) | 7.0039E-03 (2003,059,0000) |
| 638 | -26.535 | -189.332 | 8.9665E-03 (2003,077,0000) | 8.2079E-03 (2003,006,0000) | 7.5440E-03 (2003,023,0000) | 7.2457E-03 (2003,059,0000) |
| 639 | -25.081 | -189.337 | 8.7912E-03 (2003,077,0000) | 8.1783E-03 (2003,006,0000) | 7.3166E-03 (2003,023,0000) | 6.4842E-03 (2003,012,0000) |
| 640 | -23.628 | -189.342 | 8.6205E-03 (2003,077,0000) | 8.1833E-03 (2003,006,0000) | 7.3636E-03 (2003,059,0000) | 7.1820E-03 (2003,023,0000) |
| 641 | -22.173 | -189.346 | 8.4548E-03 (2003,077,0000) | 8.1629E-03 (2003,006,0000) | 7.2514E-03 (2003,059,0000) | 7.0103E-03 (2003,023,0000) |
| 642 | -41.066 | -187.417 | 1.0609E-02 (2003,077,0000) | 9.8018E-03 (2003,023,0000) | 8.4053E-03 (2003,006,0000) | 8.0429E-03 (2003,059,0000) |
| 643 | -39.612 | -187.424 | 1.0413E-02 (2003,077,0000) | 9.4735E-03 (2003,023,0000) | 8.3762E-03 (2003,006,0000) | 7.1410E-03 (2003,060,0000) |
| 644 | -38.158 | -187.431 | 1.0216E-02 (2003,077,0000) | 9.4086E-03 (2003,023,0000) | 8.3992E-03 (2003,006,0000) | 7.9592E-03 (2003,059,0000) |
| 645 | -36.705 | -187.438 | 1.0021E-02 (2003,077,0000) | 9.2300E-03 (2003,023,0000) | 8.4048E-03 (2003,006,0000) | 7.9616E-03 (2003,059,0000) |
| 646 | -35.251 | -187.445 | 9.8277E-03 (2003,077,0000) | 8.9730E-03 (2003,023,0000) | 8.3990E-03 (2003,006,0000) | 7.8860E-03 (2003,059,0000) |
| 647 | -33.797 | -187.452 | 9.6358E-03 (2003,077,0000) | 8.7649E-03 (2003,023,0000) | 8.3981E-03 (2003,006,0000) | 7.8843E-03 (2003,059,0000) |
| 648 | -32.344 | -187.458 | 9.4479E-03 (2003,077,0000) | 8.5721E-03 (2003,023,0000) | 8.4353E-03 (2003,006,0000) | 7.8960E-03 (2003,059,0000) |
| 649 | -30.890 | -187.464 | 9.2617E-03 (2003,077,0000) | 8.6410E-03 (2003,006,0000) | 8.5430E-03 (2003,023,0000) | 7.9849E-03 (2003,059,0000) |
| 650 | -29.436 | -187.469 | 9.0797E-03 (2003,077,0000) | 8.4754E-03 (2003,006,0000) | 8.1353E-03 (2003,023,0000) | 7.7926E-03 (2003,059,0000) |
| 651 | -27.983 | -187.475 | 8.9022E-03 (2003,077,0000) | 8.4473E-03 (2003,006,0000) | 7.9393E-03 (2003,023,0000) | 7.7609E-03 (2003,059,0000) |
| 652 | -26.529 | -187.480 | 8.7275E-03 (2003,077,0000) | 8.4321E-03 (2003,006,0000) | 7.7474E-03 (2003,023,0000) | 7.7421E-03 (2003,059,0000) |
| 653 | -25.076 | -187.485 | 8.5586E-03 (2003,077,0000) | 8.4156E-03 (2003,006,0000) | 7.7237E-03 (2003,059,0000) | 7.5488E-03 (2003,023,0000) |
| 654 | -23.622 | -187.489 | 8.3939E-03 (2003,077,0000) | 8.3828E-03 (2003,006,0000) | 7.4880E-03 (2003,059,0000) | 7.3307E-03 (2003,023,0000) |
| 655 | -22.168 | -187.494 | 8.3590E-03 (2003,006,0000) | 8.2342E-03 (2003,077,0000) | 7.4305E-03 (2003,059,0000) | 7.1546E-03 (2003,023,0000) |
| 656 | -41.056 | -185.564 | 1.0280E-02 (2003,077,0000) | 9.8737E-03 (2003,023,0000) | 8.6113E-03 (2003,006,0000) | 7.1579E-03 (2003,060,0000) |
| 657 | -39.602 | -185.572 | 1.0092E-02 (2003,077,0000) | 9.7178E-03 (2003,023,0000) | 8.6221E-03 (2003,006,0000) | 7.4485E-03 (2003,059,0000) |
| 658 | -38.149 | -185.579 | 9.9052E-03 (2003,077,0000) | 9.5951E-03 (2003,023,0000) | 8.6310E-03 (2003,006,0000) | 8.0421E-03 (2003,059,0000) |
| 659 | -36.696 | -185.586 | 9.7188E-03 (2003,077,0000) | 9.3484E-03 (2003,023,0000) | 8.6276E-03 (2003,006,0000) | 7.9806E-03 (2003,059,0000) |
| 660 | -35.243 | -185.593 | 9.5333E-03 (2003,077,0000) | 9.2016E-03 (2003,023,0000) | 8.6389E-03 (2003,006,0000) | 8.1625E-03 (2003,059,0000) |
| 661 | -33.789 | -185.599 | 9.3509E-03 (2003,077,0000) | 8.9370E-03 (2003,023,0000) | 8.6266E-03 (2003,006,0000) | 8.0877E-03 (2003,059,0000) |
| 662 | -32.336 | -185.605 | 9.1706E-03 (2003,077,0000) | 8.7661E-03 (2003,023,0000) | 8.6722E-03 (2003,006,0000) | 8.1323E-03 (2003,059,0000) |
| 663 | -30.883 | -185.611 | 8.9924E-03 (2003,077,0000) | 8.8519E-03 (2003,006,0000) | 8.7287E-03 (2003,023,0000) | 8.2052E-03 (2003,059,0000) |
| 664 | -29.429 | -185.617 | 8.8186E-03 (2003,077,0000) | 8.6872E-03 (2003,006,0000) | 8.2984E-03 (2003,023,0000) | 7.9936E-03 (2003,059,0000) |
| 665 | -27.976 | -185.622 | 8.6653E-03 (2003,006,0000) | 8.6481E-03 (2003,077,0000) | 8.0798E-03 (2003,023,0000) | 7.9400E-03 (2003,059,0000) |
| 666 | -26.523 | -185.627 | 8.6367E-03 (2003,006,0000) | 8.4807E-03 (2003,077,0000) | 7.9199E-03 (2003,059,0000) | 7.8852E-03 (2003,023,0000) |
| 667 | -25.070 | -185.632 | 8.6080E-03 (2003,006,0000) | 8.3185E-03 (2003,077,0000) | 7.7836E-03 (2003,059,0000) | 7.6598E-03 (2003,023,0000) |
| 668 | -23.616 | -185.637 | 8.5688E-03 (2003,006,0000) | 8.1598E-03 (2003,077,0000) | 7.4236E-03 (2003,023,0000) | 6.7158E-03 (2003,012,0000) |
| 669 | -22.163 | -185.641 | 8.5553E-03 (2003,006,0000) | 8.0062E-03 (2003,077,0000) | 7.2731E-03 (2003,023,0000) | 7.2358E-03 (2003,059,0000) |
| 670 | -42.499 | -183.704 | 1.0395E-02 (2003,023,0000) | 1.0118E-02 (2003,077,0000) | 8.8823E-03 (2003,006,0000) | 7.9435E-03 (2003,059,0000) |
| 671 | -41.046 | -183.711 | 1.0079E-02 (2003,023,0000) | 9.9403E-03 (2003,077,0000) | 8.8573E-03 (2003,006,0000) | 7.0662E-03 (2003,060,0000) |
| 672 | -39.593 | -183.719 | 9.8818E-03 (2003,023,0000) | 9.7616E-03 (2003,077,0000) | 8.8614E-03 (2003,006,0000) | 7.0322E-03 (2003,059,0000) |
| 673 | -38.140 | -183.726 | 9.6449E-03 (2003,023,0000) | 9.5830E-03 (2003,077,0000) | 8.8530E-03 (2003,006,0000) | 7.0195E-03 (2003,012,0000) |
| 674 | -36.687 | -183.733 | 9.4480E-03 (2003,023,0000) | 9.4063E-03 (2003,077,0000) | 8.8553E-03 (2003,006,0000) | 7.5211E-03 (2003,059,0000) |
| 675 | -35.234 | -183.740 | 9.3114E-03 (2003,023,0000) | 9.2307E-03 (2003,077,0000) | 8.8751E-03 (2003,006,0000) | 8.2249E-03 (2003,059,0000) |
| 676 | -33.781 | -183.746 | 9.1619E-03 (2003,023,0000) | 9.0560E-03 (2003,077,0000) | 8.8891E-03 (2003,006,0000) | 8.3453E-03 (2003,059,0000) |
| 677 | -32.328 | -183.753 | 9.0717E-03 (2003,023,0000) | 9.0169E-03 (2003,006,0000) | 8.8848E-03 (2003,077,0000) | 8.4009E-03 (2003,059,0000) |
| 678 | -30.875 | -183.759 | 8.8829E-03 (2003,006,0000) | 8.7159E-03 (2003,077,0000) | 8.6674E-03 (2003,023,0000) | 8.1950E-03 (2003,059,0000) |
| 679 | -29.422 | -183.764 | 8.8930E-03 (2003,006,0000) | 8.5480E-03 (2003,077,0000) | 8.4200E-03 (2003,023,0000) | 8.1141E-03 (2003,059,0000) |
| 680 | -27.969 | -183.770 | 8.8861E-03 (2003,006,0000) | 8.3856E-03 (2003,077,0000) | 8.2158E-03 (2003,023,0000) | 8.0912E-03 (2003,059,0000) |
| 681 | -26.517 | -183.775 | 8.8409E-03 (2003,006,0000) | 8.2262E-03 (2003,077,0000) | 7.9858E-03 (2003,023,0000) | 7.8172E-03 (2003,059,0000) |
| 682 | -25.064 | -183.779 | 8.8144E-03 (2003,006,0000) | 8.0690E-03 (2003,077,0000) | 7.7694E-03 (2003,023,0000) | 7.3843E-03 (2003,059,0000) |
| 683 | -23.611 | -183.784 | 8.7806E-03 (2003,006,0000) | 7.9180E-03 (2003,077,0000) | 7.5547E-03 (2003,023,0000) | 6.8410E-03 (2003,012,0000) |
| 684 | -22.158 | -183.788 | 8.7745E-03 (2003,006,0000) | 7.7708E-03 (2003,077,0000) | 7.7647E-03 (2003,059,0000) | 7.4337E-03 (2003,023,0000) |
| 685 | -20.705 | -183.792 | 8.7474E-03 (2003,006,0000) | 7.7626E-03 (2003,059,0000) | 7.6276E-03 (2003,077,0000) | 7.2589E-03 (2003,023,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 686 | -45.394 | -181.835 | 1.0970E-02 (2003,023,0000) | 1.0089E-02 (2003,077,0000) | 9.1121E-03 (2003,006,0000) | 7.3092E-03 (2003,060,0000) |
| 687 | -43.941 | -181.843 | 1.0774E-02 (2003,023,0000) | 9.9237E-03 (2003,077,0000) | 9.1295E-03 (2003,006,0000) | 7.7991E-03 (2003,059,0000) |
| 688 | -42.489 | -181.851 | 1.0500E-02 (2003,023,0000) | 9.7584E-03 (2003,077,0000) | 9.1146E-03 (2003,006,0000) | 7.1677E-03 (2003,012,0000) |
| 689 | -41.036 | -181.859 | 1.0348E-02 (2003,023,0000) | 9.5905E-03 (2003,077,0000) | 9.1328E-03 (2003,006,0000) | 8.0059E-03 (2003,059,0000) |
| 690 | -39.584 | -181.866 | 1.0174E-02 (2003,023,0000) | 9.4217E-03 (2003,077,0000) | 9.1430E-03 (2003,006,0000) | 8.2891E-03 (2003,059,0000) |
| 691 | -38.131 | -181.874 | 9.9038E-03 (2003,023,0000) | 9.2533E-03 (2003,077,0000) | 9.1304E-03 (2003,006,0000) | 8.2444E-03 (2003,059,0000) |
| 692 | -36.678 | -181.881 | 9.6210E-03 (2003,023,0000) | 9.1154E-03 (2003,006,0000) | 9.0866E-03 (2003,077,0000) | 7.8855E-03 (2003,059,0000) |
| 693 | -35.226 | -181.887 | 9.4182E-03 (2003,023,0000) | 9.1137E-03 (2003,006,0000) | 8.9197E-03 (2003,077,0000) | 8.1890E-03 (2003,059,0000) |
| 694 | -33.773 | -181.894 | 9.2148E-03 (2003,023,0000) | 9.1139E-03 (2003,006,0000) | 8.7541E-03 (2003,077,0000) | 8.3046E-03 (2003,059,0000) |
| 695 | -32.321 | -181.900 | 9.2482E-03 (2003,023,0000) | 9.2253E-03 (2003,006,0000) | 8.5922E-03 (2003,077,0000) | 8.5523E-03 (2003,059,0000) |
| 696 | -30.868 | -181.906 | 9.1612E-03 (2003,006,0000) | 8.8762E-03 (2003,023,0000) | 8.4312E-03 (2003,077,0000) | 8.4239E-03 (2003,059,0000) |
| 697 | -29.415 | -181.912 | 9.1219E-03 (2003,006,0000) | 8.5532E-03 (2003,023,0000) | 8.2720E-03 (2003,077,0000) | 8.2323E-03 (2003,059,0000) |
| 698 | -27.963 | -181.917 | 9.1000E-03 (2003,006,0000) | 8.3177E-03 (2003,023,0000) | 8.1170E-03 (2003,077,0000) | 8.0875E-03 (2003,059,0000) |
| 699 | -26.510 | -181.922 | 9.0728E-03 (2003,006,0000) | 8.1085E-03 (2003,023,0000) | 7.9650E-03 (2003,077,0000) | 7.8757E-03 (2003,059,0000) |
| 700 | -25.058 | -181.927 | 9.0348E-03 (2003,006,0000) | 7.8797E-03 (2003,023,0000) | 7.8165E-03 (2003,077,0000) | 6.9983E-03 (2003,012,0000) |
| 701 | -23.605 | -181.931 | 9.0206E-03 (2003,006,0000) | 7.7223E-03 (2003,023,0000) | 7.6717E-03 (2003,077,0000) | 7.4878E-03 (2003,059,0000) |
| 702 | -22.152 | -181.936 | 8.9893E-03 (2003,006,0000) | 7.5382E-03 (2003,023,0000) | 7.5309E-03 (2003,077,0000) | 7.4856E-03 (2003,059,0000) |
| 703 | -20.700 | -181.940 | 8.9514E-03 (2003,006,0000) | 7.3949E-03 (2003,077,0000) | 7.3365E-03 (2003,023,0000) | 6.9012E-03 (2003,012,0000) |
| 704 | -46.835 | -179.973 | 1.1461E-02 (2003,023,0000) | 9.8512E-03 (2003,077,0000) | 9.4029E-03 (2003,006,0000) | 7.8387E-03 (2003,059,0000) |
| 705 | -45.383 | -179.982 | 1.1166E-02 (2003,023,0000) | 9.6999E-03 (2003,077,0000) | 9.3874E-03 (2003,006,0000) | 7.3006E-03 (2003,012,0000) |
| 706 | -43.931 | -179.990 | 1.0949E-02 (2003,023,0000) | 9.5461E-03 (2003,077,0000) | 9.3970E-03 (2003,006,0000) | 7.7891E-03 (2003,059,0000) |
| 707 | -42.479 | -179.999 | 1.0729E-02 (2003,023,0000) | 9.3978E-03 (2003,006,0000) | 9.3907E-03 (2003,077,0000) | 7.9024E-03 (2003,059,0000) |
| 708 | -41.026 | -180.006 | 1.0475E-02 (2003,023,0000) | 9.3902E-03 (2003,006,0000) | 9.2336E-03 (2003,077,0000) | 7.8773E-03 (2003,059,0000) |
| 709 | -39.574 | -180.014 | 1.0290E-02 (2003,023,0000) | 9.3952E-03 (2003,006,0000) | 9.0756E-03 (2003,077,0000) | 8.1704E-03 (2003,059,0000) |
| 710 | -38.122 | -180.021 | 1.0074E-02 (2003,023,0000) | 9.4006E-03 (2003,006,0000) | 8.9184E-03 (2003,077,0000) | 8.3158E-03 (2003,059,0000) |
| 711 | -36.670 | -180.028 | 9.8322E-03 (2003,023,0000) | 9.4002E-03 (2003,006,0000) | 8.7588E-03 (2003,077,0000) | 8.4270E-03 (2003,059,0000) |
| 712 | -35.217 | -180.035 | 9.5909E-03 (2003,023,0000) | 9.3884E-03 (2003,006,0000) | 8.6014E-03 (2003,077,0000) | 8.3993E-03 (2003,059,0000) |
| 713 | -33.765 | -180.041 | 9.4773E-03 (2003,023,0000) | 9.4210E-03 (2003,006,0000) | 8.5972E-03 (2003,059,0000) | 8.4470E-03 (2003,077,0000) |
| 714 | -32.313 | -180.048 | 9.4636E-03 (2003,006,0000) | 9.2970E-03 (2003,023,0000) | 8.6045E-03 (2003,059,0000) | 8.3039E-03 (2003,302,0000) |
| 715 | -30.861 | -180.053 | 9.3458E-03 (2003,006,0000) | 8.8885E-03 (2003,023,0000) | 8.3238E-03 (2003,059,0000) | 8.1394E-03 (2003,077,0000) |
| 716 | -29.408 | -180.059 | 9.3444E-03 (2003,006,0000) | 8.6657E-03 (2003,023,0000) | 8.2964E-03 (2003,059,0000) | 7.9910E-03 (2003,077,0000) |
| 717 | -27.956 | -180.064 | 9.3442E-03 (2003,006,0000) | 8.4525E-03 (2003,023,0000) | 8.1883E-03 (2003,059,0000) | 7.8448E-03 (2003,077,0000) |
| 718 | -26.504 | -180.069 | 9.3125E-03 (2003,006,0000) | 8.2444E-03 (2003,023,0000) | 7.9842E-03 (2003,059,0000) | 7.6995E-03 (2003,077,0000) |
| 719 | -25.052 | -180.074 | 9.2735E-03 (2003,006,0000) | 8.0314E-03 (2003,023,0000) | 7.5696E-03 (2003,059,0000) | 7.5594E-03 (2003,077,0000) |
| 720 | -23.599 | -180.079 | 9.2474E-03 (2003,006,0000) | 7.8440E-03 (2003,023,0000) | 7.5637E-03 (2003,059,0000) | 7.4218E-03 (2003,077,0000) |
| 721 | -22.147 | -180.083 | 9.2303E-03 (2003,006,0000) | 7.9655E-03 (2003,059,0000) | 7.6692E-03 (2003,023,0000) | 7.2875E-03 (2003,077,0000) |
| 722 | -20.695 | -180.087 | 9.1893E-03 (2003,006,0000) | 7.5664E-03 (2003,059,0000) | 7.4646E-03 (2003,023,0000) | 7.1583E-03 (2003,077,0000) |
| 723 | -46.824 | -178.121 | 1.1596E-02 (2003,023,0000) | 9.6735E-03 (2003,006,0000) | 9.4461E-03 (2003,077,0000) | 7.4843E-03 (2003,059,0000) |
| 724 | -45.372 | -178.130 | 1.1296E-02 (2003,023,0000) | 9.6592E-03 (2003,006,0000) | 9.3064E-03 (2003,077,0000) | 7.4395E-03 (2003,012,0000) |
| 725 | -43.920 | -178.138 | 1.1120E-02 (2003,023,0000) | 9.6753E-03 (2003,006,0000) | 9.1635E-03 (2003,077,0000) | 7.7959E-03 (2003,059,0000) |
| 726 | -42.469 | -178.146 | 1.0881E-02 (2003,023,0000) | 9.6732E-03 (2003,006,0000) | 9.0192E-03 (2003,077,0000) | 7.9463E-03 (2003,059,0000) |
| 727 | -41.017 | -178.154 | 1.0581E-02 (2003,023,0000) | 9.6538E-03 (2003,006,0000) | 8.8728E-03 (2003,077,0000) | 7.4392E-03 (2003,012,0000) |
| 728 | -39.565 | -178.161 | 1.0427E-02 (2003,023,0000) | 9.6748E-03 (2003,006,0000) | 8.7249E-03 (2003,077,0000) | 8.1834E-03 (2003,059,0000) |
| 729 | -38.113 | -178.169 | 1.0166E-02 (2003,023,0000) | 9.6659E-03 (2003,006,0000) | 8.5779E-03 (2003,077,0000) | 8.1839E-03 (2003,059,0000) |
| 730 | -36.661 | -178.176 | 9.9349E-03 (2003,023,0000) | 9.6634E-03 (2003,006,0000) | 8.4289E-03 (2003,077,0000) | 8.3307E-03 (2003,059,0000) |
| 731 | -35.209 | -178.182 | 9.8663E-03 (2003,023,0000) | 9.7299E-03 (2003,006,0000) | 8.6927E-03 (2003,059,0000) | 8.2814E-03 (2003,077,0000) |
| 732 | -33.757 | -178.189 | 9.7464E-03 (2003,006,0000) | 9.6748E-03 (2003,023,0000) | 8.6900E-03 (2003,059,0000) | 8.1736E-03 (2003,302,0000) |
| 733 | -32.305 | -178.195 | 9.7296E-03 (2003,006,0000) | 9.4272E-03 (2003,023,0000) | 8.6561E-03 (2003,059,0000) | 8.0307E-03 (2003,302,0000) |
| 734 | -30.853 | -178.201 | 9.7379E-03 (2003,006,0000) | 9.2365E-03 (2003,023,0000) | 8.6253E-03 (2003,059,0000) | 7.9030E-03 (2003,302,0000) |
| 735 | -29.401 | -178.206 | 9.6030E-03 (2003,006,0000) | 8.8037E-03 (2003,023,0000) | 8.3432E-03 (2003,059,0000) | 7.7082E-03 (2003,077,0000) |
| 736 | -27.949 | -178.212 | 9.6297E-03 (2003,006,0000) | 8.6926E-03 (2003,023,0000) | 8.4451E-03 (2003,059,0000) | 7.5692E-03 (2003,077,0000) |
| 737 | -26.498 | -178.217 | 9.5818E-03 (2003,006,0000) | 8.4291E-03 (2003,023,0000) | 8.3196E-03 (2003,059,0000) | 7.4320E-03 (2003,077,0000) |
| 738 | -25.046 | -178.222 | 9.5197E-03 (2003,006,0000) | 8.1483E-03 (2003,023,0000) | 7.6092E-03 (2003,059,0000) | 7.2998E-03 (2003,077,0000) |
| 739 | -23.594 | -178.226 | 9.5034E-03 (2003,006,0000) | 8.1904E-03 (2003,059,0000) | 7.9945E-03 (2003,023,0000) | 7.2202E-03 (2003,012,0000) |
| 740 | -22.142 | -178.231 | 9.4575E-03 (2003,006,0000) | 7.7571E-03 (2003,023,0000) | 7.6479E-03 (2003,059,0000) | 7.1813E-03 (2003,012,0000) |
| 741 | -20.690 | -178.235 | 9.4196E-03 (2003,006,0000) | 7.5539E-03 (2003,023,0000) | 7.3026E-03 (2003,059,0000) | 7.1420E-03 (2003,012,0000) |
| 742 | -46.813 | -176.268 | 1.1835E-02 (2003,023,0000) | 9.9977E-03 (2003,006,0000) | 9.0392E-03 (2003,077,0000) | 8.1188E-03 (2003,059,0000) |
| 743 | -45.361 | -176.277 | 1.1527E-02 (2003,023,0000) | 9.9823E-03 (2003,006,0000) | 8.9098E-03 (2003,077,0000) | 7.7804E-03 (2003,059,0000) |
| 744 | -43.910 | -176.285 | 1.1174E-02 (2003,023,0000) | 9.9444E-03 (2003,006,0000) | 8.7780E-03 (2003,077,0000) | 7.5791E-03 (2003,012,0000) |
| 745 | -42.458 | -176.293 | 1.1043E-02 (2003,023,0000) | 9.9823E-03 (2003,006,0000) | 8.6453E-03 (2003,077,0000) | 8.0478E-03 (2003,059,0000) |
| 746 | -41.007 | -176.301 | 1.0812E-02 (2003,023,0000) | 9.9810E-03 (2003,006,0000) | 8.5094E-03 (2003,077,0000) | 8.2076E-03 (2003,059,0000) |
| 747 | -39.555 | -176.309 | 1.0548E-02 (2003,023,0000) | 9.9695E-03 (2003,006,0000) | 8.3728E-03 (2003,077,0000) | 8.1607E-03 (2003,059,0000) |
| 748 | -38.104 | -176.316 | 1.0417E-02 (2003,023,0000) | 1.0010E-02 (2003,006,0000) | 8.6380E-03 (2003,059,0000) | 8.2355E-03 (2003,077,0000) |
| 749 | -36.652 | -176.323 | 1.0062E-02 (2003,023,0000) | 9.9582E-03 (2003,006,0000) | 8.4208E-03 (2003,059,0000) | 8.0962E-03 (2003,077,0000) |
| 750 | -35.201 | -176.330 | 1.0010E-02 (2003,006,0000) | 9.9710E-03 (2003,023,0000) | 8.6953E-03 (2003,059,0000) | 7.9597E-03 (2003,077,0000) |
| 751 | -33.749 | -176.336 | 9.9864E-03 (2003,006,0000) | 9.7162E-03 (2003,023,0000) | 8.6618E-03 (2003,059,0000) | 7.8230E-03 (2003,077,0000) |
| 752 | -32.297 | -176.342 | 9.9165E-03 (2003,006,0000) | 9.3724E-03 (2003,023,0000) | 8.4472E-03 (2003,059,0000) | 7.6867E-03 (2003,077,0000) |
| 753 | -30.846 | -176.348 | 9.9934E-03 (2003,006,0000) | 9.4962E-03 (2003,023,0000) | 8.6743E-03 (2003,059,0000) | 7.8232E-03 (2003,302,0000) |
| 754 | -29.394 | -176.354 | 1.0008E-02 (2003,006,0000) | 9.2287E-03 (2003,023,0000) | 8.6365E-03 (2003,059,0000) | 7.4723E-03 (2003,012,0000) |
| 755 | -27.943 | -176.359 | 9.8856E-03 (2003,006,0000) | 8.8015E-03 (2003,023,0000) | 8.4544E-03 (2003,059,0000) | 7.4390E-03 (2003,012,0000) |
| 756 | -26.491 | -176.364 | 9.8482E-03 (2003,006,0000) | 8.5758E-03 (2003,023,0000) | 8.3983E-03 (2003,059,0000) | 7.4094E-03 (2003,012,0000) |
| 757 | -25.040 | -176.369 | 9.8127E-03 (2003,006,0000) | 8.3784E-03 (2003,059,0000) | 8.3499E-03 (2003,023,0000) | 7.3760E-03 (2003,012,0000) |
| 758 | -23.588 | -176.374 | 9.7542E-03 (2003,006,0000) | 8.1936E-03 (2003,059,0000) | 8.0851E-03 (2003,023,0000) | 7.3370E-03 (2003,012,0000) |
| 759 | -22.137 | -176.378 | 9.7182E-03 (2003,006,0000) | 8.2008E-03 (2003,059,0000) | 7.8909E-03 (2003,023,0000) | 7.3005E-03 (2003,012,0000) |
| 760 | -20.685 | -176.382 | 9.6613E-03 (2003,006,0000) | 7.6631E-03 (2003,023,0000) | 7.6285E-03 (2003,059,0000) | 7.2583E-03 (2003,012,0000) |
| 761 | -62.765 | -174.303 | 1.5515E-02 (2003,023,0000) | 1.1822E-02 (2003,302,0000) | 1.0284E-02 (2003,006,0000) | 9.6881E-03 (2003,005,0000) |
| 762 | -46.802 | -174.416 | 1.2254E-02 (2003,023,0000) | 1.0419E-02 (2003,006,0000) | 9.2035E-03 (2003,302,0000) | 8.7791E-03 (2003,059,0000) |
| 763 | -45.351 | -174.425 | 1.1644E-02 (2003,023,0000) | 1.0290E-02 (2003,006,0000) | 8.5155E-03 (2003,077,0000) | 7.7165E-03 (2003,012,0000) |
| 764 | -43.899 | -174.433 | 1.1336E-02 (2003,023,0000) | 1.0263E-02 (2003,006,0000) | 8.3951E-03 (2003,077,0000) | 7.7150E-03 (2003,012,0000) |
| 765 | -42.448 | -174.441 | 1.1154E-02 (2003,023,0000) | 1.0286E-02 (2003,006,0000) | 8.2709E-03 (2003,077,0000) | 7.9480E-03 (2003,059,0000) |
| 766 | -40.997 | -174.449 | 1.0918E-02 (2003,023,0000) | 1.0279E-02 (2003,006,0000) | 8.1466E-03 (2003,077,0000) | 8.1225E-03 (2003,059,0000) |
| 767 | -39.546 | -174.456 | 1.0794E-02 (2003,023,0000) | 1.0328E-02 (2003,006,0000) | 8.5531E-03 (2003,059,0000) | 8.0213E-03 (2003,077,0000) |
| 768 | -38.095 | -174.464 | 1.0592E-02 (2003,023,0000) | 1.0337E-02 (2003,006,0000) | 8.7034E-03 (2003,059,0000) | 7.8922E-03 (2003,077,0000) |
| 769 | -36.643 | -174.471 | 1.0313E-02 (2003,006,0000) | 1.0307E-02 (2003,023,0000) | 8.6689E-03 (2003,059,0000) | 7.7652E-03 (2003,077,0000) |
| 770 | -35.192 | -174.477 | 1.0252E-02 (2003,006,0000) | 9.9320E-03 (2003,023,0000) | 8.4071E-03 (2003,059,0000) | 7.6769E-03 (2003,012,0000) |
| 771 | -33.741 | -174.484 | 1.0226E-02 (2003,006,0000) | 9.6813E-03 (2003,023,0000) | 8.3411E-03 (2003,059,0000) | 7.6592E-03 (2003,012,0000) |
| 772 | -32.290 | -174.490 | 1.0252E-02 (2003,006,0000) | 9.6328E-03 (2003,023,0000) | 8.6050E-03 (2003,059,0000) | 7.6454E-03 (2003,012,0000) |
| 773 | -30.839 | -174.496 | 1.0226E-02 (2003,006,0000) | 9.4656E-03 (2003,023,0000) | 8.5807E-03 (2003,059,0000) | 7.6223E-03 (2003,012,0000) |
| 774 | -29.387 | -174.501 | 1.0276E-02 (2003,006,0000) | 9.2953E-03 (2003,023,0000) | 8.6007E-03 (2003,059,0000) | 7.5972E-03 (2003,012,0000) |
| 775 | -27.936 | -174.507 | 1.0246E-02 (2003,006,0000) | 9.0368E-03 (2003,023,0000) | 8.5792E-03 (2003,059,0000) | 7.5695E-03 (2003,012,0000) |
| 776 | -26.485 | -174.512 | 1.0120E-02 (2003,006,0000) | 8.6804E-03 (2003,023,0000) | 8.4156E-03 (2003,059,0000) | 7.5323E-03 (2003,012,0000) |
| 777 | -25.034 | -174.517 | 1.0049E-02 (2003,006,0000) | 8.3853E-03 (2003,023,0000) | 8.1710E-03 (2003,059,0000) | 7.4926E-03 (2003,012,0000) |
| 778 | -23.582 | -174.521 | 9.9991E-03 (2003,006,0000) | 8.1604E-03 (2003,023,0000) | 8.0594E-03 (2003,059,0000) | 7.4561E-03 (2003,012,0000) |
| 779 | -22.131 | -174.526 | 9.9490E-03 (2003,006,0000) | 7.9465E-03 (2003,023,0000) | 7.6074E-03 (2003,059,0000) | 7.4124E-03 (2003,012,0000) |
| 780 | -62.750 | -172.451 | 1.5638E-02 (2003,023,0000) | 1.1431E-02 (2003,302,0000) | 1.0602E-02 (2003,006,0000) | 9.6852E-03 (2003,005,0000) |
| 781 | -61.299 | -172.462 | 1.5577E-02 (2003,023,0000) | 1.1901E-02 (2003,302,0000) | 1.0647E-02 (2003,006,0000) | 9.5680E-03 (2003,005,0000) |
| 782 | -46.791 | -172.563 | 1.1951E-02 (2003,023,0000) | 1.0567E-02 (2003,006,0000) | 8.2310E-03 (2003,077,0000) | 7.8431E-03 (2003,012,0000) |
| 783 | -45.340 | -172.572 | 1.1701E-02 (2003,023,0000) | 1.0586E-02 (2003,006,0000) | 8.1226E-03 (2003,077,0000) | 7.8497E-03 (2003,012,0000) |
| 784 | -43.889 | -172.580 | 1.1634E-02 (2003,023,0000) | 1.0660E-02 (2003,006,0000) | 8.3563E-03 (2003,059,0000) | 8.0142E-03 (2003,077,0000) |
| 785 | -42.438 | -172.588 | 1.1420E-02 (2003,023,0000) | 1.0682E-02 (2003,006,0000) | 8.4870E-03 (2003,059,0000) | 7.9012E-03 (2003,077,0000) |
| 786 | -40.987 | -172.596 | 1.1101E-02 (2003,023,0000) | 1.0642E-02 (2003,006,0000) | 8.3407E-03 (2003,059,0000) | 7.8565E-03 (2003,012,0000) |
| 787 | -39.536 | -172.604 | 1.0748E-02 (2003,023,0000) | 1.0579E-02 (2003,006,0000) | 8.0108E-03 (2003,059,0000) | 7.8449E-03 (2003,012,0000) |
| 788 | -38.086 | -172.611 | 1.0653E-02 (2003,023,0000) | 1.0645E-02 (2003,006,0000) | 8.6048E-03 (2003,059,0000) | 7.8445E-03 (2003,012,0000) |
| 789 | -36.635 | -172.618 | 1.0622E-02 (2003,006,0000) | 1.0377E-02 (2003,023,0000) | 8.5737E-03 (2003,059,0000) | 7.8298E-03 (2003,012,0000) |
| 790 | -35.184 | -172.625 | 1.0540E-02 (2003,006,0000) | 1.0004E-02 (2003,023,0000) | 8.2586E-03 (2003,059,0000) | 7.8073E-03 (2003,012,0000) |
| 791 | -33.733 | -172.631 | 1.0560E-02 (2003,006,0000) | 9.8848E-03 (2003,023,0000) | 8.5100E-03 (2003,059,0000) | 7.7946E-03 (2003,012,0000) |
| 792 | -32.282 | -172.637 | 1.0499E-02 (2003,006,0000) | 9.5904E-03 (2003,023,0000) | 8.2495E-03 (2003,059,0000) | 7.7675E-03 (2003,012,0000) |
| 793 | -30.831 | -172.643 | 1.0547E-02 (2003,006,0000) | 9.5695E-03 (2003,023,0000) | 8.5397E-03 (2003,059,0000) | 7.7514E-03 (2003,012,0000) |
| 794 | -29.380 | -172.649 | 1.0479E-02 (2003,006,0000) | 9.2733E-03 (2003,023,0000) | 8.4756E-03 (2003,059,0000) | 7.7209E-03 (2003,012,0000) |
| 795 | -27.929 | -172.654 | 1.0502E-02 (2003,006,0000) | 9.0990E-03 (2003,023,0000) | 8.5127E-03 (2003,059,0000) | 7.6908E-03 (2003,012,0000) |
| 796 | -26.479 | -172.659 | 1.0414E-02 (2003,006,0000) | 8.8123E-03 (2003,023,0000) | 8.4489E-03 (2003,059,0000) | 7.6537E-03 (2003,012,0000) |
| 797 | -25.028 | -172.664 | 1.0335E-02 (2003,006,0000) | 8.5066E-03 (2003,023,0000) | 8.2788E-03 (2003,059,0000) | 7.6129E-03 (2003,012,0000) |
| 798 | -23.577 | -172.669 | 1.0269E-02 (2003,006,0000) | 8.2563E-03 (2003,023,0000) | 8.1115E-03 (2003,059,0000) | 7.5716E-03 (2003,012,0000) |
| 799 | -61.285 | -170.610 | 1.5695E-02 (2003,023,0000) | 1.1758E-02 (2003,302,0000) | 1.0998E-02 (2003,006,0000) | 9.6105E-03 (2003,005,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 800 | -46.780 | -170.711 | 1.2338E-02 (2003,023,0000) | 1.1045E-02 (2003,006,0000) | 8.4285E-03 (2003,302,0000) | 8.2498E-03 (2003,059,0000) |
| 801 | -45.329 | -170.720 | 1.2092E-02 (2003,023,0000) | 1.1071E-02 (2003,006,0000) | 8.4863E-03 (2003,302,0000) | 8.4076E-03 (2003,059,0000) |
| 802 | -43.879 | -170.728 | 1.1516E-02 (2003,023,0000) | 1.0894E-02 (2003,006,0000) | 7.9824E-03 (2003,012,0000) | 7.6378E-03 (2003,077,0000) |
| 803 | -42.428 | -170.736 | 1.1285E-02 (2003,023,0000) | 1.0910E-02 (2003,006,0000) | 7.9837E-03 (2003,012,0000) | 7.5359E-03 (2003,077,0000) |
| 804 | -40.977 | -170.744 | 1.1262E-02 (2003,023,0000) | 1.1011E-02 (2003,006,0000) | 8.3726E-03 (2003,059,0000) | 7.9926E-03 (2003,012,0000) |
| 805 | -39.527 | -170.751 | 1.0984E-02 (2003,006,0000) | 1.0964E-02 (2003,023,0000) | 8.3408E-03 (2003,059,0000) | 7.9831E-03 (2003,012,0000) |
| 806 | -38.076 | -170.759 | 1.0967E-02 (2003,006,0000) | 1.0705E-02 (2003,023,0000) | 8.4257E-03 (2003,059,0000) | 7.9745E-03 (2003,012,0000) |
| 807 | -36.626 | -170.766 | 1.0864E-02 (2003,006,0000) | 1.0301E-02 (2003,023,0000) | 7.9513E-03 (2003,012,0000) | 7.8672E-03 (2003,059,0000) |
| 808 | -35.175 | -170.772 | 1.0889E-02 (2003,006,0000) | 1.0153E-02 (2003,023,0000) | 8.2625E-03 (2003,059,0000) | 7.9415E-03 (2003,012,0000) |
| 809 | -33.725 | -170.779 | 1.0816E-02 (2003,006,0000) | 9.8638E-03 (2003,023,0000) | 8.0010E-03 (2003,059,0000) | 7.9146E-03 (2003,012,0000) |
| 810 | -32.274 | -170.785 | 1.0835E-02 (2003,006,0000) | 9.7781E-03 (2003,023,0000) | 8.3838E-03 (2003,059,0000) | 7.8985E-03 (2003,012,0000) |
| 811 | -30.824 | -170.791 | 1.0769E-02 (2003,006,0000) | 9.4602E-03 (2003,023,0000) | 8.1355E-03 (2003,059,0000) | 7.8670E-03 (2003,012,0000) |
| 812 | -29.373 | -170.796 | 1.0768E-02 (2003,006,0000) | 9.3490E-03 (2003,023,0000) | 8.3858E-03 (2003,059,0000) | 7.8436E-03 (2003,012,0000) |
| 813 | -27.923 | -170.802 | 1.0775E-02 (2003,006,0000) | 9.1449E-03 (2003,023,0000) | 8.4203E-03 (2003,059,0000) | 7.8124E-03 (2003,012,0000) |
| 814 | -26.472 | -170.807 | 1.0676E-02 (2003,006,0000) | 8.8268E-03 (2003,023,0000) | 8.2335E-03 (2003,059,0000) | 7.7703E-03 (2003,012,0000) |
| 815 | -25.022 | -170.812 | 1.0593E-02 (2003,006,0000) | 8.5458E-03 (2003,023,0000) | 8.0187E-03 (2003,059,0000) | 7.7259E-03 (2003,012,0000) |
| 816 | -59.820 | -168.769 | 1.5391E-02 (2003,023,0000) | 1.1509E-02 (2003,302,0000) | 1.1391E-02 (2003,006,0000) | 9.4917E-03 (2003,005,0000) |
| 817 | -43.868 | -168.875 | 1.1577E-02 (2003,023,0000) | 1.1219E-02 (2003,006,0000) | 8.1166E-03 (2003,012,0000) | 7.2731E-03 (2003,005,0000) |
| 818 | -42.418 | -168.884 | 1.1366E-02 (2003,023,0000) | 1.1258E-02 (2003,006,0000) | 8.1185E-03 (2003,012,0000) | 7.1786E-03 (2003,077,0000) |
| 819 | -40.968 | -168.891 | 1.1252E-02 (2003,006,0000) | 1.1117E-02 (2003,023,0000) | 8.1127E-03 (2003,012,0000) | 7.3450E-03 (2003,059,0000) |
| 820 | -39.518 | -168.899 | 1.1230E-02 (2003,006,0000) | 1.0855E-02 (2003,023,0000) | 8.1028E-03 (2003,012,0000) | 7.3415E-03 (2003,059,0000) |
| 821 | -38.067 | -168.906 | 1.1210E-02 (2003,006,0000) | 1.0592E-02 (2003,023,0000) | 8.0897E-03 (2003,012,0000) | 7.3362E-03 (2003,059,0000) |
| 822 | -36.617 | -168.913 | 1.1211E-02 (2003,006,0000) | 1.0413E-02 (2003,023,0000) | 8.0796E-03 (2003,012,0000) | 7.8750E-03 (2003,059,0000) |
| 823 | -35.167 | -168.920 | 1.1173E-02 (2003,006,0000) | 1.0180E-02 (2003,023,0000) | 8.0606E-03 (2003,012,0000) | 7.8612E-03 (2003,059,0000) |
| 824 | -33.717 | -168.926 | 1.1202E-02 (2003,006,0000) | 1.0096E-02 (2003,023,0000) | 8.2286E-03 (2003,059,0000) | 8.0478E-03 (2003,012,0000) |
| 825 | -32.267 | -168.932 | 1.1139E-02 (2003,006,0000) | 9.7856E-03 (2003,023,0000) | 8.0701E-03 (2003,059,0000) | 8.0191E-03 (2003,012,0000) |
| 826 | -30.816 | -168.938 | 1.1125E-02 (2003,006,0000) | 9.6317E-03 (2003,023,0000) | 8.2704E-03 (2003,059,0000) | 7.9952E-03 (2003,012,0000) |
| 827 | -29.366 | -168.944 | 1.1079E-02 (2003,006,0000) | 9.4143E-03 (2003,023,0000) | 8.2777E-03 (2003,059,0000) | 7.9643E-03 (2003,012,0000) |
| 828 | -27.916 | -168.949 | 1.1076E-02 (2003,006,0000) | 9.2208E-03 (2003,023,0000) | 8.3146E-03 (2003,059,0000) | 7.9313E-03 (2003,012,0000) |
| 829 | -26.466 | -168.954 | 1.1041E-02 (2003,006,0000) | 9.0404E-03 (2003,023,0000) | 8.3264E-03 (2003,059,0000) | 7.8943E-03 (2003,012,0000) |
| 830 | -25.016 | -168.959 | 1.0922E-02 (2003,006,0000) | 8.6972E-03 (2003,023,0000) | 8.1356E-03 (2003,059,0000) | 7.8480E-03 (2003,012,0000) |
| 831 | -45.307 | -167.015 | 1.1914E-02 (2003,023,0000) | 1.1567E-02 (2003,006,0000) | 8.2453E-03 (2003,012,0000) | 7.5412E-03 (2003,005,0000) |
| 832 | -43.858 | -167.023 | 1.1672E-02 (2003,023,0000) | 1.1582E-02 (2003,006,0000) | 8.2474E-03 (2003,012,0000) | 7.4072E-03 (2003,005,0000) |
| 833 | -42.408 | -167.031 | 1.1764E-02 (2003,006,0000) | 1.1657E-02 (2003,023,0000) | 8.2649E-03 (2003,012,0000) | 8.0636E-03 (2003,059,0000) |
| 834 | -25.010 | -167.107 | 1.1202E-02 (2003,006,0000) | 8.7110E-03 (2003,023,0000) | 7.9548E-03 (2003,012,0000) | 7.9080E-03 (2003,059,0000) |

**********
CALPOST Version 5.6394 Level 070622
**********

8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 329 | -19.357 | -226.410 | 6.0006E-04 | 582 | -32.382 | -196.721 | 7.7338E-04 |
| 330 | -23.734 | -224.545 | 6.2999E-04 | 583 | -30.927 | -196.727 | 7.6019E-04 |
| 331 | -22.274 | -224.549 | 6.1922E-04 | 584 | -29.472 | -196.733 | 7.5006E-04 |
| 332 | -20.813 | -224.553 | 6.1165E-04 | 585 | -28.016 | -196.738 | 7.2092E-04 |
| 333 | -17.892 | -224.561 | 5.9586E-04 | 586 | -26.561 | -196.743 | 7.1526E-04 |
| 334 | -16.432 | -224.564 | 5.9061E-04 | 587 | -46.925 | -194.794 | 8.9478E-04 |
| 335 | -23.729 | -222.692 | 6.3328E-04 | 588 | -45.470 | -194.803 | 8.8466E-04 |
| 336 | -22.269 | -222.696 | 6.2654E-04 | 589 | -44.015 | -194.811 | 8.7297E-04 |
| 337 | -20.808 | -222.701 | 6.1707E-04 | 590 | -42.560 | -194.819 | 8.5117E-04 |
| 338 | -19.348 | -222.704 | 6.0944E-04 | 591 | -41.105 | -194.827 | 8.4748E-04 |
| 339 | -17.888 | -222.708 | 6.0194E-04 | 592 | -39.650 | -194.835 | 8.4134E-04 |
| 340 | -16.428 | -222.711 | 5.9557E-04 | 593 | -38.195 | -194.842 | 8.1389E-04 |
| 341 | -14.967 | -222.714 | 5.8594E-04 | 594 | -36.740 | -194.849 | 7.8490E-04 |
| 342 | -25.183 | -220.835 | 6.4792E-04 | 595 | -35.285 | -194.856 | 7.8695E-04 |
| 343 | -23.723 | -220.839 | 6.4076E-04 | 596 | -33.830 | -194.862 | 7.8494E-04 |
| 344 | -22.263 | -220.844 | 6.3082E-04 | 597 | -32.375 | -194.868 | 7.8161E-04 |
| 345 | -20.803 | -220.848 | 6.2380E-04 | 598 | -30.920 | -194.874 | 7.7173E-04 |
| 346 | -19.344 | -220.851 | 6.1747E-04 | 599 | -29.465 | -194.880 | 7.3524E-04 |
| 347 | -17.884 | -220.855 | 6.1120E-04 | 600 | -28.009 | -194.885 | 7.2765E-04 |
| 348 | -16.424 | -220.858 | 5.9853E-04 | 601 | -26.554 | -194.890 | 7.4039E-04 |
| 349 | -14.964 | -220.861 | 5.9097E-04 | 602 | -45.459 | -192.950 | 8.9171E-04 |
| 350 | -25.177 | -218.982 | 6.5391E-04 | 603 | -44.004 | -192.959 | 8.7139E-04 |
| 351 | -23.718 | -218.986 | 6.4627E-04 | 604 | -42.550 | -192.967 | 8.5523E-04 |
| 352 | -22.258 | -218.991 | 6.3548E-04 | 605 | -41.095 | -192.975 | 8.4222E-04 |
| 353 | -20.799 | -218.995 | 6.2942E-04 | 606 | -39.640 | -192.982 | 8.4338E-04 |
| 354 | -19.339 | -218.998 | 6.2226E-04 | 607 | -38.186 | -192.989 | 8.0389E-04 |
| 355 | -17.879 | -219.002 | 6.1087E-04 | 608 | -36.731 | -192.996 | 7.9149E-04 |
| 356 | -16.420 | -219.005 | 6.0646E-04 | 609 | -35.276 | -193.003 | 7.8159E-04 |
| 357 | -26.630 | -217.124 | 6.6825E-04 | 610 | -33.822 | -193.010 | 7.9506E-04 |
| 358 | -25.171 | -217.129 | 6.5825E-04 | 611 | -32.367 | -193.016 | 7.9222E-04 |
| 359 | -23.712 | -217.133 | 6.4857E-04 | 612 | -30.912 | -193.022 | 7.8214E-04 |
| 360 | -22.253 | -217.138 | 6.4320E-04 | 613 | -29.457 | -193.027 | 7.6593E-04 |
| 361 | -20.794 | -217.142 | 6.3607E-04 | 614 | -28.003 | -193.033 | 7.5683E-04 |
| 362 | -19.334 | -217.145 | 6.2640E-04 | 615 | -26.548 | -193.038 | 7.2749E-04 |
| 363 | -17.875 | -217.149 | 6.1747E-04 | 616 | -25.093 | -193.043 | 7.3734E-04 |
| 364 | -16.416 | -217.152 | 6.0894E-04 | 617 | -41.085 | -191.122 | 8.6673E-04 |
| 365 | -47.048 | -215.175 | 8.0054E-04 | 618 | -39.631 | -191.129 | 8.3116E-04 |
| 366 | -45.589 | -215.183 | 8.0570E-04 | 619 | -38.176 | -191.137 | 8.2909E-04 |
| 367 | -44.130 | -215.192 | 7.9718E-04 | 620 | -36.722 | -191.144 | 8.2086E-04 |
| 368 | -42.671 | -215.200 | 7.8606E-04 | 621 | -35.268 | -191.150 | 8.2160E-04 |
| 369 | -41.212 | -215.208 | 7.7513E-04 | 622 | -33.813 | -191.157 | 8.1184E-04 |
| 370 | -39.754 | -215.215 | 7.6368E-04 | 623 | -32.359 | -191.163 | 8.0417E-04 |
| 371 | -38.295 | -215.223 | 7.5195E-04 | 624 | -30.905 | -191.169 | 7.9266E-04 |
| 372 | -36.836 | -215.230 | 7.4274E-04 | 625 | -29.450 | -191.175 | 7.7516E-04 |
| 373 | -35.377 | -215.236 | 7.3190E-04 | 626 | -27.996 | -191.180 | 7.6533E-04 |
| 374 | -33.918 | -215.243 | 7.2195E-04 | 627 | -26.542 | -191.185 | 7.5105E-04 |
| 375 | -32.459 | -215.249 | 7.1084E-04 | 628 | -25.087 | -191.190 | 7.4626E-04 |
| 376 | -31.001 | -215.255 | 7.0094E-04 | 629 | -39.621 | -189.277 | 8.3070E-04 |
| 377 | -29.542 | -215.261 | 6.9199E-04 | 630 | -38.167 | -189.284 | 8.4997E-04 |
| 378 | -28.083 | -215.266 | 6.8583E-04 | 631 | -36.713 | -189.291 | 8.3867E-04 |
| 379 | -26.624 | -215.271 | 6.7364E-04 | 632 | -35.259 | -189.298 | 8.1691E-04 |
| 380 | -25.165 | -215.276 | 6.6318E-04 | 633 | -33.805 | -189.304 | 8.2492E-04 |
| 381 | -23.706 | -215.280 | 6.5423E-04 | 634 | -32.351 | -189.310 | 8.1753E-04 |
| 382 | -22.247 | -215.285 | 6.4910E-04 | 635 | -30.897 | -189.316 | 7.9755E-04 |
| 383 | -20.789 | -215.289 | 6.3741E-04 | 636 | -29.443 | -189.322 | 7.8577E-04 |
| 384 | -19.330 | -215.293 | 6.3217E-04 | 637 | -27.989 | -189.327 | 7.6142E-04 |
| 385 | -17.871 | -215.296 | 6.2420E-04 | 638 | -26.535 | -189.332 | 7.5889E-04 |
| 386 | -16.412 | -215.299 | 6.1355E-04 | 639 | -25.081 | -189.337 | 7.3188E-04 |
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| 392 | -44.120 | -213.339 | 8.0024E-04 |
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| 394 | -41.203 | -213.355 | 7.7782E-04 |
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| | | | | | | | |
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| 506 | -41.154 | -204.091 | 8.1298E-04 | 759 | -22.137 | -176.378 | 7.8815E-04 |
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| 559 | -44.036 | -198.517 | 8.5373E-04 | 812 | -29.373 | -170.796 | 8.8011E-04 |
| 560 | -42.580 | -198.525 | 8.4236E-04 | 813 | -27.923 | -170.802 | 8.7356E-04 |
| 561 | -41.124 | -198.533 | 8.3160E-04 | 814 | -26.472 | -170.807 | 8.5120E-04 |
| 562 | -39.669 | -198.540 | 8.2017E-04 | 815 | -25.022 | -170.812 | 8.3065E-04 |
| 563 | -38.213 | -198.547 | 8.0667E-04 | 816 | -59.820 | -168.769 | 1.1884E-03 |
| 564 | -36.757 | -198.554 | 7.7686E-04 | 817 | -43.868 | -168.875 | 9.6108E-04 |
| 565 | -35.301 | -198.561 | 7.6983E-04 | 818 | -42.418 | -168.884 | 9.6029E-04 |
| 566 | -33.846 | -198.568 | 7.7202E-04 | 819 | -40.968 | -168.891 | 9.5201E-04 |
| 567 | -32.390 | -198.574 | 7.6717E-04 | 820 | -39.518 | -168.899 | 9.3971E-04 |
| 568 | -30.934 | -198.580 | 7.2788E-04 | 821 | -38.067 | -168.906 | 9.2749E-04 |
| 569 | -29.479 | -198.585 | 7.2297E-04 | 822 | -36.617 | -168.913 | 9.3039E-04 |
| 570 | -28.023 | -198.591 | 7.2546E-04 | 823 | -35.167 | -168.920 | 9.1606E-04 |
| 571 | -26.567 | -198.596 | 7.2722E-04 | 824 | -33.717 | -168.926 | 9.1996E-04 |
| 572 | -46.936 | -196.647 | 8.9276E-04 | 825 | -32.267 | -168.932 | 9.0160E-04 |
| 573 | -45.481 | -196.656 | 8.8611E-04 | 826 | -30.816 | -168.938 | 8.9849E-04 |
| 574 | -44.025 | -196.664 | 8.6185E-04 | 827 | -29.366 | -168.944 | 8.8856E-04 |
| 575 | -42.570 | -196.672 | 8.4291E-04 | 828 | -27.916 | -168.949 | 8.8168E-04 |
| 576 | -41.115 | -196.680 | 8.3784E-04 | 829 | -26.466 | -168.954 | 8.7286E-04 |
| 577 | -39.659 | -196.687 | 8.2180E-04 | 830 | -25.016 | -168.959 | 8.4827E-04 |
| 578 | -38.204 | -196.695 | 8.1499E-04 | 831 | -45.307 | -167.015 | 9.8243E-04 |
| 579 | -36.748 | -196.702 | 8.0051E-04 | 832 | -43.858 | -167.023 | 9.7441E-04 |
| 580 | -35.293 | -196.708 | 7.6618E-04 | 833 | -42.408 | -167.031 | 1.0047E-03 |
| 581 | -33.838 | -196.715 | 7.5709E-04 | 834 | -25.010 | -167.107 | 8.5136E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|---|
| 799 | -61.285 | -170.610 | DISCRETE | 1.5695E-02 (2003,023,0000) | RANK | 1 | 24 | HOUR |
| 781 | -61.299 | -172.462 | DISCRETE | 1.1901E-02 (2003,302,0000) | RANK | 2 | 24 | HOUR |
| 816 | -59.820 | -168.769 | DISCRETE | 1.1391E-02 (2003,006,0000) | RANK | 3 | 24 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 9.6881E-03 (2003,005,0000) | RANK | 4 | 24 | HOUR |
| 761 | -62.765 | -174.303 | DISCRETE | 1.1964E-03 | RANK | 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Capitol Reef

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  834*0, 363*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
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*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                       Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                        Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                  Multiplicative scaling factor: 0.0000E+00
                        Additive scaling factor: 0.0000E+00
                 Hourly background values used?: F


  Source information
                 Source contribution processing: 0
                  0= No source contributions
                  1= Contributions are summed
                  2= TRACEBACK mode for 1 receptor
                  3= Reported TOTAL is processed


  Receptor information
                   Gridded receptors processed?: F
                  Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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| 842 | -127.975 | -256.894 | 2.0488E-02 (2003,013,0000) | 1.2972E-02 (2003,060,0000) | 1.2931E-02 (2003,343,0000) | 1.2349E-02 (2003,338,0000) |
| 843 | -126.508 | -256.918 | 2.0394E-02 (2003,013,0000) | 1.2584E-02 (2003,126,0000) | 1.2427E-02 (2003,343,0000) | 1.2379E-02 (2003,338,0000) |
| 844 | -125.041 | -256.941 | 2.0214E-02 (2003,013,0000) | 1.2739E-02 (2003,126,0000) | 1.2380E-02 (2003,338,0000) | 1.1230E-02 (2003,343,0000) |
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| 848 | -129.380 | -253.164 | 1.9924E-02 (2003,013,0000) | 1.4082E-02 (2003,060,0000) | 1.3200E-02 (2003,343,0000) | 1.2687E-02 (2003,338,0000) |
| 849 | -127.914 | -253.188 | 1.9858E-02 (2003,013,0000) | 1.3599E-02 (2003,060,0000) | 1.2940E-02 (2003,126,0000) | 1.2769E-02 (2003,343,0000) |
| 850 | -126.448 | -253.212 | 1.9741E-02 (2003,013,0000) | 1.3023E-02 (2003,126,0000) | 1.2732E-02 (2003,338,0000) | 1.2569E-02 (2003,060,0000) |
| 851 | -130.815 | -251.286 | 1.9570E-02 (2003,013,0000) | 1.4946E-02 (2003,060,0000) | 1.3385E-02 (2003,156,0000) | 1.3384E-02 (2003,343,0000) |
| 852 | -129.349 | -251.311 | 1.9543E-02 (2003,013,0000) | 1.3731E-02 (2003,060,0000) | 1.2850E-02 (2003,126,0000) | 1.2812E-02 (2003,338,0000) |
| 853 | -127.884 | -251.335 | 1.9469E-02 (2003,013,0000) | 1.3774E-02 (2003,060,0000) | 1.3103E-02 (2003,126,0000) | 1.2855E-02 (2003,338,0000) |
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| 856 | -132.249 | -249.409 | 1.9126E-02 (2003,013,0000) | 1.6098E-02 (2003,060,0000) | 1.4052E-02 (2003,156,0000) | 1.3557E-02 (2003,343,0000) |
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| 870 | -136.548 | -243.775 | 1.8444E-02 (2003,060,0000) | 1.7229E-02 (2003,013,0000) | 1.6213E-02 (2003,156,0000) | 1.3999E-02 (2003,343,0000) |
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| 873 | -132.155 | -243.850 | 1.7534E-02 (2003,013,0000) | 1.6720E-02 (2003,060,0000) | 1.3363E-02 (2003,327,0000) | 1.3097E-02 (2003,156,0000) |
| 874 | -130.691 | -243.874 | 1.7535E-02 (2003,013,0000) | 1.6945E-02 (2003,060,0000) | 1.3345E-02 (2003,327,0000) | 1.3241E-02 (2003,126,0000) |
| 875 | -129.227 | -243.899 | 1.7472E-02 (2003,013,0000) | 1.5943E-02 (2003,060,0000) | 1.3004E-02 (2003,126,0000) | 1.2976E-02 (2003,338,0000) |
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| 878 | -135.052 | -241.947 | 1.7886E-02 (2003,060,0000) | 1.6768E-02 (2003,013,0000) | 1.5142E-02 (2003,156,0000) | 1.4226E-02 (2003,327,0000) |
| 879 | -133.588 | -241.972 | 1.8225E-02 (2003,060,0000) | 1.6865E-02 (2003,013,0000) | 1.4773E-02 (2003,156,0000) | 1.4494E-02 (2003,327,0000) |
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| 881 | -130.660 | -242.022 | 1.7270E-02 (2003,060,0000) | 1.6887E-02 (2003,013,0000) | 1.3074E-02 (2003,126,0000) | 1.3063E-02 (2003,327,0000) |
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| 885 | -135.020 | -240.094 | 1.8079E-02 (2003,060,0000) | 1.6102E-02 (2003,013,0000) | 1.4453E-02 (2003,327,0000) | 1.4228E-02 (2003,156,0000) |
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| 887 | -132.093 | -240.144 | 1.8226E-02 (2003,060,0000) | 1.6222E-02 (2003,013,0000) | 1.3980E-02 (2003,327,0000) | 1.3022E-02 (2003,126,0000) |
| 888 | -130.629 | -240.169 | 1.7270E-02 (2003,060,0000) | 1.6195E-02 (2003,013,0000) | 1.2998E-02 (2003,338,0000) | 1.2705E-02 (2003,126,0000) |
| 889 | -129.166 | -240.193 | 1.7697E-02 (2003,060,0000) | 1.6131E-02 (2003,013,0000) | 1.3057E-02 (2003,338,0000) | 1.2694E-02 (2003,126,0000) |
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| 891 | -136.451 | -238.216 | 1.8878E-02 (2003,060,0000) | 1.5273E-02 (2003,013,0000) | 1.5236E-02 (2003,156,0000) | 1.5126E-02 (2003,327,0000) |
| 892 | -134.988 | -238.241 | 1.8710E-02 (2003,060,0000) | 1.5399E-02 (2003,013,0000) | 1.4877E-02 (2003,327,0000) | 1.3835E-02 (2003,156,0000) |
| 893 | -133.525 | -238.266 | 1.8718E-02 (2003,060,0000) | 1.5474E-02 (2003,013,0000) | 1.4471E-02 (2003,327,0000) | 1.2999E-02 (2003,338,0000) |
| 894 | -132.062 | -238.291 | 1.7653E-02 (2003,060,0000) | 1.5489E-02 (2003,013,0000) | 1.3000E-02 (2003,338,0000) | 1.2556E-02 (2003,327,0000) |
| 895 | -130.599 | -238.316 | 1.7877E-02 (2003,060,0000) | 1.5467E-02 (2003,013,0000) | 1.3056E-02 (2003,338,0000) | 1.2415E-02 (2003,126,0000) |
| 896 | -137.882 | -236.337 | 2.0174E-02 (2003,060,0000) | 1.6650E-02 (2003,156,0000) | 1.5644E-02 (2003,327,0000) | 1.4393E-02 (2003,013,0000) |
| 897 | -136.419 | -236.363 | 1.9629E-02 (2003,060,0000) | 1.5713E-02 (2003,327,0000) | 1.5540E-02 (2003,156,0000) | 1.4554E-02 (2003,013,0000) |
| 898 | -134.956 | -236.388 | 1.9316E-02 (2003,060,0000) | 1.5147E-02 (2003,327,0000) | 1.4668E-02 (2003,013,0000) | 1.3762E-02 (2003,156,0000) |
| 899 | -133.493 | -236.413 | 1.8013E-02 (2003,060,0000) | 1.4723E-02 (2003,013,0000) | 1.3036E-02 (2003,338,0000) | 1.3019E-02 (2003,327,0000) |
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| 908 | -139.245 | -230.753 | 2.1706E-02 (2003,060,0000) | 1.6984E-02 (2003,327,0000) | 1.6826E-02 (2003,156,0000) | 1.5009E-02 (2003,121,0000) |
| 909 | -137.784 | -230.779 | 2.1442E-02 (2003,060,0000) | 1.6778E-02 (2003,327,0000) | 1.6191E-02 (2003,156,0000) | 1.4543E-02 (2003,121,0000) |
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| 911 | -134.860 | -230.830 | 1.9967E-02 (2003,060,0000) | 1.3584E-02 (2003,327,0000) | 1.3573E-02 (2003,338,0000) | 1.2393E-02 (2003,013,0000) |
| 912 | -139.212 | -228.900 | 2.2156E-02 (2003,060,0000) | 1.7167E-02 (2003,327,0000) | 1.6532E-02 (2003,156,0000) | 1.4879E-02 (2003,121,0000) |
| 913 | -137.751 | -228.926 | 2.1843E-02 (2003,060,0000) | 1.6638E-02 (2003,327,0000) | 1.5817E-02 (2003,156,0000) | 1.4398E-02 (2003,121,0000) |
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| 940 | -146.311 | -217.651 | 1.8174E-02 (2003,327,0000) | 1.7293E-02 (2003,060,0000) | 1.7084E-02 (2003,156,0000) | 1.6077E-02 (2003,050,0000) |
| 941 | -144.851 | -217.678 | 1.8463E-02 (2003,060,0000) | 1.7347E-02 (2003,327,0000) | 1.6740E-02 (2003,050,0000) | 1.6304E-02 (2003,156,0000) |
| 942 | -143.392 | -217.705 | 2.0117E-02 (2003,060,0000) | 1.7315E-02 (2003,050,0000) | 1.6106E-02 (2003,327,0000) | 1.5485E-02 (2003,025,0000) |
| 943 | -141.933 | -217.732 | 1.9891E-02 (2003,060,0000) | 1.7282E-02 (2003,050,0000) | 1.5621E-02 (2003,012,0000) | 1.4408E-02 (2003,327,0000) |
| 944 | -140.474 | -217.758 | 1.9526E-02 (2003,060,0000) | 1.5713E-02 (2003,012,0000) | 1.5446E-02 (2003,050,0000) | 1.4152E-02 (2003,338,0000) |
| 945 | -139.014 | -217.784 | 2.0900E-02 (2003,060,0000) | 1.5859E-02 (2003,050,0000) | 1.5743E-02 (2003,012,0000) | 1.4646E-02 (2003,338,0000) |
| 946 | -137.555 | -217.810 | 2.1070E-02 (2003,060,0000) | 1.5707E-02 (2003,012,0000) | 1.4906E-02 (2003,338,0000) | 1.4625E-02 (2003,050,0000) |
| 947 | -146.276 | -215.798 | 1.7523E-02 (2003,327,0000) | 1.6914E-02 (2003,050,0000) | 1.6477E-02 (2003,060,0000) | 1.6446E-02 (2003,156,0000) |
| 948 | -144.817 | -215.825 | 1.8405E-02 (2003,060,0000) | 1.7668E-02 (2003,050,0000) | 1.6240E-02 (2003,327,0000) | 1.5748E-02 (2003,012,0000) |
| 949 | -143.358 | -215.852 | 1.7946E-02 (2003,060,0000) | 1.6924E-02 (2003,050,0000) | 1.5958E-02 (2003,012,0000) | 1.4224E-02 (2003,077,0000) |
| 950 | -141.899 | -215.879 | 1.8497E-02 (2003,060,0000) | 1.6098E-02 (2003,050,0000) | 1.6094E-02 (2003,012,0000) | 1.4329E-02 (2003,077,0000) |
| 951 | -146.241 | -213.946 | 1.8117E-02 (2003,050,0000) | 1.7202E-02 (2003,060,0000) | 1.6374E-02 (2003,327,0000) | 1.6120E-02 (2003,025,0000) |
| 952 | -144.783 | -213.973 | 1.8616E-02 (2003,050,0000) | 1.8437E-02 (2003,060,0000) | 1.6218E-02 (2003,012,0000) | 1.5773E-02 (2003,025,0000) |
| 953 | -143.324 | -214.000 | 1.8552E-02 (2003,050,0000) | 1.8537E-02 (2003,060,0000) | 1.6403E-02 (2003,012,0000) | 1.4870E-02 (2003,077,0000) |
| 954 | -146.207 | -212.093 | 1.8463E-02 (2003,050,0000) | 1.6430E-02 (2003,012,0000) | 1.5561E-02 (2003,060,0000) | 1.4981E-02 (2003,077,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 955 | -144.748 | -212.120 | 1.9433E-02 (2003,050,0000) | 1.7547E-02 (2003,060,0000) | 1.6668E-02 (2003,012,0000) | 1.5313E-02 (2003,077,0000) |
| 956 | -143.290 | -212.147 | 1.9296E-02 (2003,050,0000) | 1.8311E-02 (2003,060,0000) | 1.6829E-02 (2003,012,0000) | 1.5590E-02 (2003,077,0000) |
| 957 | -141.832 | -212.174 | 1.9023E-02 (2003,060,0000) | 1.8455E-02 (2003,050,0000) | 1.6917E-02 (2003,012,0000) | 1.5913E-02 (2003,077,0000) |
| 958 | -146.172 | -210.241 | 2.0252E-02 (2003,050,0000) | 1.6862E-02 (2003,012,0000) | 1.6580E-02 (2003,060,0000) | 1.5834E-02 (2003,025,0000) |
| 959 | -144.714 | -210.268 | 2.0504E-02 (2003,050,0000) | 1.7654E-02 (2003,060,0000) | 1.7068E-02 (2003,012,0000) | 1.6152E-02 (2003,077,0000) |
| 960 | -143.256 | -210.295 | 1.9908E-02 (2003,050,0000) | 1.7982E-02 (2003,060,0000) | 1.7206E-02 (2003,012,0000) | 1.6480E-02 (2003,077,0000) |
| 961 | -141.798 | -210.321 | 1.9719E-02 (2003,050,0000) | 1.9220E-02 (2003,060,0000) | 1.7271E-02 (2003,012,0000) | 1.7004E-02 (2003,077,0000) |
| 962 | -146.137 | -208.388 | 2.1221E-02 (2003,050,0000) | 1.7272E-02 (2003,012,0000) | 1.6544E-02 (2003,077,0000) | 1.6082E-02 (2003,060,0000) |
| 963 | -144.680 | -208.415 | 2.1334E-02 (2003,050,0000) | 1.7442E-02 (2003,012,0000) | 1.7422E-02 (2003,060,0000) | 1.7159E-02 (2003,077,0000) |
| 964 | -143.222 | -208.442 | 2.1128E-02 (2003,050,0000) | 1.8361E-02 (2003,060,0000) | 1.7724E-02 (2003,077,0000) | 1.7551E-02 (2003,012,0000) |
| 965 | -141.764 | -208.469 | 1.9886E-02 (2003,050,0000) | 1.8630E-02 (2003,060,0000) | 1.8255E-02 (2003,077,0000) | 1.7583E-02 (2003,012,0000) |
| 966 | -140.307 | -208.495 | 1.8885E-02 (2003,077,0000) | 1.8821E-02 (2003,060,0000) | 1.8035E-02 (2003,050,0000) | 1.7542E-02 (2003,012,0000) |
| 967 | -146.102 | -206.535 | 2.2130E-02 (2003,050,0000) | 1.7629E-02 (2003,012,0000) | 1.7574E-02 (2003,077,0000) | 1.5810E-02 (2003,060,0000) |
| 968 | -144.645 | -206.563 | 2.2028E-02 (2003,050,0000) | 1.8325E-02 (2003,077,0000) | 1.7775E-02 (2003,012,0000) | 1.6886E-02 (2003,060,0000) |
| 969 | -143.188 | -206.590 | 2.1621E-02 (2003,050,0000) | 1.9121E-02 (2003,077,0000) | 1.7928E-02 (2003,060,0000) | 1.7844E-02 (2003,012,0000) |
| 970 | -141.731 | -206.616 | 1.9752E-02 (2003,077,0000) | 1.9713E-02 (2003,050,0000) | 1.7843E-02 (2003,012,0000) | 1.7842E-02 (2003,060,0000) |
| 971 | -146.068 | -204.683 | 2.2563E-02 (2003,050,0000) | 1.8769E-02 (2003,077,0000) | 1.7955E-02 (2003,012,0000) | 1.5171E-02 (2003,060,0000) |
| 972 | -144.611 | -204.710 | 2.2482E-02 (2003,050,0000) | 1.9755E-02 (2003,077,0000) | 1.8067E-02 (2003,012,0000) | 1.6431E-02 (2003,060,0000) |
| 973 | -143.154 | -204.737 | 2.1704E-02 (2003,050,0000) | 2.0690E-02 (2003,077,0000) | 1.8370E-02 (2003,328,0000) | 1.8100E-02 (2003,012,0000) |
| 974 | -141.697 | -204.764 | 2.1602E-02 (2003,077,0000) | 2.0206E-02 (2003,050,0000) | 1.9498E-02 (2003,328,0000) | 1.8054E-02 (2003,012,0000) |
| 975 | -148.946 | -202.775 | 2.4018E-02 (2003,050,0000) | 1.8568E-02 (2003,077,0000) | 1.7880E-02 (2003,012,0000) | 1.4950E-02 (2003,025,0000) |
| 976 | -147.489 | -202.803 | 2.3735E-02 (2003,050,0000) | 1.9401E-02 (2003,077,0000) | 1.8091E-02 (2003,012,0000) | 1.4404E-02 (2003,060,0000) |
| 977 | -146.033 | -202.831 | 2.3457E-02 (2003,050,0000) | 2.0448E-02 (2003,077,0000) | 1.8233E-02 (2003,012,0000) | 1.5665E-02 (2003,328,0000) |
| 978 | -144.576 | -202.858 | 2.2409E-02 (2003,050,0000) | 2.1388E-02 (2003,077,0000) | 1.8300E-02 (2003,012,0000) | 1.8000E-02 (2003,328,0000) |
| 979 | -143.120 | -202.885 | 2.2637E-02 (2003,077,0000) | 2.1848E-02 (2003,050,0000) | 2.0321E-02 (2003,328,0000) | 1.8300E-02 (2003,012,0000) |
| 980 | -141.663 | -202.911 | 2.3383E-02 (2003,077,0000) | 1.9025E-02 (2003,050,0000) | 1.8566E-02 (2003,328,0000) | 1.8226E-02 (2003,012,0000) |
| 981 | -148.910 | -200.923 | 2.4710E-02 (2003,050,0000) | 1.9917E-02 (2003,077,0000) | 1.8194E-02 (2003,012,0000) | 1.4850E-02 (2003,337,0000) |
| 982 | -147.454 | -200.951 | 2.3009E-02 (2003,050,0000) | 2.0822E-02 (2003,077,0000) | 1.8371E-02 (2003,012,0000) | 1.4568E-02 (2003,328,0000) |
| 983 | -145.998 | -200.978 | 2.3869E-02 (2003,050,0000) | 2.2339E-02 (2003,077,0000) | 1.8469E-02 (2003,012,0000) | 1.8166E-02 (2003,328,0000) |
| 984 | -144.542 | -201.005 | 2.3142E-02 (2003,077,0000) | 2.1502E-02 (2003,050,0000) | 1.8959E-02 (2003,328,0000) | 1.8492E-02 (2003,012,0000) |
| 985 | -143.086 | -201.032 | 2.4259E-02 (2003,077,0000) | 2.0181E-02 (2003,050,0000) | 1.9463E-02 (2003,328,0000) | 1.8443E-02 (2003,012,0000) |
| 986 | -141.630 | -201.059 | 2.5008E-02 (2003,077,0000) | 1.8326E-02 (2003,012,0000) | 1.7481E-02 (2003,050,0000) | 1.5548E-02 (2003,328,0000) |
| 987 | -148.875 | -199.071 | 2.2951E-02 (2003,050,0000) | 2.1259E-02 (2003,077,0000) | 1.8462E-02 (2003,012,0000) | 1.4112E-02 (2003,337,0000) |
| 988 | -147.419 | -199.098 | 2.5008E-02 (2003,050,0000) | 2.3098E-02 (2003,077,0000) | 1.8588E-02 (2003,012,0000) | 1.8042E-02 (2003,328,0000) |
| 989 | -145.963 | -199.126 | 2.3765E-02 (2003,077,0000) | 2.1901E-02 (2003,050,0000) | 1.8645E-02 (2003,012,0000) | 1.8122E-02 (2003,328,0000) |
| 990 | -144.508 | -199.153 | 2.5273E-02 (2003,077,0000) | 2.2330E-02 (2003,050,0000) | 2.1478E-02 (2003,328,0000) | 1.8633E-02 (2003,012,0000) |
| 991 | -151.751 | -197.162 | 2.7267E-02 (2003,050,0000) | 2.1242E-02 (2003,077,0000) | 1.8309E-02 (2003,012,0000) | 1.6118E-02 (2003,025,0000) |
| 992 | -150.295 | -197.190 | 2.6126E-02 (2003,050,0000) | 2.2024E-02 (2003,077,0000) | 1.8531E-02 (2003,012,0000) | 1.4891E-02 (2003,337,0000) |
| 993 | -148.840 | -197.218 | 2.3070E-02 (2003,050,0000) | 2.2961E-02 (2003,077,0000) | 1.8676E-02 (2003,012,0000) | 1.5296E-02 (2003,328,0000) |
| 994 | -147.384 | -197.246 | 2.4162E-02 (2003,077,0000) | 2.1815E-02 (2003,050,0000) | 1.8758E-02 (2003,012,0000) | 1.6543E-02 (2003,328,0000) |
| 995 | -145.929 | -197.273 | 2.5581E-02 (2003,077,0000) | 2.1935E-02 (2003,050,0000) | 1.9803E-02 (2003,328,0000) | 1.8769E-02 (2003,012,0000) |
| 996 | -144.473 | -197.300 | 2.5869E-02 (2003,077,0000) | 1.8699E-02 (2003,012,0000) | 1.7770E-02 (2003,050,0000) | 1.5920E-02 (2003,362,0000) |
| 997 | -151.714 | -195.310 | 2.7739E-02 (2003,050,0000) | 2.2654E-02 (2003,077,0000) | 1.8563E-02 (2003,012,0000) | 1.5066E-02 (2003,337,0000) |
| 998 | -150.259 | -195.338 | 2.4723E-02 (2003,050,0000) | 2.3487E-02 (2003,077,0000) | 1.8726E-02 (2003,012,0000) | 1.6238E-02 (2003,328,0000) |
| 999 | -148.804 | -195.366 | 2.6171E-02 (2003,050,0000) | 2.5785E-02 (2003,077,0000) | 2.0568E-02 (2003,328,0000) | 1.8845E-02 (2003,012,0000) |
| 1000 | -147.349 | -195.393 | 2.6886E-02 (2003,077,0000) | 2.4755E-02 (2003,050,0000) | 2.2255E-02 (2003,328,0000) | 1.8880E-02 (2003,012,0000) |
| 1001 | -145.894 | -195.421 | 2.7040E-02 (2003,077,0000) | 2.1735E-02 (2003,050,0000) | 2.1041E-02 (2003,328,0000) | 1.8840E-02 (2003,362,0000) |
| 1002 | -144.439 | -195.448 | 2.7083E-02 (2003,077,0000) | 1.8944E-02 (2003,362,0000) | 1.8733E-02 (2003,012,0000) | 1.8315E-02 (2003,050,0000) |
| 1003 | -153.133 | -193.429 | 2.9002E-02 (2003,050,0000) | 2.3125E-02 (2003,077,0000) | 1.8574E-02 (2003,012,0000) | 1.5074E-02 (2003,337,0000) |
| 1004 | -151.678 | -193.457 | 2.4567E-02 (2003,050,0000) | 2.3573E-02 (2003,077,0000) | 1.8756E-02 (2003,012,0000) | 1.4950E-02 (2003,328,0000) |
| 1005 | -150.224 | -193.485 | 2.5739E-02 (2003,050,0000) | 2.5269E-02 (2003,077,0000) | 1.9932E-02 (2003,328,0000) | 1.8885E-02 (2003,012,0000) |
| 1006 | -148.769 | -193.513 | 2.7248E-02 (2003,077,0000) | 2.5814E-02 (2003,050,0000) | 2.2470E-02 (2003,328,0000) | 1.9244E-02 (2003,362,0000) |
| 1007 | -147.314 | -193.541 | 2.7110E-02 (2003,077,0000) | 2.2601E-02 (2003,050,0000) | 2.1224E-02 (2003,328,0000) | 1.9899E-02 (2003,362,0000) |
| 1008 | -145.859 | -193.568 | 2.7303E-02 (2003,077,0000) | 2.0885E-02 (2003,362,0000) | 2.0060E-02 (2003,050,0000) | 1.8841E-02 (2003,012,0000) |
| 1009 | -144.404 | -193.596 | 2.6740E-02 (2003,077,0000) | 2.0552E-02 (2003,362,0000) | 1.8687E-02 (2003,012,0000) | 1.6583E-02 (2003,050,0000) |
| 1010 | -156.005 | -191.519 | 3.1118E-02 (2003,050,0000) | 2.2769E-02 (2003,077,0000) | 1.8298E-02 (2003,012,0000) | 1.5893E-02 (2003,025,0000) |
| 1011 | -154.551 | -191.548 | 3.0550E-02 (2003,050,0000) | 2.3943E-02 (2003,077,0000) | 1.8560E-02 (2003,012,0000) | 1.5852E-02 (2003,362,0000) |
| 1012 | -153.097 | -191.576 | 2.7391E-02 (2003,050,0000) | 2.4112E-02 (2003,077,0000) | 1.8738E-02 (2003,012,0000) | 1.7308E-02 (2003,328,0000) |
| 1013 | -151.642 | -191.605 | 2.5077E-02 (2003,050,0000) | 2.4986E-02 (2003,077,0000) | 1.8882E-02 (2003,012,0000) | 1.7958E-02 (2003,328,0000) |
| 1014 | -150.188 | -191.633 | 2.5824E-02 (2003,077,0000) | 2.3383E-02 (2003,050,0000) | 1.8955E-02 (2003,012,0000) | 1.8646E-02 (2003,362,0000) |
| 1015 | -148.733 | -191.661 | 2.7141E-02 (2003,077,0000) | 2.4105E-02 (2003,050,0000) | 2.2492E-02 (2003,328,0000) | 2.1567E-02 (2003,362,0000) |
| 1016 | -147.279 | -191.689 | 2.7191E-02 (2003,077,0000) | 2.2904E-02 (2003,362,0000) | 2.1728E-02 (2003,050,0000) | 2.0724E-02 (2003,328,0000) |
| 1017 | -145.824 | -191.716 | 2.6734E-02 (2003,077,0000) | 2.3666E-02 (2003,362,0000) | 1.9070E-02 (2003,050,0000) | 1.8790E-02 (2003,012,0000) |
| 1018 | -144.370 | -191.743 | 2.5630E-02 (2003,077,0000) | 2.2946E-02 (2003,362,0000) | 1.8603E-02 (2003,012,0000) | 1.5780E-02 (2003,050,0000) |
| 1019 | -155.968 | -189.666 | 3.1925E-02 (2003,050,0000) | 2.4230E-02 (2003,077,0000) | 1.8518E-02 (2003,012,0000) | 1.6906E-02 (2003,362,0000) |
| 1020 | -154.514 | -189.695 | 2.8389E-02 (2003,050,0000) | 2.4195E-02 (2003,077,0000) | 1.8713E-02 (2003,012,0000) | 1.7577E-02 (2003,328,0000) |
| 1021 | -153.060 | -189.724 | 2.4298E-02 (2003,077,0000) | 2.3799E-02 (2003,050,0000) | 1.8855E-02 (2003,012,0000) | 1.7252E-02 (2003,362,0000) |
| 1022 | -151.606 | -189.753 | 2.5965E-02 (2003,077,0000) | 2.5648E-02 (2003,050,0000) | 2.1169E-02 (2003,328,0000) | 2.0616E-02 (2003,362,0000) |
| 1023 | -150.152 | -189.781 | 2.5506E-02 (2003,077,0000) | 2.1425E-02 (2003,050,0000) | 2.0796E-02 (2003,362,0000) | 1.8967E-02 (2003,012,0000) |
| 1024 | -148.698 | -189.809 | 2.6020E-02 (2003,077,0000) | 2.3598E-02 (2003,362,0000) | 2.1223E-02 (2003,050,0000) | 1.8935E-02 (2003,012,0000) |
| 1025 | -147.244 | -189.836 | 2.4579E-02 (2003,077,0000) | 2.2474E-02 (2003,362,0000) | 1.8817E-02 (2003,012,0000) | 1.6776E-02 (2003,050,0000) |
| 1026 | -145.790 | -189.864 | 2.4023E-02 (2003,077,0000) | 2.3600E-02 (2003,362,0000) | 1.8662E-02 (2003,012,0000) | 1.5513E-02 (2003,050,0000) |
| 1027 | -144.336 | -189.891 | 2.4862E-02 (2003,362,0000) | 2.3449E-02 (2003,077,0000) | 1.8450E-02 (2003,012,0000) | 1.4765E-02 (2003,050,0000) |
| 1028 | -157.385 | -187.785 | 3.3079E-02 (2003,050,0000) | 2.3937E-02 (2003,077,0000) | 1.8446E-02 (2003,012,0000) | 1.7722E-02 (2003,362,0000) |
| 1029 | -155.931 | -187.814 | 3.0152E-02 (2003,050,0000) | 2.4367E-02 (2003,077,0000) | 1.8800E-02 (2003,328,0000) | 1.8696E-02 (2003,362,0000) |
| 1030 | -154.477 | -187.843 | 2.4822E-02 (2003,050,0000) | 2.4012E-02 (2003,077,0000) | 1.8781E-02 (2003,012,0000) | 1.8404E-02 (2003,362,0000) |
| 1031 | -153.024 | -187.872 | 2.7952E-02 (2003,050,0000) | 2.6048E-02 (2003,077,0000) | 2.3194E-02 (2003,328,0000) | 2.2772E-02 (2003,362,0000) |
| 1032 | -151.570 | -187.900 | 2.5706E-02 (2003,077,0000) | 2.4929E-02 (2003,050,0000) | 2.4203E-02 (2003,362,0000) | 2.1811E-02 (2003,328,0000) |
| 1033 | -150.116 | -187.928 | 2.6227E-02 (2003,362,0000) | 2.5400E-02 (2003,077,0000) | 2.3038E-02 (2003,050,0000) | 2.0777E-02 (2003,328,0000) |
| 1034 | -148.663 | -187.956 | 2.6945E-02 (2003,362,0000) | 2.4270E-02 (2003,077,0000) | 2.0030E-02 (2003,050,0000) | 1.8840E-02 (2003,012,0000) |
| 1035 | -147.209 | -187.984 | 2.9316E-02 (2003,362,0000) | 2.3819E-02 (2003,077,0000) | 1.9457E-02 (2003,050,0000) | 1.8709E-02 (2003,012,0000) |
| 1036 | -145.755 | -188.011 | 2.7584E-02 (2003,362,0000) | 2.1937E-02 (2003,077,0000) | 1.8500E-02 (2003,012,0000) | 1.5920E-02 (2003,050,0000) |
| 1037 | -144.301 | -188.039 | 2.5191E-02 (2003,362,0000) | 2.0261E-02 (2003,077,0000) | 1.8229E-02 (2003,012,0000) | 1.3144E-02 (2003,050,0000) |
| 1038 | -142.848 | -188.065 | 2.5846E-02 (2003,362,0000) | 1.9505E-02 (2003,077,0000) | 1.7935E-02 (2003,012,0000) | 1.3579E-02 (2003,347,0000) |
| 1039 | -141.394 | -188.092 | 2.3921E-02 (2003,362,0000) | 1.8357E-02 (2003,077,0000) | 1.7574E-02 (2003,012,0000) | 1.4029E-02 (2003,347,0000) |
| 1040 | -161.707 | -185.843 | 3.6278E-02 (2003,050,0000) | 2.1909E-02 (2003,077,0000) | 1.7823E-02 (2003,012,0000) | 1.6829E-02 (2003,350,0000) |
| 1041 | -160.254 | -185.873 | 3.5849E-02 (2003,050,0000) | 2.3065E-02 (2003,077,0000) | 1.8118E-02 (2003,012,0000) | 1.7263E-02 (2003,362,0000) |
| 1042 | -158.801 | -185.903 | 3.4343E-02 (2003,050,0000) | 2.3810E-02 (2003,077,0000) | 1.8758E-02 (2003,362,0000) | 1.8350E-02 (2003,012,0000) |
| 1043 | -157.347 | -185.932 | 3.1238E-02 (2003,050,0000) | 2.4186E-02 (2003,077,0000) | 1.9833E-02 (2003,362,0000) | 1.9351E-02 (2003,328,0000) |
| 1044 | -155.894 | -185.962 | 3.1606E-02 (2003,050,0000) | 2.5900E-02 (2003,077,0000) | 2.3061E-02 (2003,328,0000) | 2.2699E-02 (2003,362,0000) |
| 1045 | -154.441 | -185.991 | 2.9671E-02 (2003,050,0000) | 2.6343E-02 (2003,077,0000) | 2.4977E-02 (2003,362,0000) | 2.4215E-02 (2003,328,0000) |
| 1046 | -152.987 | -186.019 | 2.6090E-02 (2003,362,0000) | 2.5692E-02 (2003,050,0000) | 2.4760E-02 (2003,077,0000) | 2.1975E-02 (2003,328,0000) |
| 1047 | -151.534 | -186.048 | 2.5735E-02 (2003,362,0000) | 2.2949E-02 (2003,077,0000) | 2.0869E-02 (2003,050,0000) | 1.8857E-02 (2003,012,0000) |
| 1048 | -150.080 | -186.076 | 3.0583E-02 (2003,362,0000) | 2.3380E-02 (2003,077,0000) | 2.2339E-02 (2003,050,0000) | 1.9761E-02 (2003,328,0000) |
| 1049 | -148.627 | -186.104 | 3.1849E-02 (2003,362,0000) | 2.2296E-02 (2003,077,0000) | 2.0691E-02 (2003,050,0000) | 1.8690E-02 (2003,012,0000) |
| 1050 | -147.174 | -186.132 | 3.0700E-02 (2003,362,0000) | 2.0272E-02 (2003,077,0000) | 1.8502E-02 (2003,012,0000) | 1.7314E-02 (2003,050,0000) |
| 1051 | -145.720 | -186.159 | 2.7506E-02 (2003,362,0000) | 1.8270E-02 (2003,077,0000) | 1.8259E-02 (2003,012,0000) | 1.3938E-02 (2003,050,0000) |
| 1052 | -144.267 | -186.186 | 2.5424E-02 (2003,362,0000) | 1.7967E-02 (2003,012,0000) | 1.6913E-02 (2003,077,0000) | 1.3330E-02 (2003,347,0000) |
| 1053 | -142.813 | -186.213 | 2.4588E-02 (2003,362,0000) | 1.7635E-02 (2003,012,0000) | 1.5985E-02 (2003,077,0000) | 1.3962E-02 (2003,347,0000) |
| 1054 | -141.360 | -186.240 | 2.2536E-02 (2003,362,0000) | 1.7259E-02 (2003,012,0000) | 1.5051E-02 (2003,077,0000) | 1.4447E-02 (2003,347,0000) |
| 1055 | -161.669 | -183.991 | 3.7522E-02 (2003,050,0000) | 2.3577E-02 (2003,077,0000) | 1.8671E-02 (2003,362,0000) | 1.8024E-02 (2003,012,0000) |
| 1056 | -160.216 | -184.021 | 3.6510E-02 (2003,050,0000) | 2.4494E-02 (2003,077,0000) | 2.0437E-02 (2003,362,0000) | 1.8844E-02 (2003,343,0000) |
| 1057 | -158.763 | -184.051 | 3.5225E-02 (2003,050,0000) | 2.6689E-02 (2003,077,0000) | 2.2671E-02 (2003,362,0000) | 2.1694E-02 (2003,328,0000) |
| 1058 | -157.310 | -184.080 | 3.3148E-02 (2003,050,0000) | 2.6999E-02 (2003,077,0000) | 2.4884E-02 (2003,362,0000) | 2.3995E-02 (2003,328,0000) |
| 1059 | -155.857 | -184.109 | 3.0847E-02 (2003,050,0000) | 2.7270E-02 (2003,362,0000) | 2.6524E-02 (2003,077,0000) | 2.4798E-02 (2003,328,0000) |
| 1060 | -154.404 | -184.138 | 2.9187E-02 (2003,362,0000) | 2.7901E-02 (2003,050,0000) | 2.4296E-02 (2003,077,0000) | 2.3709E-02 (2003,328,0000) |
| 1061 | -152.951 | -184.167 | 3.1901E-02 (2003,362,0000) | 2.5924E-02 (2003,050,0000) | 2.4247E-02 (2003,077,0000) | 2.2531E-02 (2003,328,0000) |
| 1062 | -151.498 | -184.196 | 3.3418E-02 (2003,362,0000) | 2.3478E-02 (2003,050,0000) | 2.2378E-02 (2003,077,0000) | 2.0380E-02 (2003,328,0000) |
| 1063 | -150.045 | -184.224 | 3.3486E-02 (2003,362,0000) | 2.0344E-02 (2003,050,0000) | 1.9898E-02 (2003,077,0000) | 1.8627E-02 (2003,012,0000) |
| 1064 | -148.592 | -184.252 | 3.2431E-02 (2003,362,0000) | 1.8463E-02 (2003,012,0000) | 1.8019E-02 (2003,077,0000) | 1.7607E-02 (2003,050,0000) |
| 1065 | -147.139 | -184.279 | 2.9094E-02 (2003,362,0000) | 1.8230E-02 (2003,012,0000) | 1.6008E-02 (2003,077,0000) | 1.4324E-02 (2003,050,0000) |
| 1066 | -145.686 | -184.307 | 2.6326E-02 (2003,362,0000) | 1.7961E-02 (2003,012,0000) | 1.4550E-02 (2003,077,0000) | 1.3341E-02 (2003,347,0000) |
| 1067 | -144.233 | -184.334 | 2.5162E-02 (2003,362,0000) | 1.7652E-02 (2003,012,0000) | 1.3936E-02 (2003,347,0000) | 1.3609E-02 (2003,077,0000) |
| 1068 | -161.630 | -182.138 | 3.8207E-02 (2003,050,0000) | 2.6131E-02 (2003,077,0000) | 2.2461E-02 (2003,362,0000) | 1.9743E-02 (2003,343,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1069 | -160.178 | -182.169 | 3.6569E-02 (2003,050,0000) | 2.6769E-02 (2003,077,0000) | 2.4621E-02 (2003,362,0000) | 2.2828E-02 (2003,328,0000) |
| 1070 | -158.725 | -182.198 | 3.4466E-02 (2003,050,0000) | 2.7105E-02 (2003,362,0000) | 2.6792E-02 (2003,077,0000) | 2.4911E-02 (2003,328,0000) |
| 1071 | -157.272 | -182.228 | 3.1931E-02 (2003,050,0000) | 2.9810E-02 (2003,362,0000) | 2.6028E-02 (2003,077,0000) | 2.5306E-02 (2003,328,0000) |
| 1072 | -155.820 | -182.257 | 3.2435E-02 (2003,362,0000) | 2.9218E-02 (2003,050,0000) | 2.4605E-02 (2003,077,0000) | 2.4212E-02 (2003,328,0000) |
| 1073 | -154.367 | -182.286 | 3.4715E-02 (2003,362,0000) | 2.6553E-02 (2003,050,0000) | 2.3137E-02 (2003,077,0000) | 2.2181E-02 (2003,328,0000) |
| 1074 | -152.914 | -182.315 | 3.6201E-02 (2003,362,0000) | 2.4004E-02 (2003,050,0000) | 2.1107E-02 (2003,077,0000) | 1.9789E-02 (2003,328,0000) |
| 1075 | -151.462 | -182.343 | 3.6543E-02 (2003,362,0000) | 2.1582E-02 (2003,050,0000) | 1.8551E-02 (2003,012,0000) | 1.8457E-02 (2003,077,0000) |
| 1076 | -150.009 | -182.372 | 3.3476E-02 (2003,362,0000) | 1.8374E-02 (2003,012,0000) | 1.7379E-02 (2003,050,0000) | 1.5572E-02 (2003,077,0000) |
| 1077 | -148.556 | -182.399 | 3.1414E-02 (2003,362,0000) | 1.8180E-02 (2003,012,0000) | 1.5143E-02 (2003,050,0000) | 1.3927E-02 (2003,077,0000) |
| 1078 | -147.104 | -182.427 | 2.8063E-02 (2003,362,0000) | 1.7929E-02 (2003,012,0000) | 1.3572E-02 (2003,347,0000) | 1.2973E-02 (2003,084,0000) |
| 1079 | -145.651 | -182.454 | 2.6722E-02 (2003,362,0000) | 1.7637E-02 (2003,012,0000) | 1.4189E-02 (2003,347,0000) | 1.3483E-02 (2003,084,0000) |
| 1080 | -161.592 | -180.286 | 3.7972E-02 (2003,050,0000) | 2.7061E-02 (2003,362,0000) | 2.6783E-02 (2003,077,0000) | 2.4002E-02 (2003,328,0000) |
| 1081 | -160.139 | -180.316 | 3.5526E-02 (2003,050,0000) | 2.9846E-02 (2003,362,0000) | 2.6411E-02 (2003,077,0000) | 2.5706E-02 (2003,328,0000) |
| 1082 | -158.687 | -180.346 | 3.2876E-02 (2003,050,0000) | 3.2798E-02 (2003,362,0000) | 2.5624E-02 (2003,328,0000) | 2.5313E-02 (2003,077,0000) |
| 1083 | -157.235 | -180.376 | 3.5603E-02 (2003,362,0000) | 3.0073E-02 (2003,050,0000) | 2.4025E-02 (2003,328,0000) | 2.3573E-02 (2003,077,0000) |
| 1084 | -155.783 | -180.405 | 3.7777E-02 (2003,362,0000) | 2.7164E-02 (2003,050,0000) | 2.1594E-02 (2003,328,0000) | 2.1461E-02 (2003,077,0000) |
| 1085 | -154.330 | -180.434 | 3.8985E-02 (2003,362,0000) | 2.4443E-02 (2003,050,0000) | 1.9011E-02 (2003,077,0000) | 1.8989E-02 (2003,328,0000) |
| 1086 | -152.878 | -180.463 | 3.8787E-02 (2003,362,0000) | 2.1854E-02 (2003,050,0000) | 1.8432E-02 (2003,012,0000) | 1.6324E-02 (2003,328,0000) |
| 1087 | -151.426 | -180.491 | 3.5571E-02 (2003,362,0000) | 1.8274E-02 (2003,012,0000) | 1.7884E-02 (2003,050,0000) | 1.4910E-02 (2003,084,0000) |
| 1088 | -149.973 | -180.519 | 3.3551E-02 (2003,362,0000) | 1.8099E-02 (2003,012,0000) | 1.5887E-02 (2003,050,0000) | 1.5063E-02 (2003,084,0000) |
| 1089 | -148.521 | -180.547 | 2.9871E-02 (2003,362,0000) | 1.7863E-02 (2003,012,0000) | 1.4610E-02 (2003,084,0000) | 1.3943E-02 (2003,347,0000) |
| 1090 | -147.068 | -180.575 | 2.6980E-02 (2003,362,0000) | 1.7586E-02 (2003,012,0000) | 1.4502E-02 (2003,084,0000) | 1.4296E-02 (2003,347,0000) |
| 1091 | -145.616 | -180.602 | 2.5342E-02 (2003,362,0000) | 1.7273E-02 (2003,012,0000) | 1.4941E-02 (2003,084,0000) | 1.4925E-02 (2003,347,0000) |
| 1092 | -161.553 | -178.434 | 3.6854E-02 (2003,050,0000) | 3.3154E-02 (2003,362,0000) | 2.6372E-02 (2003,328,0000) | 2.6000E-02 (2003,077,0000) |
| 1093 | -160.101 | -178.464 | 3.6313E-02 (2003,362,0000) | 3.3723E-02 (2003,050,0000) | 2.5651E-02 (2003,328,0000) | 2.4380E-02 (2003,077,0000) |
| 1094 | -158.649 | -178.494 | 3.9130E-02 (2003,362,0000) | 3.0642E-02 (2003,050,0000) | 2.3495E-02 (2003,328,0000) | 2.2159E-02 (2003,077,0000) |
| 1095 | -157.197 | -178.523 | 4.1098E-02 (2003,362,0000) | 2.7688E-02 (2003,050,0000) | 2.0706E-02 (2003,328,0000) | 1.9651E-02 (2003,077,0000) |
| 1096 | -155.745 | -178.553 | 4.1880E-02 (2003,362,0000) | 2.4891E-02 (2003,050,0000) | 1.8389E-02 (2003,012,0000) | 1.8014E-02 (2003,328,0000) |
| 1097 | -154.293 | -178.582 | 4.1254E-02 (2003,362,0000) | 2.2181E-02 (2003,050,0000) | 1.8301E-02 (2003,012,0000) | 1.6908E-02 (2003,084,0000) |
| 1098 | -152.841 | -178.610 | 3.9398E-02 (2003,362,0000) | 1.9702E-02 (2003,050,0000) | 1.8174E-02 (2003,012,0000) | 1.7211E-02 (2003,084,0000) |
| 1099 | -151.389 | -178.639 | 3.5810E-02 (2003,362,0000) | 1.8004E-02 (2003,012,0000) | 1.6811E-02 (2003,084,0000) | 1.6801E-02 (2003,050,0000) |
| 1100 | -149.937 | -178.667 | 3.0366E-02 (2003,362,0000) | 1.7777E-02 (2003,012,0000) | 1.5682E-02 (2003,084,0000) | 1.4225E-02 (2003,082,0000) |
| 1101 | -148.485 | -178.695 | 2.7763E-02 (2003,362,0000) | 1.7516E-02 (2003,012,0000) | 1.5815E-02 (2003,084,0000) | 1.4651E-02 (2003,347,0000) |
| 1102 | -147.033 | -178.723 | 2.8526E-02 (2003,362,0000) | 1.7667E-02 (2003,084,0000) | 1.7265E-02 (2003,012,0000) | 1.6649E-02 (2003,082,0000) |
| 1103 | -145.581 | -178.750 | 2.4795E-02 (2003,362,0000) | 1.6908E-02 (2003,012,0000) | 1.6903E-02 (2003,084,0000) | 1.6128E-02 (2003,082,0000) |
| 1104 | -164.418 | -176.521 | 4.1984E-02 (2003,050,0000) | 3.3787E-02 (2003,362,0000) | 2.6849E-02 (2003,077,0000) | 2.6335E-02 (2003,328,0000) |
| 1105 | -162.966 | -176.552 | 3.8467E-02 (2003,050,0000) | 3.7120E-02 (2003,362,0000) | 2.6856E-02 (2003,328,0000) | 2.5513E-02 (2003,077,0000) |
| 1106 | -161.515 | -176.582 | 4.0378E-02 (2003,362,0000) | 3.4849E-02 (2003,050,0000) | 2.5346E-02 (2003,328,0000) | 2.3378E-02 (2003,077,0000) |
| 1107 | -160.063 | -176.612 | 4.3057E-02 (2003,362,0000) | 3.1326E-02 (2003,050,0000) | 2.2598E-02 (2003,328,0000) | 2.0701E-02 (2003,077,0000) |
| 1108 | -158.611 | -176.642 | 4.4453E-02 (2003,362,0000) | 2.7968E-02 (2003,050,0000) | 1.9519E-02 (2003,328,0000) | 1.8205E-02 (2003,012,0000) |
| 1109 | -157.160 | -176.671 | 4.4139E-02 (2003,362,0000) | 2.4749E-02 (2003,050,0000) | 1.8177E-02 (2003,012,0000) | 1.7758E-02 (2003,084,0000) |
| 1110 | -155.708 | -176.701 | 4.3370E-02 (2003,362,0000) | 2.2474E-02 (2003,050,0000) | 1.8170E-02 (2003,084,0000) | 1.8163E-02 (2003,012,0000) |
| 1111 | -154.257 | -176.730 | 4.0711E-02 (2003,362,0000) | 1.9982E-02 (2003,050,0000) | 1.8406E-02 (2003,084,0000) | 1.8052E-02 (2003,012,0000) |
| 1112 | -152.805 | -176.758 | 3.6509E-02 (2003,362,0000) | 1.7926E-02 (2003,084,0000) | 1.7897E-02 (2003,012,0000) | 1.7041E-02 (2003,050,0000) |
| 1113 | -151.353 | -176.787 | 3.1532E-02 (2003,362,0000) | 1.7688E-02 (2003,012,0000) | 1.7150E-02 (2003,084,0000) | 1.5519E-02 (2003,082,0000) |
| 1114 | -149.902 | -176.815 | 2.7639E-02 (2003,362,0000) | 1.7438E-02 (2003,012,0000) | 1.6684E-02 (2003,084,0000) | 1.5351E-02 (2003,082,0000) |
| 1115 | -148.450 | -176.843 | 2.6634E-02 (2003,362,0000) | 1.7621E-02 (2003,084,0000) | 1.7172E-02 (2003,012,0000) | 1.6429E-02 (2003,082,0000) |
| 1116 | -146.998 | -176.870 | 2.4267E-02 (2003,362,0000) | 1.7571E-02 (2003,084,0000) | 1.6851E-02 (2003,012,0000) | 1.6632E-02 (2003,082,0000) |
| 1117 | -164.379 | -174.669 | 4.1741E-02 (2003,362,0000) | 4.0290E-02 (2003,050,0000) | 2.7024E-02 (2003,328,0000) | 2.5001E-02 (2003,077,0000) |
| 1118 | -162.927 | -174.699 | 4.5001E-02 (2003,362,0000) | 3.6143E-02 (2003,050,0000) | 2.4760E-02 (2003,328,0000) | 2.2330E-02 (2003,077,0000) |
| 1119 | -161.476 | -174.730 | 4.7326E-02 (2003,362,0000) | 3.2163E-02 (2003,050,0000) | 2.1466E-02 (2003,328,0000) | 1.9253E-02 (2003,077,0000) |
| 1120 | -160.025 | -174.760 | 4.8236E-02 (2003,362,0000) | 2.8522E-02 (2003,050,0000) | 1.8785E-02 (2003,122,0000) | 1.8611E-02 (2003,084,0000) |
| 1121 | -158.574 | -174.790 | 4.7485E-02 (2003,362,0000) | 2.5340E-02 (2003,050,0000) | 1.9003E-02 (2003,084,0000) | 1.8776E-02 (2003,122,0000) |
| 1122 | -157.122 | -174.819 | 4.5188E-02 (2003,362,0000) | 2.2609E-02 (2003,050,0000) | 1.9294E-02 (2003,084,0000) | 1.8508E-02 (2003,122,0000) |
| 1123 | -155.671 | -174.848 | 4.1876E-02 (2003,362,0000) | 2.0305E-02 (2003,050,0000) | 1.9493E-02 (2003,084,0000) | 1.8167E-02 (2003,122,0000) |
| 1124 | -154.220 | -174.877 | 3.7763E-02 (2003,362,0000) | 1.9554E-02 (2003,084,0000) | 1.8109E-02 (2003,050,0000) | 1.7785E-02 (2003,012,0000) |
| 1125 | -152.768 | -174.906 | 3.1308E-02 (2003,362,0000) | 1.7944E-02 (2003,084,0000) | 1.7579E-02 (2003,012,0000) | 1.6433E-02 (2003,082,0000) |
| 1126 | -151.317 | -174.934 | 2.8291E-02 (2003,362,0000) | 1.7988E-02 (2003,084,0000) | 1.7371E-02 (2003,012,0000) | 1.6721E-02 (2003,082,0000) |
| 1127 | -149.866 | -174.963 | 2.5454E-02 (2003,362,0000) | 1.7821E-02 (2003,084,0000) | 1.7108E-02 (2003,012,0000) | 1.6843E-02 (2003,082,0000) |
| 1128 | -148.415 | -174.991 | 2.4587E-02 (2003,362,0000) | 1.8687E-02 (2003,084,0000) | 1.7918E-02 (2003,082,0000) | 1.7188E-02 (2003,347,0000) |
| 1129 | -167.241 | -172.755 | 4.6554E-02 (2003,050,0000) | 4.3349E-02 (2003,362,0000) | 2.7934E-02 (2003,328,0000) | 2.6846E-02 (2003,077,0000) |
| 1130 | -165.790 | -172.786 | 4.7032E-02 (2003,362,0000) | 4.2051E-02 (2003,050,0000) | 2.6757E-02 (2003,328,0000) | 2.4354E-02 (2003,077,0000) |
| 1131 | -164.339 | -172.817 | 5.0130E-02 (2003,362,0000) | 3.7470E-02 (2003,050,0000) | 2.3666E-02 (2003,328,0000) | 2.1148E-02 (2003,077,0000) |
| 1132 | -162.888 | -172.847 | 5.1863E-02 (2003,362,0000) | 3.3076E-02 (2003,050,0000) | 2.0006E-02 (2003,328,0000) | 1.9988E-02 (2003,122,0000) |
| 1133 | -161.438 | -172.878 | 5.1843E-02 (2003,362,0000) | 2.9116E-02 (2003,050,0000) | 1.9752E-02 (2003,122,0000) | 1.9697E-02 (2003,084,0000) |
| 1134 | -159.987 | -172.908 | 4.9906E-02 (2003,362,0000) | 2.5708E-02 (2003,050,0000) | 1.9998E-02 (2003,084,0000) | 1.9497E-02 (2003,122,0000) |
| 1135 | -158.536 | -172.937 | 4.6305E-02 (2003,362,0000) | 2.2765E-02 (2003,050,0000) | 2.0216E-02 (2003,084,0000) | 1.9285E-02 (2003,122,0000) |
| 1136 | -157.085 | -172.967 | 4.1505E-02 (2003,362,0000) | 2.0115E-02 (2003,084,0000) | 1.9888E-02 (2003,050,0000) | 1.8902E-02 (2003,122,0000) |
| 1137 | -155.634 | -172.996 | 3.5864E-02 (2003,362,0000) | 1.9314E-02 (2003,084,0000) | 1.8610E-02 (2003,082,0000) | 1.7632E-02 (2003,012,0000) |
| 1138 | -154.183 | -173.025 | 3.0970E-02 (2003,362,0000) | 1.8667E-02 (2003,084,0000) | 1.8077E-02 (2003,082,0000) | 1.7475E-02 (2003,012,0000) |
| 1139 | -152.732 | -173.054 | 2.9456E-02 (2003,362,0000) | 1.9768E-02 (2003,084,0000) | 1.8982E-02 (2003,082,0000) | 1.7680E-02 (2003,122,0000) |
| 1140 | -151.281 | -173.082 | 2.6284E-02 (2003,362,0000) | 1.9262E-02 (2003,084,0000) | 1.9084E-02 (2003,082,0000) | 1.7305E-02 (2003,347,0000) |
| 1141 | -149.830 | -173.110 | 2.3813E-02 (2003,362,0000) | 1.9120E-02 (2003,082,0000) | 1.8946E-02 (2003,084,0000) | 1.7783E-02 (2003,347,0000) |
| 1142 | -148.379 | -173.138 | 2.0731E-02 (2003,362,0000) | 1.8633E-02 (2003,082,0000) | 1.7787E-02 (2003,084,0000) | 1.7721E-02 (2003,347,0000) |
| 1143 | -146.928 | -173.166 | 1.8387E-02 (2003,362,0000) | 1.7845E-02 (2003,347,0000) | 1.7748E-02 (2003,082,0000) | 1.7027E-02 (2003,084,0000) |
| 1144 | -165.751 | -170.934 | 5.5704E-02 (2003,362,0000) | 3.8577E-02 (2003,050,0000) | 2.2291E-02 (2003,328,0000) | 2.1331E-02 (2003,122,0000) |
| 1145 | -164.300 | -170.965 | 5.6545E-02 (2003,362,0000) | 3.3893E-02 (2003,050,0000) | 2.1132E-02 (2003,122,0000) | 2.0699E-02 (2003,082,0000) |
| 1146 | -162.850 | -170.995 | 5.5214E-02 (2003,362,0000) | 2.9725E-02 (2003,050,0000) | 2.0836E-02 (2003,122,0000) | 2.0512E-02 (2003,084,0000) |
| 1147 | -161.399 | -171.025 | 5.1816E-02 (2003,362,0000) | 2.6109E-02 (2003,050,0000) | 2.0747E-02 (2003,084,0000) | 2.0496E-02 (2003,122,0000) |
| 1148 | -159.948 | -171.056 | 4.6848E-02 (2003,362,0000) | 2.3048E-02 (2003,050,0000) | 2.0805E-02 (2003,084,0000) | 2.0149E-02 (2003,082,0000) |
| 1149 | -158.498 | -171.085 | 4.0616E-02 (2003,362,0000) | 2.0168E-02 (2003,084,0000) | 2.0122E-02 (2003,082,0000) | 1.9737E-02 (2003,050,0000) |
| 1150 | -157.047 | -171.115 | 3.5807E-02 (2003,362,0000) | 2.0124E-02 (2003,084,0000) | 2.0028E-02 (2003,082,0000) | 1.8807E-02 (2003,122,0000) |
| 1151 | -155.597 | -171.144 | 3.2107E-02 (2003,362,0000) | 2.0210E-02 (2003,084,0000) | 1.9785E-02 (2003,082,0000) | 1.9131E-02 (2003,122,0000) |
| 1152 | -154.146 | -171.173 | 2.8130E-02 (2003,362,0000) | 1.9838E-02 (2003,082,0000) | 1.9725E-02 (2003,084,0000) | 1.8361E-02 (2003,122,0000) |
| 1153 | -152.696 | -171.202 | 2.5134E-02 (2003,362,0000) | 1.9845E-02 (2003,082,0000) | 1.9204E-02 (2003,084,0000) | 1.7915E-02 (2003,347,0000) |
| 1154 | -151.245 | -171.230 | 2.2045E-02 (2003,362,0000) | 1.9729E-02 (2003,082,0000) | 1.8066E-02 (2003,084,0000) | 1.7909E-02 (2003,347,0000) |
| 1155 | -149.794 | -171.258 | 2.0682E-02 (2003,362,0000) | 1.9636E-02 (2003,082,0000) | 1.8700E-02 (2003,347,0000) | 1.7976E-02 (2003,084,0000) |
| 1156 | -148.344 | -171.286 | 1.7570E-02 (2003,082,0000) | 1.7455E-02 (2003,347,0000) | 1.6469E-02 (2003,362,0000) | 1.6016E-02 (2003,012,0000) |
| 1157 | -146.893 | -171.314 | 1.7428E-02 (2003,347,0000) | 1.6804E-02 (2003,082,0000) | 1.5602E-02 (2003,012,0000) | 1.4748E-02 (2003,084,0000) |
| 1158 | -162.811 | -169.143 | 5.3125E-02 (2003,362,0000) | 2.6414E-02 (2003,050,0000) | 2.1779E-02 (2003,082,0000) | 2.1600E-02 (2003,122,0000) |
| 1159 | -161.360 | -169.173 | 4.6740E-02 (2003,362,0000) | 2.3314E-02 (2003,050,0000) | 2.1573E-02 (2003,082,0000) | 2.1095E-02 (2003,122,0000) |
| 1160 | -159.910 | -169.203 | 4.0617E-02 (2003,362,0000) | 2.1367E-02 (2003,082,0000) | 2.0770E-02 (2003,084,0000) | 2.0701E-02 (2003,050,0000) |
| 1161 | -158.460 | -169.233 | 3.5253E-02 (2003,362,0000) | 2.1228E-02 (2003,082,0000) | 2.0395E-02 (2003,084,0000) | 2.0033E-02 (2003,122,0000) |
| 1162 | -157.010 | -169.263 | 3.0743E-02 (2003,362,0000) | 2.1172E-02 (2003,082,0000) | 1.9907E-02 (2003,084,0000) | 1.9587E-02 (2003,122,0000) |
| 1163 | -155.560 | -169.292 | 2.6676E-02 (2003,362,0000) | 2.1141E-02 (2003,082,0000) | 1.9175E-02 (2003,084,0000) | 1.8857E-02 (2003,122,0000) |
| 1164 | -154.109 | -169.321 | 2.3854E-02 (2003,362,0000) | 2.0779E-02 (2003,082,0000) | 1.8544E-02 (2003,084,0000) | 1.8469E-02 (2003,122,0000) |
| 1165 | -152.659 | -169.350 | 2.1476E-02 (2003,362,0000) | 2.0585E-02 (2003,082,0000) | 1.8734E-02 (2003,347,0000) | 1.7953E-02 (2003,122,0000) |
| 1166 | -151.209 | -169.378 | 2.0212E-02 (2003,082,0000) | 1.8642E-02 (2003,362,0000) | 1.8548E-02 (2003,347,0000) | 1.6441E-02 (2003,012,0000) |
| 1167 | -149.759 | -169.406 | 1.9901E-02 (2003,082,0000) | 1.9150E-02 (2003,347,0000) | 1.6987E-02 (2003,362,0000) | 1.6793E-02 (2003,060,0000) |
| 1168 | -148.308 | -169.434 | 1.9371E-02 (2003,347,0000) | 1.9302E-02 (2003,082,0000) | 1.7640E-02 (2003,060,0000) | 1.6487E-02 (2003,065,0000) |
| 1169 | -164.222 | -167.260 | 5.3595E-02 (2003,362,0000) | 2.6661E-02 (2003,050,0000) | 2.4364E-02 (2003,082,0000) | 2.2712E-02 (2003,122,0000) |
| 1170 | -162.772 | -167.291 | 4.6223E-02 (2003,362,0000) | 2.4293E-02 (2003,082,0000) | 2.3490E-02 (2003,050,0000) | 2.2199E-02 (2003,122,0000) |
| 1171 | -161.322 | -167.321 | 3.9505E-02 (2003,362,0000) | 2.3343E-02 (2003,082,0000) | 2.1569E-02 (2003,122,0000) | 2.0882E-02 (2003,050,0000) |
| 1172 | -159.872 | -167.351 | 3.3963E-02 (2003,362,0000) | 2.2670E-02 (2003,082,0000) | 2.0905E-02 (2003,122,0000) | 1.9813E-02 (2003,084,0000) |
| 1173 | -158.422 | -167.381 | 2.9454E-02 (2003,362,0000) | 2.2527E-02 (2003,082,0000) | 2.0232E-02 (2003,122,0000) | 1.9140E-02 (2003,084,0000) |
| 1174 | -156.972 | -167.411 | 2.5994E-02 (2003,362,0000) | 2.2286E-02 (2003,082,0000) | 1.9552E-02 (2003,122,0000) | 1.8698E-02 (2003,347,0000) |
| 1175 | -155.522 | -167.440 | 2.3185E-02 (2003,362,0000) | 2.2085E-02 (2003,082,0000) | 1.9065E-02 (2003,122,0000) | 1.8901E-02 (2003,347,0000) |
| 1176 | -154.072 | -167.469 | 2.1813E-02 (2003,082,0000) | 2.0675E-02 (2003,362,0000) | 1.9183E-02 (2003,347,0000) | 1.8773E-02 (2003,122,0000) |
| 1177 | -152.623 | -167.497 | 2.1426E-02 (2003,082,0000) | 1.9516E-02 (2003,347,0000) | 1.8475E-02 (2003,362,0000) | 1.8249E-02 (2003,122,0000) |
| 1178 | -164.182 | -165.408 | 4.4674E-02 (2003,362,0000) | 2.5202E-02 (2003,082,0000) | 2.3744E-02 (2003,050,0000) | 2.3272E-02 (2003,122,0000) |
| 1179 | -162.733 | -165.439 | 3.7686E-02 (2003,362,0000) | 2.5115E-02 (2003,082,0000) | 2.2576E-02 (2003,122,0000) | 2.1031E-02 (2003,050,0000) |
| 1180 | -161.283 | -165.469 | 3.2059E-02 (2003,362,0000) | 2.5029E-02 (2003,082,0000) | 2.1809E-02 (2003,122,0000) | 1.9327E-02 (2003,347,0000) |
| 1181 | -159.834 | -165.499 | 2.8288E-02 (2003,362,0000) | 2.4936E-02 (2003,082,0000) | 2.1025E-02 (2003,122,0000) | 1.9197E-02 (2003,347,0000) |
| 1182 | -158.384 | -165.529 | 2.5131E-02 (2003,362,0000) | 2.4392E-02 (2003,082,0000) | 2.0236E-02 (2003,122,0000) | 1.9199E-02 (2003,347,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1183 | -156.935 | -165.558 | 2.3522E-02 (2003,082,0000) | 2.1012E-02 (2003,362,0000) | 1.8539E-02 (2003,347,0000) | 1.7608E-02 (2003,122,0000) |
| 1184 | -155.485 | -165.588 | 2.3163E-02 (2003,082,0000) | 1.8918E-02 (2003,347,0000) | 1.8842E-02 (2003,362,0000) | 1.7126E-02 (2003,122,0000) |
| 1185 | -154.036 | -165.617 | 2.1258E-02 (2003,082,0000) | 1.8178E-02 (2003,347,0000) | 1.6501E-02 (2003,012,0000) | 1.5756E-02 (2003,060,0000) |
| 1186 | -152.586 | -165.645 | 2.0635E-02 (2003,082,0000) | 1.8416E-02 (2003,347,0000) | 1.6555E-02 (2003,060,0000) | 1.6191E-02 (2003,012,0000) |
| 1187 | -164.143 | -163.556 | 3.5687E-02 (2003,362,0000) | 2.5917E-02 (2003,082,0000) | 2.3519E-02 (2003,122,0000) | 2.2753E-02 (2003,042,0000) |
| 1188 | -162.694 | -163.587 | 3.0832E-02 (2003,362,0000) | 2.5789E-02 (2003,082,0000) | 2.2717E-02 (2003,122,0000) | 2.1261E-02 (2003,042,0000) |
| 1189 | -161.245 | -163.617 | 2.7144E-02 (2003,362,0000) | 2.5657E-02 (2003,082,0000) | 2.1806E-02 (2003,122,0000) | 1.9800E-02 (2003,347,0000) |
| 1190 | -159.796 | -163.647 | 2.5448E-02 (2003,082,0000) | 2.3734E-02 (2003,362,0000) | 2.0547E-02 (2003,122,0000) | 1.9563E-02 (2003,347,0000) |
| 1191 | -158.346 | -163.677 | 2.5097E-02 (2003,082,0000) | 2.1156E-02 (2003,362,0000) | 1.9650E-02 (2003,122,0000) | 1.9599E-02 (2003,347,0000) |
| 1192 | -156.897 | -163.706 | 2.4722E-02 (2003,082,0000) | 1.9330E-02 (2003,347,0000) | 1.8118E-02 (2003,362,0000) | 1.7941E-02 (2003,122,0000) |
| 1193 | -155.448 | -163.736 | 2.3977E-02 (2003,082,0000) | 1.9945E-02 (2003,347,0000) | 1.8393E-02 (2003,060,0000) | 1.7999E-02 (2003,122,0000) |
| 1194 | -153.999 | -163.765 | 2.2502E-02 (2003,082,0000) | 1.9242E-02 (2003,347,0000) | 1.8149E-02 (2003,060,0000) | 1.6812E-02 (2003,065,0000) |
| 1195 | -152.550 | -163.793 | 2.0366E-02 (2003,082,0000) | 1.8623E-02 (2003,347,0000) | 1.8171E-02 (2003,060,0000) | 1.6681E-02 (2003,323,0000) |
| 1196 | -159.757 | -161.795 | 2.6150E-02 (2003,082,0000) | 2.0563E-02 (2003,122,0000) | 2.0548E-02 (2003,362,0000) | 1.9952E-02 (2003,347,0000) |
| 1197 | -158.309 | -161.825 | 2.5582E-02 (2003,082,0000) | 2.0020E-02 (2003,347,0000) | 1.9705E-02 (2003,122,0000) | 1.8964E-02 (2003,060,0000) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 835 | -122.223 | -264.400 | 1.1460E-03 | 1016 | -147.279 | -191.689 | 2.0563E-03 |
| 836 | -120.755 | -264.423 | 1.0923E-03 | 1017 | -145.824 | -191.716 | 1.9462E-03 |
| 837 | -123.662 | -262.524 | 1.2074E-03 | 1018 | -144.370 | -191.743 | 1.7643E-03 |
| 838 | -122.195 | -262.547 | 1.1405E-03 | 1019 | -155.968 | -189.666 | 2.3271E-03 |
| 839 | -123.633 | -260.671 | 1.1617E-03 | 1020 | -154.514 | -189.695 | 2.1648E-03 |
| 840 | -125.071 | -258.794 | 1.2241E-03 | 1021 | -153.060 | -189.724 | 1.9286E-03 |
| 841 | -129.441 | -256.870 | 1.4136E-03 | 1022 | -151.606 | -189.753 | 2.1236E-03 |
| 842 | -127.975 | -256.894 | 1.4052E-03 | 1023 | -150.152 | -189.781 | 1.9144E-03 |
| 843 | -126.508 | -256.918 | 1.3341E-03 | 1024 | -148.698 | -189.809 | 1.9983E-03 |
| 844 | -125.041 | -256.941 | 1.2340E-03 | 1025 | -147.244 | -189.836 | 1.7441E-03 |
| 845 | -129.411 | -255.017 | 1.4435E-03 | 1026 | -145.790 | -189.864 | 1.7296E-03 |
| 846 | -127.944 | -255.041 | 1.3766E-03 | 1027 | -144.336 | -189.891 | 1.7589E-03 |
| 847 | -126.478 | -255.065 | 1.3141E-03 | 1028 | -157.385 | -187.785 | 2.3446E-03 |
| 848 | -129.380 | -253.164 | 1.4538E-03 | 1029 | -155.931 | -187.814 | 2.2364E-03 |
| 849 | -127.914 | -253.188 | 1.4069E-03 | 1030 | -154.477 | -187.843 | 1.9613E-03 |
| 850 | -126.448 | -253.212 | 1.2980E-03 | 1031 | -153.024 | -187.872 | 2.2423E-03 |
| 851 | -130.815 | -251.286 | 1.4980E-03 | 1032 | -151.570 | -187.900 | 2.1463E-03 |
| 852 | -129.349 | -251.311 | 1.3968E-03 | 1033 | -150.116 | -187.928 | 2.1220E-03 |
| 853 | -127.884 | -251.335 | 1.3863E-03 | 1034 | -148.663 | -187.956 | 1.9992E-03 |
| 854 | -126.418 | -251.359 | 1.3193E-03 | 1035 | -147.209 | -187.984 | 2.0836E-03 |
| 855 | -133.715 | -249.384 | 1.5468E-03 | 1036 | -145.755 | -188.011 | 1.8677E-03 |
| 856 | -132.249 | -249.409 | 1.5431E-03 | 1037 | -144.301 | -188.039 | 1.6974E-03 |
| 857 | -130.784 | -249.433 | 1.4714E-03 | 1038 | -142.848 | -188.065 | 1.7655E-03 |
| 858 | -129.319 | -249.458 | 1.4404E-03 | 1039 | -141.394 | -188.092 | 1.6943E-03 |
| 859 | -127.854 | -249.482 | 1.3432E-03 | 1040 | -161.707 | -185.843 | 2.4492E-03 |
| 860 | -133.683 | -247.531 | 1.5768E-03 | 1041 | -160.254 | -185.873 | 2.4226E-03 |
| 861 | -132.218 | -247.556 | 1.5010E-03 | 1042 | -158.801 | -185.903 | 2.3729E-03 |
| 862 | -130.753 | -247.580 | 1.4067E-03 | 1043 | -157.347 | -185.932 | 2.2613E-03 |
| 863 | -129.288 | -247.605 | 1.3951E-03 | 1044 | -155.894 | -185.962 | 2.3511E-03 |
| 864 | -127.823 | -247.629 | 1.3933E-03 | 1045 | -154.441 | -185.991 | 2.3319E-03 |
| 865 | -135.116 | -245.653 | 1.6158E-03 | 1046 | -152.987 | -186.019 | 2.1797E-03 |
| 866 | -133.651 | -245.678 | 1.5599E-03 | 1047 | -151.534 | -186.048 | 1.9267E-03 |
| 867 | -132.187 | -245.703 | 1.5057E-03 | 1048 | -150.080 | -186.076 | 2.1776E-03 |
| 868 | -130.722 | -245.727 | 1.4408E-03 | 1049 | -148.627 | -186.104 | 2.1721E-03 |
| 869 | -129.258 | -245.752 | 1.4161E-03 | 1050 | -147.174 | -186.132 | 2.0080E-03 |
| 870 | -136.548 | -243.775 | 1.6523E-03 | 1051 | -145.720 | -186.159 | 1.7785E-03 |
| 871 | -135.084 | -243.800 | 1.6334E-03 | 1052 | -144.267 | -186.186 | 1.6891E-03 |
| 872 | -133.620 | -243.825 | 1.5609E-03 | 1053 | -142.813 | -186.213 | 1.6968E-03 |
| 873 | -132.155 | -243.850 | 1.5411E-03 | 1054 | -141.360 | -186.240 | 1.6491E-03 |
| 874 | -130.691 | -243.874 | 1.5419E-03 | 1055 | -161.669 | -183.991 | 2.4908E-03 |
| 875 | -129.227 | -243.899 | 1.4366E-03 | 1056 | -160.216 | -184.021 | 2.4607E-03 |
| 876 | -137.980 | -241.896 | 1.6877E-03 | 1057 | -158.763 | -184.051 | 2.4798E-03 |
| 877 | -136.516 | -241.922 | 1.6776E-03 | 1058 | -157.310 | -184.080 | 2.4441E-03 |
| 878 | -135.052 | -241.947 | 1.6370E-03 | 1059 | -155.857 | -184.109 | 2.3998E-03 |
| 879 | -133.588 | -241.972 | 1.6380E-03 | 1060 | -154.404 | -184.138 | 2.3066E-03 |
| 880 | -132.124 | -241.997 | 1.5865E-03 | 1061 | -152.951 | -184.167 | 2.3185E-03 |
| 881 | -130.660 | -242.022 | 1.5364E-03 | 1062 | -151.498 | -184.196 | 2.2698E-03 |
| 882 | -129.197 | -242.046 | 1.4813E-03 | 1063 | -150.045 | -184.224 | 2.1506E-03 |
| 883 | -137.947 | -240.043 | 1.7120E-03 | 1064 | -148.592 | -184.252 | 2.0326E-03 |
| 884 | -136.483 | -240.069 | 1.6837E-03 | 1065 | -147.139 | -184.279 | 1.8196E-03 |
| 885 | -135.020 | -240.094 | 1.6288E-03 | 1066 | -145.686 | -184.307 | 1.7024E-03 |
| 886 | -133.556 | -240.119 | 1.5935E-03 | 1067 | -144.233 | -184.334 | 1.7030E-03 |
| 887 | -132.093 | -240.144 | 1.5981E-03 | 1068 | -161.630 | -182.138 | 2.5697E-03 |
| 888 | -130.629 | -240.169 | 1.5024E-03 | 1069 | -160.178 | -182.169 | 2.5402E-03 |
| 889 | -129.166 | -240.193 | 1.5267E-03 | 1070 | -158.725 | -182.198 | 2.5057E-03 |
| 890 | -137.914 | -238.190 | 1.7278E-03 | 1071 | -157.272 | -182.228 | 2.4571E-03 |
| 891 | -136.451 | -238.216 | 1.6898E-03 | 1072 | -155.820 | -182.257 | 2.4107E-03 |
| 892 | -134.988 | -238.241 | 1.6508E-03 | 1073 | -154.367 | -182.286 | 2.3805E-03 |
| 893 | -133.525 | -238.266 | 1.6275E-03 | 1074 | -152.914 | -182.315 | 2.3340E-03 |
| 894 | -132.062 | -238.291 | 1.5170E-03 | 1075 | -151.462 | -182.343 | 2.2689E-03 |
| 895 | -130.599 | -238.316 | 1.5200E-03 | 1076 | -150.009 | -182.372 | 2.0113E-03 |
| 896 | -137.882 | -236.337 | 1.7534E-03 | 1077 | -148.556 | -182.399 | 1.9163E-03 |
| 897 | -136.419 | -236.363 | 1.7224E-03 | 1078 | -147.104 | -182.427 | 1.7770E-03 |
| 898 | -134.956 | -236.388 | 1.6717E-03 | 1079 | -145.651 | -182.454 | 1.7865E-03 |
| 899 | -133.493 | -236.413 | 1.5387E-03 | 1080 | -161.592 | -180.286 | 2.6099E-03 |
| 900 | -132.030 | -236.438 | 1.5678E-03 | 1081 | -160.139 | -180.316 | 2.5695E-03 |
| 901 | -137.849 | -234.485 | 1.7632E-03 | 1082 | -158.687 | -180.346 | 2.5254E-03 |
| 902 | -136.386 | -234.510 | 1.7326E-03 | 1083 | -157.235 | -180.376 | 2.4748E-03 |
| 903 | -134.924 | -234.536 | 1.6411E-03 | 1084 | -155.783 | -180.405 | 2.4284E-03 |
| 904 | -133.462 | -234.561 | 1.5845E-03 | 1085 | -154.330 | -180.434 | 2.3706E-03 |
| 905 | -137.816 | -232.632 | 1.7820E-03 | 1086 | -152.878 | -180.463 | 2.2894E-03 |
| 906 | -136.354 | -232.657 | 1.7516E-03 | 1087 | -151.426 | -180.491 | 2.0698E-03 |
| 907 | -134.892 | -232.683 | 1.5980E-03 | 1088 | -149.973 | -180.519 | 2.0124E-03 |
| 908 | -139.245 | -230.753 | 1.8259E-03 | 1089 | -148.521 | -180.547 | 1.8755E-03 |
| 909 | -137.784 | -230.779 | 1.8104E-03 | 1090 | -147.068 | -180.575 | 1.8039E-03 |
| 910 | -136.322 | -230.805 | 1.6486E-03 | 1091 | -145.616 | -180.602 | 1.8189E-03 |
| 911 | -134.860 | -230.830 | 1.6478E-03 | 1092 | -161.553 | -178.434 | 2.6430E-03 |
| 912 | -139.212 | -228.900 | 1.8458E-03 | 1093 | -160.101 | -178.464 | 2.5898E-03 |
| 913 | -137.751 | -228.926 | 1.8267E-03 | 1094 | -158.649 | -178.494 | 2.5316E-03 |
| 914 | -136.290 | -228.952 | 1.6630E-03 | 1095 | -157.197 | -178.523 | 2.4765E-03 |
| 915 | -134.828 | -228.977 | 1.7039E-03 | 1096 | -155.745 | -178.553 | 2.4110E-03 |
| 916 | -140.640 | -227.021 | 1.8643E-03 | 1097 | -154.293 | -178.582 | 2.3484E-03 |
| 917 | -139.179 | -227.048 | 1.8655E-03 | 1098 | -152.841 | -178.610 | 2.2750E-03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 918 | -137.718 | -227.073 | 1.7603E-03 | 1099 | -151.389 | -178.639 | 2.1410E-03 |
| 919 | -136.257 | -227.099 | 1.7172E-03 | 1100 | -149.937 | -178.667 | 1.9086E-03 |
| 920 | -140.607 | -225.169 | 1.8856E-03 | 1101 | -148.485 | -178.695 | 1.8793E-03 |
| 921 | -139.146 | -225.195 | 1.8580E-03 | 1102 | -147.033 | -178.723 | 2.1457E-03 |
| 922 | -137.686 | -225.221 | 1.7575E-03 | 1103 | -145.581 | -178.750 | 1.9867E-03 |
| 923 | -136.225 | -225.246 | 1.7715E-03 | 1104 | -164.418 | -176.521 | 2.7882E-03 |
| 924 | -140.574 | -223.316 | 1.8963E-03 | 1105 | -162.966 | -176.552 | 2.7275E-03 |
| 925 | -139.113 | -223.342 | 1.7827E-03 | 1106 | -161.515 | -176.582 | 2.6628E-03 |
| 926 | -137.653 | -223.368 | 1.7372E-03 | 1107 | -160.063 | -176.612 | 2.5934E-03 |
| 927 | -136.193 | -223.394 | 1.7660E-03 | 1108 | -158.611 | -176.642 | 2.5068E-03 |
| 928 | -143.460 | -221.410 | 1.9089E-03 | 1109 | -157.160 | -176.671 | 2.3998E-03 |
| 929 | -142.000 | -221.437 | 1.9158E-03 | 1110 | -155.708 | -176.701 | 2.3978E-03 |
| 930 | -140.540 | -221.463 | 1.8640E-03 | 1111 | -154.257 | -176.730 | 2.3192E-03 |
| 931 | -139.080 | -221.489 | 1.7449E-03 | 1112 | -152.805 | -176.758 | 2.1871E-03 |
| 932 | -137.620 | -221.515 | 1.7358E-03 | 1113 | -151.353 | -176.787 | 2.0201E-03 |
| 933 | -146.346 | -219.503 | 1.9392E-03 | 1114 | -149.902 | -176.815 | 1.9195E-03 |
| 934 | -144.886 | -219.531 | 1.9362E-03 | 1115 | -148.450 | -176.843 | 2.0397E-03 |
| 935 | -143.426 | -219.558 | 1.9313E-03 | 1116 | -146.998 | -176.870 | 2.0285E-03 |
| 936 | -141.967 | -219.584 | 1.9159E-03 | 1117 | -164.379 | -174.669 | 2.8241E-03 |
| 937 | -140.507 | -219.611 | 1.7985E-03 | 1118 | -162.927 | -174.699 | 2.7484E-03 |
| 938 | -139.047 | -219.637 | 1.7511E-03 | 1119 | -161.476 | -174.730 | 2.6723E-03 |
| 939 | -137.588 | -219.663 | 1.7222E-03 | 1120 | -160.025 | -174.760 | 2.5994E-03 |
| 940 | -146.311 | -217.651 | 1.9479E-03 | 1121 | -158.574 | -174.790 | 2.5320E-03 |
| 941 | -144.851 | -217.678 | 1.9402E-03 | 1122 | -157.122 | -174.819 | 2.4617E-03 |
| 942 | -143.392 | -217.705 | 1.9394E-03 | 1123 | -155.671 | -174.848 | 2.4135E-03 |
| 943 | -141.933 | -217.732 | 1.8991E-03 | 1124 | -154.220 | -174.877 | 2.3312E-03 |
| 944 | -140.474 | -217.758 | 1.7684E-03 | 1125 | -152.768 | -174.906 | 2.0713E-03 |
| 945 | -139.014 | -217.784 | 1.7934E-03 | 1126 | -151.317 | -174.934 | 2.0605E-03 |
| 946 | -137.555 | -217.810 | 1.7240E-03 | 1127 | -149.866 | -174.963 | 2.0379E-03 |
| 947 | -146.276 | -215.798 | 1.9416E-03 | 1128 | -148.415 | -174.991 | 2.2112E-03 |
| 948 | -144.817 | -215.825 | 1.9513E-03 | 1129 | -167.241 | -172.755 | 3.0177E-03 |
| 949 | -143.358 | -215.852 | 1.8699E-03 | 1130 | -165.790 | -172.786 | 2.9321E-03 |
| 950 | -141.899 | -215.879 | 1.7925E-03 | 1131 | -164.339 | -172.817 | 2.8381E-03 |
| 951 | -146.241 | -213.946 | 1.9714E-03 | 1132 | -162.888 | -172.847 | 2.7525E-03 |
| 952 | -144.783 | -213.973 | 1.9631E-03 | 1133 | -161.438 | -172.878 | 2.6761E-03 |
| 953 | -143.324 | -214.000 | 1.9225E-03 | 1134 | -159.987 | -172.908 | 2.5976E-03 |
| 954 | -146.207 | -212.093 | 1.9289E-03 | 1135 | -158.536 | -172.937 | 2.5121E-03 |
| 955 | -144.748 | -212.120 | 1.9553E-03 | 1136 | -157.085 | -172.967 | 2.3964E-03 |
| 956 | -143.290 | -212.147 | 1.9285E-03 | 1137 | -155.634 | -172.996 | 2.2667E-03 |
| 957 | -141.832 | -212.174 | 1.8819E-03 | 1138 | -154.183 | -173.025 | 2.1610E-03 |
| 958 | -146.172 | -210.241 | 1.9893E-03 | 1139 | -152.732 | -173.054 | 2.3337E-03 |
| 959 | -144.714 | -210.268 | 1.9772E-03 | 1140 | -151.281 | -173.082 | 2.2946E-03 |
| 960 | -143.256 | -210.295 | 1.9320E-03 | 1141 | -149.830 | -173.110 | 2.3061E-03 |
| 961 | -141.798 | -210.321 | 1.9272E-03 | 1142 | -148.379 | -173.138 | 2.1715E-03 |
| 962 | -146.137 | -208.388 | 1.9904E-03 | 1143 | -146.928 | -173.166 | 2.1040E-03 |
| 963 | -144.680 | -208.415 | 1.9912E-03 | 1144 | -165.751 | -170.934 | 2.9446E-03 |
| 964 | -143.222 | -208.442 | 1.9758E-03 | 1145 | -164.300 | -170.965 | 2.8452E-03 |
| 965 | -141.764 | -208.469 | 1.9240E-03 | 1146 | -162.850 | -170.995 | 2.7518E-03 |
| 966 | -140.307 | -208.495 | 1.8366E-03 | 1147 | -161.399 | -171.025 | 2.6584E-03 |
| 967 | -146.102 | -206.535 | 1.9998E-03 | 1148 | -159.948 | -171.056 | 2.5677E-03 |
| 968 | -144.645 | -206.563 | 1.9962E-03 | 1149 | -158.498 | -171.085 | 2.4173E-03 |
| 969 | -143.188 | -206.590 | 1.9878E-03 | 1150 | -157.047 | -171.115 | 2.3908E-03 |
| 970 | -141.731 | -206.616 | 1.9071E-03 | 1151 | -155.597 | -171.144 | 2.4529E-03 |
| 971 | -146.068 | -204.683 | 1.9936E-03 | 1152 | -154.146 | -171.173 | 2.3883E-03 |
| 972 | -144.611 | -204.710 | 2.0047E-03 | 1153 | -152.696 | -171.202 | 2.3790E-03 |
| 973 | -143.154 | -204.737 | 1.9858E-03 | 1154 | -151.245 | -171.230 | 2.2802E-03 |
| 974 | -141.697 | -204.764 | 1.9405E-03 | 1155 | -149.794 | -171.258 | 2.4238E-03 |
| 975 | -148.946 | -202.775 | 2.0628E-03 | 1156 | -148.344 | -171.286 | 2.0066E-03 |
| 976 | -147.489 | -202.803 | 2.0370E-03 | 1157 | -146.893 | -171.314 | 1.9461E-03 |
| 977 | -146.033 | -202.831 | 2.0325E-03 | 1158 | -162.811 | -169.143 | 2.7548E-03 |
| 978 | -144.576 | -202.858 | 1.9969E-03 | 1159 | -161.360 | -169.173 | 2.6413E-03 |
| 979 | -143.120 | -202.885 | 2.0059E-03 | 1160 | -159.910 | -169.203 | 2.5817E-03 |
| 980 | -141.663 | -202.911 | 1.8796E-03 | 1161 | -158.460 | -169.233 | 2.5496E-03 |
| 981 | -148.910 | -200.923 | 2.0634E-03 | 1162 | -157.010 | -169.263 | 2.5221E-03 |
| 982 | -147.454 | -200.951 | 1.9858E-03 | 1163 | -155.560 | -169.292 | 2.4389E-03 |
| 983 | -145.998 | -200.978 | 2.0567E-03 | 1164 | -154.109 | -169.321 | 2.4393E-03 |
| 984 | -144.542 | -201.005 | 1.9579E-03 | 1165 | -152.659 | -169.350 | 2.4418E-03 |
| 985 | -143.086 | -201.032 | 1.9252E-03 | 1166 | -151.209 | -169.378 | 2.3168E-03 |
| 986 | -141.630 | -201.059 | 1.7931E-03 | 1167 | -149.759 | -169.406 | 2.3833E-03 |
| 987 | -148.875 | -199.071 | 1.9543E-03 | 1168 | -148.308 | -169.434 | 2.3791E-03 |
| 988 | -147.419 | -199.098 | 2.0937E-03 | 1169 | -164.222 | -167.260 | 2.8619E-03 |
| 989 | -145.963 | -199.126 | 1.9512E-03 | 1170 | -162.772 | -167.291 | 2.7691E-03 |
| 990 | -144.508 | -199.153 | 2.0288E-03 | 1171 | -161.322 | -167.321 | 2.7032E-03 |
| 991 | -151.751 | -197.162 | 2.1738E-03 | 1172 | -159.872 | -167.351 | 2.6576E-03 |
| 992 | -150.295 | -197.190 | 2.1019E-03 | 1173 | -158.422 | -167.381 | 2.6039E-03 |
| 993 | -148.840 | -197.218 | 1.9537E-03 | 1174 | -156.972 | -167.411 | 2.5793E-03 |
| 994 | -147.384 | -197.246 | 1.9150E-03 | 1175 | -155.522 | -167.440 | 2.5658E-03 |
| 995 | -145.929 | -197.273 | 1.9783E-03 | 1176 | -154.072 | -167.469 | 2.5595E-03 |
| 996 | -144.473 | -197.300 | 1.7491E-03 | 1177 | -152.623 | -167.497 | 2.5802E-03 |
| 997 | -151.714 | -195.310 | 2.1707E-03 | 1178 | -164.182 | -165.408 | 2.8908E-03 |
| 998 | -150.259 | -195.338 | 2.0305E-03 | 1179 | -162.733 | -165.439 | 2.7964E-03 |
| 999 | -148.804 | -195.366 | 2.1600E-03 | 1180 | -161.283 | -165.469 | 2.7080E-03 |
| 1000 | -147.349 | -195.393 | 2.1339E-03 | 1181 | -159.834 | -165.499 | 2.6890E-03 |
| 1001 | -145.894 | -195.421 | 2.0142E-03 | 1182 | -158.384 | -165.529 | 2.6652E-03 |
| 1002 | -144.439 | -195.448 | 1.8345E-03 | 1183 | -156.935 | -165.558 | 2.4436E-03 |
| 1003 | -153.133 | -193.429 | 2.2192E-03 | 1184 | -155.485 | -165.588 | 2.4660E-03 |
| 1004 | -151.678 | -193.457 | 1.9938E-03 | 1185 | -154.036 | -165.617 | 2.2683E-03 |
| 1005 | -150.224 | -193.485 | 2.1115E-03 | 1186 | -152.586 | -165.645 | 2.2669E-03 |
| 1006 | -148.769 | -193.513 | 2.1752E-03 | 1187 | -164.143 | -163.556 | 2.9385E-03 |
| 1007 | -147.314 | -193.541 | 2.0459E-03 | 1188 | -162.694 | -163.587 | 2.8698E-03 |
| 1008 | -145.859 | -193.568 | 1.9493E-03 | 1189 | -161.245 | -163.617 | 2.7807E-03 |
| 1009 | -144.404 | -193.596 | 1.7614E-03 | 1190 | -159.796 | -163.647 | 2.6806E-03 |
| 1010 | -156.005 | -191.519 | 2.3146E-03 | 1191 | -158.346 | -163.677 | 2.6686E-03 |
| 1011 | -154.551 | -191.548 | 2.2857E-03 | 1192 | -156.897 | -163.706 | 2.5759E-03 |
| 1012 | -153.097 | -191.576 | 2.1374E-03 | 1193 | -155.448 | -163.736 | 2.6484E-03 |
| 1013 | -151.642 | -191.605 | 2.0432E-03 | 1194 | -153.999 | -163.765 | 2.4662E-03 |
| 1014 | -150.188 | -191.633 | 1.9977E-03 | 1195 | -152.550 | -163.793 | 2.3246E-03 |
| 1015 | -148.733 | -191.661 | 2.1273E-03 | 1196 | -159.757 | -161.795 | 2.8285E-03 |
| | | | | 1197 | -158.309 | -161.825 | 2.8109E-03 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1145 | -164.300 | -170.965 | DISCRETE | 5.6545E-02 (2003,362,0000) | RANK 1 | 24 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 4.3349E-02 (2003,362,0000) | RANK 2 | 24 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 2.7934E-02 (2003,328,0000) | RANK 3 | 24 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 2.6846E-02 (2003,077,0000) | RANK 4 | 24 | HOUR |
| 1129 | -167.241 | -172.755 | DISCRETE | 3.0177E-03 | RANK 1 | 8736 | HOUR |

```
*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Grand Canyon

 ------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                   (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1197*0, 791*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
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*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                       Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                        Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                  Multiplicative scaling factor: 0.0000E+00
                        Additive scaling factor: 0.0000E+00
                 Hourly background values used?: F


  Source information
                 Source contribution processing: 0
                  0= No source contributions
                  1= Contributions are summed
                  2= TRACEBACK mode for 1 receptor
                  3= Reported TOTAL is processed


  Receptor information
                   Gridded receptors processed?: F
                  Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

```
 ------------     --------     ------------------
  CALPOST.LST         8        C:\SPC_FF\CALPOST\2003\2003_GRAND_PM.LST
       (TOPN)        11        C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_GC.DAT

*****************************************************************************************************************************************
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*****************************************************************************************************************************************


                                                        PM10          1

 4 RANKED    24   HOUR AVERAGE  CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR  (YEAR,DAY,ENDING TIME)  (ug/m**3)

RECEPTOR     COORDINATES (km)             1 RANK                      2 RANK                      3 RANK                      4 RANK
   1198     -355.887  -464.319   2.8551E-03 (2003,037,0000)  2.6885E-03 (2003,269,0000)  2.2664E-03 (2003,300,0000)  1.8415E-03 (2003,019,0000)
   1199     -353.629  -464.418   2.9616E-03 (2003,037,0000)  2.7025E-03 (2003,269,0000)  2.2258E-03 (2003,300,0000)  1.8525E-03 (2003,019,0000)
   1200     -351.371  -464.517   3.0583E-03 (2003,037,0000)  2.7136E-03 (2003,269,0000)  2.1770E-03 (2003,300,0000)  1.8611E-03 (2003,019,0000)
   1201     -362.536  -461.234   2.6819E-03 (2003,269,0000)  2.6466E-03 (2003,037,0000)  2.4313E-03 (2003,300,0000)  1.8988E-03 (2003,019,0000)
   1202     -360.279  -461.336   2.7794E-03 (2003,037,0000)  2.7062E-03 (2003,269,0000)  2.4138E-03 (2003,300,0000)  1.9107E-03 (2003,019,0000)
   1203     -358.021  -461.436   2.9061E-03 (2003,037,0000)  2.7274E-03 (2003,269,0000)  2.3912E-03 (2003,300,0000)  1.9225E-03 (2003,019,0000)
   1204     -355.764  -461.536   3.0275E-03 (2003,037,0000)  2.7462E-03 (2003,269,0000)  2.3741E-03 (2003,300,0000)  1.9345E-03 (2003,019,0000)
   1205     -353.507  -461.636   3.1339E-03 (2003,037,0000)  2.7616E-03 (2003,269,0000)  2.3358E-03 (2003,300,0000)  1.9443E-03 (2003,019,0000)
   1206     -351.249  -461.735   3.2232E-03 (2003,037,0000)  2.7739E-03 (2003,269,0000)  2.2759E-03 (2003,300,0000)  1.9537E-03 (2003,019,0000)
   1207     -348.992  -461.833   3.3068E-03 (2003,037,0000)  2.7833E-03 (2003,269,0000)  2.2216E-03 (2003,300,0000)  1.9610E-03 (2003,019,0000)
   1208     -366.923  -458.247   2.6714E-03 (2003,269,0000)  2.5076E-03 (2003,037,0000)  2.4964E-03 (2003,300,0000)  1.9689E-03 (2003,019,0000)
   1209     -364.667  -458.350   2.7025E-03 (2003,269,0000)  2.6686E-03 (2003,037,0000)  2.5405E-03 (2003,300,0000)  1.9811E-03 (2003,019,0000)
   1210     -362.410  -458.452   2.8061E-03 (2003,037,0000)  2.7312E-03 (2003,269,0000)  2.5033E-03 (2003,300,0000)  1.9931E-03 (2003,019,0000)
   1211     -360.154  -458.553   2.9502E-03 (2003,037,0000)  2.7571E-03 (2003,269,0000)  2.5178E-03 (2003,300,0000)  2.0053E-03 (2003,019,0000)
   1212     -357.897  -458.654   3.0785E-03 (2003,037,0000)  2.7800E-03 (2003,269,0000)  2.4934E-03 (2003,300,0000)  2.0178E-03 (2003,019,0000)
   1213     -355.641  -458.754   3.1963E-03 (2003,037,0000)  2.8002E-03 (2003,269,0000)  2.4685E-03 (2003,300,0000)  2.0283E-03 (2003,019,0000)
   1214     -353.384  -458.853   3.3022E-03 (2003,037,0000)  2.8172E-03 (2003,269,0000)  2.4273E-03 (2003,300,0000)  2.0391E-03 (2003,019,0000)
   1215     -351.128  -458.952   3.3963E-03 (2003,037,0000)  2.8308E-03 (2003,269,0000)  2.3860E-03 (2003,300,0000)  2.0479E-03 (2003,019,0000)
   1216     -348.871  -459.050   3.4778E-03 (2003,037,0000)  2.8415E-03 (2003,269,0000)  2.3320E-03 (2003,300,0000)  2.0554E-03 (2003,019,0000)
   1217     -346.614  -459.148   3.5365E-03 (2003,037,0000)  2.8488E-03 (2003,269,0000)  2.2595E-03 (2003,300,0000)  2.0632E-03 (2003,019,0000)
   1218     -373.563  -455.154   2.5998E-03 (2003,269,0000)  2.5557E-03 (2003,300,0000)  2.1704E-03 (2003,037,0000)  2.0294E-03 (2003,019,0000)
   1219     -366.796  -455.465   2.7133E-03 (2003,269,0000)  2.6587E-03 (2003,037,0000)  2.5638E-03 (2003,300,0000)  2.0665E-03 (2003,019,0000)
   1220     -364.541  -455.568   2.8283E-03 (2003,037,0000)  2.7463E-03 (2003,269,0000)  2.6117E-03 (2003,300,0000)  2.0787E-03 (2003,019,0000)
   1221     -362.285  -455.670   2.9774E-03 (2003,037,0000)  2.7767E-03 (2003,269,0000)  2.6091E-03 (2003,300,0000)  2.0909E-03 (2003,019,0000)
   1222     -360.029  -455.771   3.1175E-03 (2003,037,0000)  2.8043E-03 (2003,269,0000)  2.5991E-03 (2003,300,0000)  2.1029E-03 (2003,019,0000)
   1223     -357.774  -455.872   3.2474E-03 (2003,037,0000)  2.8288E-03 (2003,269,0000)  2.5830E-03 (2003,300,0000)  2.1138E-03 (2003,019,0000)
   1224     -355.518  -455.972   3.3657E-03 (2003,037,0000)  2.8505E-03 (2003,269,0000)  2.5592E-03 (2003,300,0000)  2.1251E-03 (2003,019,0000)
   1225     -353.262  -456.071   3.4712E-03 (2003,037,0000)  2.8690E-03 (2003,269,0000)  2.5250E-03 (2003,300,0000)  2.1355E-03 (2003,019,0000)
   1226     -351.006  -456.170   3.5633E-03 (2003,037,0000)  2.8840E-03 (2003,269,0000)  2.4768E-03 (2003,300,0000)  2.1447E-03 (2003,019,0000)
   1227     -348.750  -456.268   3.6304E-03 (2003,037,0000)  2.8958E-03 (2003,269,0000)  2.4183E-03 (2003,300,0000)  2.1537E-03 (2003,019,0000)
   1228     -346.494  -456.366   3.6920E-03 (2003,037,0000)  2.9043E-03 (2003,269,0000)  2.3599E-03 (2003,300,0000)  2.1592E-03 (2003,019,0000)
   1229     -375.689  -452.267   2.5881E-03 (2003,269,0000)  2.5457E-03 (2003,300,0000)  2.1185E-03 (2003,019,0000)  2.1161E-03 (2003,037,0000)
   1230     -373.434  -452.372   2.6322E-03 (2003,269,0000)  2.5993E-03 (2003,300,0000)  2.3003E-03 (2003,037,0000)  2.1305E-03 (2003,019,0000)
   1231     -371.179  -452.476   2.6740E-03 (2003,269,0000)  2.5813E-03 (2003,300,0000)  2.4690E-03 (2003,037,0000)  2.1420E-03 (2003,019,0000)
   1232     -368.924  -452.580   2.7137E-03 (2003,269,0000)  2.6754E-03 (2003,300,0000)  2.6591E-03 (2003,037,0000)  2.1542E-03 (2003,019,0000)
   1233     -366.670  -452.683   2.8278E-03 (2003,037,0000)  2.7510E-03 (2003,269,0000)  2.6873E-03 (2003,300,0000)  2.1666E-03 (2003,019,0000)
   1234     -364.415  -452.786   2.9801E-03 (2003,037,0000)  2.7857E-03 (2003,269,0000)  2.6421E-03 (2003,300,0000)  2.1794E-03 (2003,019,0000)
   1235     -362.160  -452.888   3.1434E-03 (2003,037,0000)  2.8176E-03 (2003,269,0000)  2.6853E-03 (2003,300,0000)  2.1912E-03 (2003,019,0000)
   1236     -359.905  -452.989   3.2864E-03 (2003,037,0000)  2.8470E-03 (2003,269,0000)  2.6691E-03 (2003,300,0000)  2.2030E-03 (2003,019,0000)
   1237     -357.650  -453.089   3.4179E-03 (2003,037,0000)  2.8733E-03 (2003,269,0000)  2.6677E-03 (2003,300,0000)  2.2135E-03 (2003,019,0000)
   1238     -353.140  -453.289   3.6407E-03 (2003,037,0000)  2.9165E-03 (2003,269,0000)  2.6153E-03 (2003,300,0000)  2.2346E-03 (2003,019,0000)
   1239     -350.885  -453.388   3.7302E-03 (2003,037,0000)  2.9329E-03 (2003,269,0000)  2.5753E-03 (2003,300,0000)  2.2447E-03 (2003,019,0000)
   1240     -348.630  -453.486   3.8026E-03 (2003,037,0000)  2.9463E-03 (2003,269,0000)  2.5232E-03 (2003,300,0000)  2.2529E-03 (2003,019,0000)
   1241     -346.375  -453.583   3.8642E-03 (2003,037,0000)  2.9566E-03 (2003,269,0000)  2.4795E-03 (2003,300,0000)  2.2597E-03 (2003,019,0000)
   1242     -377.813  -449.379   2.5695E-03 (2003,300,0000)  2.5663E-03 (2003,269,0000)  2.2095E-03 (2003,019,0000)  2.1045E-03 (2003,211,0000)
   1243     -375.559  -449.485   2.6235E-03 (2003,300,0000)  2.6140E-03 (2003,269,0000)  2.2437E-03 (2003,037,0000)  2.2224E-03 (2003,019,0000)
   1244     -373.305  -449.590   2.6598E-03 (2003,269,0000)  2.6127E-03 (2003,300,0000)  2.4240E-03 (2003,037,0000)  2.2349E-03 (2003,019,0000)
   1245     -371.051  -449.694   2.7033E-03 (2003,269,0000)  2.6507E-03 (2003,300,0000)  2.6092E-03 (2003,037,0000)  2.2461E-03 (2003,019,0000)
   1246     -368.797  -449.798   2.8100E-03 (2003,037,0000)  2.7474E-03 (2003,300,0000)  2.7450E-03 (2003,269,0000)  2.2586E-03 (2003,019,0000)
   1247     -366.543  -449.901   2.9854E-03 (2003,037,0000)  2.7839E-03 (2003,269,0000)  2.7567E-03 (2003,300,0000)  2.2707E-03 (2003,019,0000)
   1248     -364.289  -450.004   3.1441E-03 (2003,037,0000)  2.8203E-03 (2003,269,0000)  2.7026E-03 (2003,300,0000)  2.2828E-03 (2003,019,0000)
   1249     -362.034  -450.105   3.3053E-03 (2003,037,0000)  2.8542E-03 (2003,269,0000)  2.7233E-03 (2003,300,0000)  2.2939E-03 (2003,019,0000)
   1250     -359.780  -450.207   3.4561E-03 (2003,037,0000)  2.8849E-03 (2003,269,0000)  2.7510E-03 (2003,300,0000)  2.3063E-03 (2003,019,0000)
   1251     -357.526  -450.307   3.5892E-03 (2003,037,0000)  2.9130E-03 (2003,269,0000)  2.7476E-03 (2003,300,0000)  2.3172E-03 (2003,019,0000)
   1252     -353.018  -450.507   3.8104E-03 (2003,037,0000)  2.9596E-03 (2003,269,0000)  2.7103E-03 (2003,300,0000)  2.3373E-03 (2003,019,0000)
   1253     -350.763  -450.605   3.8972E-03 (2003,037,0000)  2.9777E-03 (2003,269,0000)  2.6729E-03 (2003,300,0000)  2.3466E-03 (2003,019,0000)
   1254     -348.509  -450.703   3.9672E-03 (2003,037,0000)  2.9923E-03 (2003,269,0000)  2.6227E-03 (2003,300,0000)  2.3547E-03 (2003,019,0000)
   1255     -346.255  -450.801   4.0209E-03 (2003,037,0000)  3.0039E-03 (2003,269,0000)  2.5819E-03 (2003,300,0000)  2.3617E-03 (2003,019,0000)
   1256     -344.000  -450.898   4.0337E-03 (2003,037,0000)  3.0108E-03 (2003,269,0000)  2.5036E-03 (2003,300,0000)  2.3655E-03 (2003,019,0000)
   1257     -379.935  -446.491   2.5760E-03 (2003,300,0000)  2.5344E-03 (2003,269,0000)  2.3088E-03 (2003,211,0000)  2.3034E-03 (2003,019,0000)
   1258     -377.682  -446.597   2.7641E-03 (2003,300,0000)  2.5856E-03 (2003,269,0000)  2.3166E-03 (2003,019,0000)  2.2619E-03 (2003,211,0000)
   1259     -375.429  -446.703   2.7750E-03 (2003,300,0000)  2.6351E-03 (2003,269,0000)  2.3841E-03 (2003,037,0000)  2.3297E-03 (2003,019,0000)
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| 1363 | -246.527 | -437.763 | 3.0665E-03 (2003,271,0000) | 2.8619E-03 (2003,265,0000) | 2.6828E-03 (2003,038,0000) | 2.2087E-03 (2003,017,0000) |
| 1364 | -244.276 | -437.832 | 3.0747E-03 (2003,271,0000) | 2.8533E-03 (2003,265,0000) | 2.6746E-03 (2003,038,0000) | 2.2591E-03 (2003,017,0000) |
| 1365 | -242.026 | -437.900 | 3.0795E-03 (2003,271,0000) | 2.8346E-03 (2003,265,0000) | 2.6588E-03 (2003,038,0000) | 2.3100E-03 (2003,017,0000) |
| 1366 | -239.775 | -437.967 | 3.0799E-03 (2003,271,0000) | 2.8066E-03 (2003,265,0000) | 2.6387E-03 (2003,038,0000) | 2.3625E-03 (2003,017,0000) |
| 1367 | -237.524 | -438.034 | 3.0744E-03 (2003,271,0000) | 2.7689E-03 (2003,265,0000) | 2.6148E-03 (2003,038,0000) | 2.4128E-03 (2003,017,0000) |
| 1368 | -235.273 | -438.101 | 3.0650E-03 (2003,271,0000) | 2.7258E-03 (2003,265,0000) | 2.5897E-03 (2003,038,0000) | 2.4629E-03 (2003,017,0000) |
| 1369 | -233.022 | -438.166 | 3.0512E-03 (2003,271,0000) | 2.6796E-03 (2003,265,0000) | 2.5590E-03 (2003,038,0000) | 2.5146E-03 (2003,017,0000) |
| 1370 | -230.772 | -438.231 | 3.0327E-03 (2003,271,0000) | 2.6315E-03 (2003,265,0000) | 2.5652E-03 (2003,017,0000) | 2.5208E-03 (2003,038,0000) |
| 1371 | -228.521 | -438.296 | 3.0094E-03 (2003,271,0000) | 2.6139E-03 (2003,017,0000) | 2.5807E-03 (2003,265,0000) | 2.4721E-03 (2003,038,0000) |
| 1372 | -226.270 | -438.360 | 2.9817E-03 (2003,271,0000) | 2.6623E-03 (2003,017,0000) | 2.5282E-03 (2003,265,0000) | 2.4197E-03 (2003,038,0000) |
| 1373 | -224.019 | -438.423 | 2.9515E-03 (2003,271,0000) | 2.7117E-03 (2003,017,0000) | 2.4732E-03 (2003,265,0000) | 2.3606E-03 (2003,038,0000) |
| 1374 | -221.768 | -438.485 | 2.9148E-03 (2003,271,0000) | 2.7597E-03 (2003,017,0000) | 2.4638E-03 (2003,157,0000) | 2.4161E-03 (2003,265,0000) |
| 1375 | -219.517 | -438.547 | 2.8760E-03 (2003,271,0000) | 2.8045E-03 (2003,017,0000) | 2.5878E-03 (2003,157,0000) | 2.3559E-03 (2003,265,0000) |
| 1376 | -217.267 | -438.609 | 2.8481E-03 (2003,017,0000) | 2.8331E-03 (2003,271,0000) | 2.7223E-03 (2003,157,0000) | 2.3978E-03 (2003,178,0000) |
| 1377 | -215.016 | -438.669 | 2.8909E-03 (2003,017,0000) | 2.8700E-03 (2003,157,0000) | 2.7880E-03 (2003,271,0000) | 2.7720E-03 (2003,298,0000) |
| 1378 | -212.765 | -438.729 | 2.9932E-03 (2003,157,0000) | 2.9318E-03 (2003,017,0000) | 2.8839E-03 (2003,298,0000) | 2.7378E-03 (2003,271,0000) |
| 1379 | -210.514 | -438.789 | 4.4943E-03 (2003,298,0000) | 3.1527E-03 (2003,157,0000) | 2.9706E-03 (2003,017,0000) | 2.6853E-03 (2003,271,0000) |
| 1380 | -208.263 | -438.847 | 4.6487E-03 (2003,298,0000) | 3.2655E-03 (2003,157,0000) | 3.0064E-03 (2003,017,0000) | 2.6299E-03 (2003,271,0000) |
| 1381 | -206.012 | -438.905 | 4.7656E-03 (2003,298,0000) | 3.3686E-03 (2003,157,0000) | 3.0398E-03 (2003,017,0000) | 2.5714E-03 (2003,271,0000) |
| 1382 | -203.761 | -438.963 | 4.8460E-03 (2003,298,0000) | 3.4623E-03 (2003,157,0000) | 3.0696E-03 (2003,017,0000) | 2.5891E-03 (2003,178,0000) |
| 1383 | -401.629 | -428.708 | 3.3866E-03 (2003,211,0000) | 3.0411E-03 (2003,062,0000) | 3.0104E-03 (2003,300,0000) | 2.8237E-03 (2003,019,0000) |
| 1384 | -399.380 | -428.820 | 3.4104E-03 (2003,211,0000) | 3.1400E-03 (2003,300,0000) | 2.9829E-03 (2003,062,0000) | 2.8456E-03 (2003,019,0000) |
| 1385 | -397.132 | -428.932 | 3.4269E-03 (2003,211,0000) | 3.1231E-03 (2003,300,0000) | 2.9092E-03 (2003,062,0000) | 2.8678E-03 (2003,019,0000) |
| 1386 | -392.636 | -429.153 | 3.4356E-03 (2003,211,0000) | 2.9022E-03 (2003,019,0000) | 2.7136E-03 (2003,062,0000) | 2.6026E-03 (2003,300,0000) |
| 1387 | -390.387 | -429.263 | 3.4271E-03 (2003,211,0000) | 2.9214E-03 (2003,019,0000) | 2.6752E-03 (2003,300,0000) | 2.6221E-03 (2003,062,0000) |
| 1388 | -388.139 | -429.372 | 3.4098E-03 (2003,211,0000) | 2.9385E-03 (2003,019,0000) | 2.7915E-03 (2003,300,0000) | 2.5406E-03 (2003,062,0000) |
| 1389 | -385.891 | -429.481 | 3.3840E-03 (2003,211,0000) | 3.1467E-03 (2003,300,0000) | 2.9538E-03 (2003,019,0000) | 2.4479E-03 (2003,062,0000) |
| 1390 | -383.642 | -429.589 | 3.3507E-03 (2003,211,0000) | 3.1425E-03 (2003,300,0000) | 2.9691E-03 (2003,019,0000) | 2.4061E-03 (2003,269,0000) |
| 1391 | -381.394 | -429.696 | 3.3106E-03 (2003,211,0000) | 3.1211E-03 (2003,300,0000) | 2.9842E-03 (2003,019,0000) | 2.4672E-03 (2003,269,0000) |
| 1392 | -379.146 | -429.803 | 3.2644E-03 (2003,211,0000) | 3.1083E-03 (2003,300,0000) | 2.9972E-03 (2003,019,0000) | 2.6053E-03 (2003,037,0000) |
| 1393 | -376.897 | -429.909 | 3.2124E-03 (2003,211,0000) | 3.1528E-03 (2003,300,0000) | 3.0126E-03 (2003,019,0000) | 2.8590E-03 (2003,037,0000) |
| 1394 | -374.649 | -430.014 | 3.1543E-03 (2003,211,0000) | 3.1128E-03 (2003,037,0000) | 3.0908E-03 (2003,300,0000) | 3.0243E-03 (2003,019,0000) |
| 1395 | -367.903 | -430.327 | 3.8459E-03 (2003,037,0000) | 3.1958E-03 (2003,300,0000) | 3.0593E-03 (2003,019,0000) | 2.9519E-03 (2003,211,0000) |
| 1396 | -365.654 | -430.430 | 4.0679E-03 (2003,037,0000) | 3.2148E-03 (2003,300,0000) | 3.0696E-03 (2003,019,0000) | 2.8762E-03 (2003,211,0000) |
| 1397 | -358.908 | -430.734 | 4.6231E-03 (2003,037,0000) | 3.2521E-03 (2003,300,0000) | 3.0960E-03 (2003,019,0000) | 2.9939E-03 (2003,269,0000) |
| 1398 | -352.162 | -431.034 | 4.9646E-03 (2003,037,0000) | 3.3240E-03 (2003,300,0000) | 3.1138E-03 (2003,019,0000) | 3.1040E-03 (2003,269,0000) |
| 1399 | -349.913 | -431.132 | 5.0232E-03 (2003,037,0000) | 3.3290E-03 (2003,300,0000) | 3.1342E-03 (2003,269,0000) | 3.1175E-03 (2003,019,0000) |
| 1400 | -347.664 | -431.230 | 5.0497E-03 (2003,037,0000) | 3.2583E-03 (2003,300,0000) | 3.1593E-03 (2003,269,0000) | 3.1197E-03 (2003,019,0000) |
| 1401 | -248.691 | -434.910 | 3.1223E-03 (2003,271,0000) | 2.9833E-03 (2003,265,0000) | 2.7566E-03 (2003,038,0000) | 2.2549E-03 (2003,269,0000) |
| 1402 | -246.441 | -434.980 | 3.1376E-03 (2003,271,0000) | 2.9847E-03 (2003,265,0000) | 2.7566E-03 (2003,038,0000) | 2.2394E-03 (2003,017,0000) |
| 1403 | -244.191 | -435.049 | 3.1488E-03 (2003,271,0000) | 2.9774E-03 (2003,265,0000) | 2.7484E-03 (2003,038,0000) | 2.2928E-03 (2003,017,0000) |
| 1404 | -241.942 | -435.117 | 3.1553E-03 (2003,271,0000) | 2.9588E-03 (2003,265,0000) | 2.7330E-03 (2003,038,0000) | 2.3444E-03 (2003,017,0000) |
| 1405 | -239.692 | -435.184 | 3.1562E-03 (2003,271,0000) | 2.9303E-03 (2003,265,0000) | 2.7127E-03 (2003,038,0000) | 2.3965E-03 (2003,017,0000) |
| 1406 | -237.442 | -435.251 | 3.1542E-03 (2003,271,0000) | 2.8933E-03 (2003,265,0000) | 2.6907E-03 (2003,038,0000) | 2.4507E-03 (2003,017,0000) |
| 1407 | -235.192 | -435.318 | 3.1468E-03 (2003,271,0000) | 2.8491E-03 (2003,265,0000) | 2.6657E-03 (2003,038,0000) | 2.5041E-03 (2003,017,0000) |
| 1408 | -232.942 | -435.383 | 3.1329E-03 (2003,271,0000) | 2.8011E-03 (2003,265,0000) | 2.6338E-03 (2003,038,0000) | 2.5570E-03 (2003,017,0000) |
| 1409 | -230.692 | -435.448 | 3.1157E-03 (2003,271,0000) | 2.7517E-03 (2003,265,0000) | 2.6086E-03 (2003,017,0000) | 2.5932E-03 (2003,038,0000) |
| 1410 | -228.442 | -435.513 | 3.0946E-03 (2003,271,0000) | 2.6990E-03 (2003,265,0000) | 2.6610E-03 (2003,017,0000) | 2.5434E-03 (2003,038,0000) |
| 1411 | -226.192 | -435.577 | 3.0692E-03 (2003,271,0000) | 2.7138E-03 (2003,017,0000) | 2.6449E-03 (2003,265,0000) | 2.4906E-03 (2003,038,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1412 | -223.941 | -435.640 | 3.0376E-03 (2003,271,0000) | 2.7635E-03 (2003,017,0000) | 2.5888E-03 (2003,265,0000) | 2.4300E-03 (2003,038,0000) |
| 1413 | -221.691 | -435.702 | 3.0038E-03 (2003,271,0000) | 2.8146E-03 (2003,017,0000) | 2.5351E-03 (2003,157,0000) | 2.5291E-03 (2003,265,0000) |
| 1414 | -219.441 | -435.764 | 2.9652E-03 (2003,271,0000) | 2.8639E-03 (2003,017,0000) | 2.6587E-03 (2003,157,0000) | 2.4668E-03 (2003,265,0000) |
| 1415 | -217.191 | -435.825 | 2.9226E-03 (2003,271,0000) | 2.9118E-03 (2003,017,0000) | 2.8088E-03 (2003,157,0000) | 2.4728E-03 (2003,178,0000) |
| 1416 | -214.941 | -435.886 | 2.9574E-03 (2003,017,0000) | 2.8772E-03 (2003,157,0000) | 2.8740E-03 (2003,271,0000) | 2.5154E-03 (2003,178,0000) |
| 1417 | -212.691 | -435.946 | 3.0493E-03 (2003,157,0000) | 3.0018E-03 (2003,017,0000) | 2.8251E-03 (2003,271,0000) | 2.5549E-03 (2003,178,0000) |
| 1418 | -210.441 | -436.005 | 3.8085E-03 (2003,298,0000) | 3.2238E-03 (2003,157,0000) | 3.0438E-03 (2003,017,0000) | 2.7721E-03 (2003,271,0000) |
| 1419 | -208.190 | -436.064 | 4.7232E-03 (2003,298,0000) | 3.3773E-03 (2003,157,0000) | 3.0827E-03 (2003,017,0000) | 2.7155E-03 (2003,271,0000) |
| 1420 | -205.940 | -436.122 | 4.8413E-03 (2003,298,0000) | 3.4967E-03 (2003,157,0000) | 3.1185E-03 (2003,017,0000) | 2.6568E-03 (2003,271,0000) |
| 1421 | -203.690 | -436.179 | 4.9199E-03 (2003,298,0000) | 3.5948E-03 (2003,157,0000) | 3.1525E-03 (2003,017,0000) | 2.6760E-03 (2003,178,0000) |
| 1422 | -401.489 | -425.927 | 3.5045E-03 (2003,211,0000) | 3.1525E-03 (2003,062,0000) | 2.9336E-03 (2003,019,0000) | 2.8405E-03 (2003,300,0000) |
| 1423 | -399.242 | -426.039 | 3.5325E-03 (2003,211,0000) | 3.1329E-03 (2003,300,0000) | 3.0946E-03 (2003,062,0000) | 2.9576E-03 (2003,019,0000) |
| 1424 | -396.994 | -426.151 | 3.5533E-03 (2003,211,0000) | 3.0196E-03 (2003,062,0000) | 2.9807E-03 (2003,019,0000) | 2.9229E-03 (2003,300,0000) |
| 1425 | -394.747 | -426.262 | 3.5659E-03 (2003,211,0000) | 2.9973E-03 (2003,019,0000) | 2.9179E-03 (2003,062,0000) | 2.6727E-03 (2003,300,0000) |
| 1426 | -392.499 | -426.372 | 3.5706E-03 (2003,211,0000) | 3.2184E-03 (2003,300,0000) | 3.0205E-03 (2003,019,0000) | 2.8648E-03 (2003,062,0000) |
| 1427 | -390.252 | -426.482 | 3.5658E-03 (2003,211,0000) | 3.1460E-03 (2003,300,0000) | 3.0387E-03 (2003,019,0000) | 2.7632E-03 (2003,062,0000) |
| 1428 | -388.004 | -426.591 | 3.5522E-03 (2003,211,0000) | 3.1925E-03 (2003,300,0000) | 3.0566E-03 (2003,019,0000) | 2.6708E-03 (2003,062,0000) |
| 1429 | -385.757 | -426.700 | 3.5295E-03 (2003,211,0000) | 3.1866E-03 (2003,300,0000) | 3.0725E-03 (2003,019,0000) | 2.5647E-03 (2003,062,0000) |
| 1430 | -383.509 | -426.808 | 3.4979E-03 (2003,211,0000) | 3.1689E-03 (2003,300,0000) | 3.0882E-03 (2003,019,0000) | 2.4543E-03 (2003,062,0000) |
| 1431 | -381.262 | -426.915 | 3.4593E-03 (2003,211,0000) | 3.1688E-03 (2003,300,0000) | 3.1038E-03 (2003,019,0000) | 2.4454E-03 (2003,269,0000) |
| 1432 | -379.014 | -427.022 | 3.4138E-03 (2003,211,0000) | 3.1784E-03 (2003,300,0000) | 3.1185E-03 (2003,019,0000) | 2.6918E-03 (2003,037,0000) |
| 1433 | -376.766 | -427.128 | 3.3618E-03 (2003,211,0000) | 3.2311E-03 (2003,300,0000) | 3.1327E-03 (2003,019,0000) | 2.9558E-03 (2003,037,0000) |
| 1434 | -374.519 | -427.233 | 3.3036E-03 (2003,211,0000) | 3.2197E-03 (2003,037,0000) | 3.1972E-03 (2003,300,0000) | 3.1456E-03 (2003,019,0000) |
| 1435 | -365.527 | -427.648 | 4.2123E-03 (2003,037,0000) | 3.2866E-03 (2003,300,0000) | 3.1899E-03 (2003,019,0000) | 3.0203E-03 (2003,211,0000) |
| 1436 | -349.792 | -428.351 | 5.1767E-03 (2003,037,0000) | 3.4188E-03 (2003,300,0000) | 3.2306E-03 (2003,019,0000) | 3.1307E-03 (2003,269,0000) |
| 1437 | -347.544 | -428.448 | 5.2009E-03 (2003,037,0000) | 3.4187E-03 (2003,300,0000) | 3.2310E-03 (2003,019,0000) | 3.1587E-03 (2003,269,0000) |
| 1438 | -345.296 | -428.546 | 5.1961E-03 (2003,037,0000) | 3.3590E-03 (2003,300,0000) | 3.2290E-03 (2003,019,0000) | 3.1830E-03 (2003,269,0000) |
| 1439 | -250.854 | -432.057 | 3.1694E-03 (2003,271,0000) | 3.0879E-03 (2003,265,0000) | 2.8133E-03 (2003,038,0000) | 2.3259E-03 (2003,269,0000) |
| 1440 | -248.605 | -432.128 | 3.1902E-03 (2003,271,0000) | 3.1003E-03 (2003,265,0000) | 2.8228E-03 (2003,038,0000) | 2.2625E-03 (2003,269,0000) |
| 1441 | -246.356 | -432.197 | 3.2073E-03 (2003,271,0000) | 3.1035E-03 (2003,265,0000) | 2.8233E-03 (2003,038,0000) | 2.2683E-03 (2003,017,0000) |
| 1442 | -244.107 | -432.266 | 3.2183E-03 (2003,271,0000) | 3.0946E-03 (2003,265,0000) | 2.8115E-03 (2003,038,0000) | 2.3191E-03 (2003,017,0000) |
| 1443 | -241.858 | -432.334 | 3.2267E-03 (2003,271,0000) | 3.0777E-03 (2003,265,0000) | 2.7969E-03 (2003,038,0000) | 2.3732E-03 (2003,017,0000) |
| 1444 | -239.608 | -432.401 | 3.2313E-03 (2003,271,0000) | 3.0506E-03 (2003,265,0000) | 2.7824E-03 (2003,038,0000) | 2.4301E-03 (2003,017,0000) |
| 1445 | -237.359 | -432.468 | 3.2319E-03 (2003,271,0000) | 3.0131E-03 (2003,265,0000) | 2.7645E-03 (2003,038,0000) | 2.4863E-03 (2003,017,0000) |
| 1446 | -235.110 | -432.535 | 3.2250E-03 (2003,271,0000) | 2.9676E-03 (2003,265,0000) | 2.7353E-03 (2003,038,0000) | 2.5391E-03 (2003,017,0000) |
| 1447 | -232.861 | -432.600 | 3.2172E-03 (2003,271,0000) | 2.9213E-03 (2003,265,0000) | 2.7044E-03 (2003,038,0000) | 2.5963E-03 (2003,017,0000) |
| 1448 | -230.612 | -432.665 | 3.2006E-03 (2003,271,0000) | 2.8706E-03 (2003,265,0000) | 2.6623E-03 (2003,038,0000) | 2.6511E-03 (2003,017,0000) |
| 1449 | -228.362 | -432.730 | 3.1804E-03 (2003,271,0000) | 2.8166E-03 (2003,265,0000) | 2.7054E-03 (2003,017,0000) | 2.6135E-03 (2003,038,0000) |
| 1450 | -226.113 | -432.793 | 3.1568E-03 (2003,271,0000) | 2.7616E-03 (2003,017,0000) | 2.7601E-03 (2003,265,0000) | 2.5617E-03 (2003,038,0000) |
| 1451 | -223.864 | -432.857 | 3.1279E-03 (2003,271,0000) | 2.8163E-03 (2003,017,0000) | 2.7019E-03 (2003,265,0000) | 2.5042E-03 (2003,038,0000) |
| 1452 | -221.614 | -432.919 | 3.0948E-03 (2003,271,0000) | 2.8701E-03 (2003,017,0000) | 2.6407E-03 (2003,265,0000) | 2.6046E-03 (2003,157,0000) |
| 1453 | -219.365 | -432.981 | 3.6908E-03 (2003,298,0000) | 3.0581E-03 (2003,271,0000) | 2.9231E-03 (2003,017,0000) | 2.7840E-03 (2003,157,0000) |
| 1454 | -217.116 | -433.042 | 3.0154E-03 (2003,271,0000) | 2.9730E-03 (2003,017,0000) | 2.8965E-03 (2003,157,0000) | 2.5488E-03 (2003,178,0000) |
| 1455 | -214.866 | -433.103 | 3.0209E-03 (2003,017,0000) | 2.9678E-03 (2003,271,0000) | 2.7806E-03 (2003,157,0000) | 2.5936E-03 (2003,178,0000) |
| 1456 | -212.617 | -433.163 | 3.0685E-03 (2003,017,0000) | 2.9162E-03 (2003,271,0000) | 2.8722E-03 (2003,157,0000) | 2.6355E-03 (2003,178,0000) |
| 1457 | -210.368 | -433.222 | 3.2005E-03 (2003,157,0000) | 3.1145E-03 (2003,017,0000) | 2.8631E-03 (2003,271,0000) | 2.6736E-03 (2003,178,0000) |
| 1458 | -208.118 | -433.281 | 3.4000E-03 (2003,157,0000) | 3.1586E-03 (2003,017,0000) | 2.8070E-03 (2003,271,0000) | 2.7077E-03 (2003,178,0000) |
| 1459 | -205.869 | -433.339 | 4.9169E-03 (2003,298,0000) | 3.5994E-03 (2003,157,0000) | 3.1990E-03 (2003,017,0000) | 2.7473E-03 (2003,271,0000) |
| 1460 | -203.619 | -433.396 | 4.9924E-03 (2003,298,0000) | 3.7198E-03 (2003,157,0000) | 3.2352E-03 (2003,017,0000) | 2.7641E-03 (2003,178,0000) |
| 1461 | -401.350 | -423.146 | 3.6136E-03 (2003,211,0000) | 3.2423E-03 (2003,062,0000) | 3.0373E-03 (2003,019,0000) | 2.5995E-03 (2003,300,0000) |
| 1462 | -399.103 | -423.258 | 3.6465E-03 (2003,211,0000) | 3.2079E-03 (2003,062,0000) | 3.0674E-03 (2003,019,0000) | 2.9212E-03 (2003,300,0000) |
| 1463 | -396.857 | -423.370 | 3.6715E-03 (2003,211,0000) | 3.1264E-03 (2003,062,0000) | 3.0911E-03 (2003,019,0000) | 2.8019E-03 (2003,300,0000) |
| 1464 | -394.610 | -423.481 | 3.6890E-03 (2003,211,0000) | 3.2451E-03 (2003,300,0000) | 3.1134E-03 (2003,019,0000) | 3.0745E-03 (2003,062,0000) |
| 1465 | -392.363 | -423.592 | 3.6971E-03 (2003,211,0000) | 3.2487E-03 (2003,300,0000) | 3.1350E-03 (2003,019,0000) | 2.9885E-03 (2003,062,0000) |
| 1466 | -390.117 | -423.701 | 3.6967E-03 (2003,211,0000) | 3.2340E-03 (2003,300,0000) | 3.1539E-03 (2003,019,0000) | 2.8945E-03 (2003,062,0000) |
| 1467 | -387.870 | -423.810 | 3.6870E-03 (2003,211,0000) | 3.2284E-03 (2003,300,0000) | 3.1722E-03 (2003,019,0000) | 2.7935E-03 (2003,062,0000) |
| 1468 | -385.623 | -423.919 | 3.6676E-03 (2003,211,0000) | 3.2414E-03 (2003,300,0000) | 3.1898E-03 (2003,019,0000) | 2.6867E-03 (2003,062,0000) |
| 1469 | -383.376 | -424.027 | 3.6387E-03 (2003,211,0000) | 3.2303E-03 (2003,300,0000) | 3.2071E-03 (2003,019,0000) | 2.5745E-03 (2003,062,0000) |
| 1470 | -381.129 | -424.134 | 3.6016E-03 (2003,211,0000) | 3.2693E-03 (2003,300,0000) | 3.2221E-03 (2003,019,0000) | 2.5023E-03 (2003,037,0000) |
| 1471 | -378.882 | -424.241 | 3.5574E-03 (2003,211,0000) | 3.2786E-03 (2003,300,0000) | 3.2382E-03 (2003,019,0000) | 2.7712E-03 (2003,037,0000) |
| 1472 | -376.636 | -424.347 | 3.5062E-03 (2003,211,0000) | 3.2785E-03 (2003,300,0000) | 3.2525E-03 (2003,019,0000) | 3.0452E-03 (2003,037,0000) |
| 1473 | -347.423 | -425.667 | 5.2835E-03 (2003,037,0000) | 3.3537E-03 (2003,300,0000) | 3.3409E-03 (2003,019,0000) | 3.1497E-03 (2003,269,0000) |
| 1474 | -345.176 | -425.764 | 5.2733E-03 (2003,037,0000) | 3.3684E-03 (2003,300,0000) | 3.3369E-03 (2003,019,0000) | 3.1763E-03 (2003,269,0000) |
| 1475 | -342.929 | -425.860 | 5.1447E-03 (2003,037,0000) | 3.3312E-03 (2003,019,0000) | 3.3305E-03 (2003,300,0000) | 3.1985E-03 (2003,269,0000) |
| 1476 | -340.681 | -425.956 | 5.0547E-03 (2003,037,0000) | 3.3272E-03 (2003,300,0000) | 3.3217E-03 (2003,019,0000) | 3.2169E-03 (2003,269,0000) |
| 1477 | -336.186 | -426.146 | 4.9780E-03 (2003,037,0000) | 3.3387E-03 (2003,300,0000) | 3.2950E-03 (2003,019,0000) | 3.2452E-03 (2003,269,0000) |
| 1478 | -255.264 | -429.133 | 3.1748E-03 (2003,271,0000) | 3.1487E-03 (2003,265,0000) | 2.8314E-03 (2003,038,0000) | 2.4423E-03 (2003,026,0000) |
| 1479 | -253.015 | -429.204 | 3.2067E-03 (2003,271,0000) | 3.1771E-03 (2003,265,0000) | 2.8554E-03 (2003,038,0000) | 2.3944E-03 (2003,026,0000) |
| 1480 | -250.767 | -429.275 | 3.2333E-03 (2003,271,0000) | 3.1990E-03 (2003,265,0000) | 2.8725E-03 (2003,038,0000) | 2.3449E-03 (2003,026,0000) |
| 1481 | -248.519 | -429.345 | 3.2559E-03 (2003,271,0000) | 3.2078E-03 (2003,265,0000) | 2.8720E-03 (2003,038,0000) | 2.2938E-03 (2003,026,0000) |
| 1482 | -246.270 | -429.414 | 3.2747E-03 (2003,271,0000) | 3.2139E-03 (2003,265,0000) | 2.8734E-03 (2003,038,0000) | 2.2902E-03 (2003,017,0000) |
| 1483 | -244.022 | -429.483 | 3.2877E-03 (2003,271,0000) | 3.2091E-03 (2003,265,0000) | 2.8684E-03 (2003,038,0000) | 2.3459E-03 (2003,017,0000) |
| 1484 | -241.774 | -429.551 | 3.3006E-03 (2003,271,0000) | 3.1934E-03 (2003,265,0000) | 2.8593E-03 (2003,038,0000) | 2.4031E-03 (2003,017,0000) |
| 1485 | -239.525 | -429.619 | 3.3062E-03 (2003,271,0000) | 3.1670E-03 (2003,265,0000) | 2.8465E-03 (2003,038,0000) | 2.4504E-03 (2003,017,0000) |
| 1486 | -237.277 | -429.685 | 3.3086E-03 (2003,271,0000) | 3.1309E-03 (2003,265,0000) | 2.8280E-03 (2003,038,0000) | 2.5166E-03 (2003,017,0000) |
| 1487 | -235.028 | -429.752 | 3.3053E-03 (2003,271,0000) | 3.0866E-03 (2003,265,0000) | 2.8027E-03 (2003,038,0000) | 2.5753E-03 (2003,017,0000) |
| 1488 | -232.780 | -429.817 | 3.2976E-03 (2003,271,0000) | 3.0366E-03 (2003,265,0000) | 2.7692E-03 (2003,038,0000) | 2.6321E-03 (2003,017,0000) |
| 1489 | -230.532 | -429.882 | 3.2865E-03 (2003,271,0000) | 2.9860E-03 (2003,265,0000) | 2.7313E-03 (2003,038,0000) | 2.6910E-03 (2003,017,0000) |
| 1490 | -228.283 | -429.947 | 3.2690E-03 (2003,271,0000) | 2.9307E-03 (2003,265,0000) | 2.7490E-03 (2003,017,0000) | 2.6851E-03 (2003,038,0000) |
| 1491 | -226.035 | -430.010 | 3.2465E-03 (2003,271,0000) | 2.8723E-03 (2003,265,0000) | 2.8078E-03 (2003,017,0000) | 2.6324E-03 (2003,038,0000) |
| 1492 | -223.786 | -430.073 | 3.2199E-03 (2003,271,0000) | 2.8640E-03 (2003,017,0000) | 2.8129E-03 (2003,265,0000) | 2.5740E-03 (2003,038,0000) |
| 1493 | -221.538 | -430.136 | 3.1881E-03 (2003,271,0000) | 2.9211E-03 (2003,017,0000) | 2.7510E-03 (2003,265,0000) | 2.6814E-03 (2003,157,0000) |
| 1494 | -219.289 | -430.198 | 3.7477E-03 (2003,298,0000) | 3.1545E-03 (2003,271,0000) | 2.9789E-03 (2003,017,0000) | 2.8639E-03 (2003,157,0000) |
| 1495 | -217.040 | -430.259 | 3.1106E-03 (2003,271,0000) | 3.0323E-03 (2003,017,0000) | 2.9351E-03 (2003,157,0000) | 2.6244E-03 (2003,178,0000) |
| 1496 | -214.792 | -430.320 | 3.1162E-03 (2003,157,0000) | 3.0861E-03 (2003,017,0000) | 3.0663E-03 (2003,271,0000) | 2.6717E-03 (2003,178,0000) |
| 1497 | -212.543 | -430.379 | 3.2445E-03 (2003,157,0000) | 3.1372E-03 (2003,017,0000) | 3.0168E-03 (2003,271,0000) | 2.7157E-03 (2003,178,0000) |
| 1498 | -210.295 | -430.439 | 3.3199E-03 (2003,157,0000) | 3.1849E-03 (2003,017,0000) | 2.9609E-03 (2003,271,0000) | 2.7559E-03 (2003,178,0000) |
| 1499 | -208.046 | -430.497 | 3.3827E-03 (2003,157,0000) | 3.2310E-03 (2003,017,0000) | 2.9022E-03 (2003,271,0000) | 2.7922E-03 (2003,178,0000) |
| 1500 | -205.797 | -430.556 | 4.9949E-03 (2003,298,0000) | 3.7297E-03 (2003,157,0000) | 3.2761E-03 (2003,017,0000) | 2.8446E-03 (2003,271,0000) |
| 1501 | -203.549 | -430.613 | 4.7653E-03 (2003,298,0000) | 3.8333E-03 (2003,157,0000) | 3.3159E-03 (2003,017,0000) | 2.8519E-03 (2003,178,0000) |
| 1502 | -396.719 | -420.589 | 3.7812E-03 (2003,211,0000) | 3.2462E-03 (2003,062,0000) | 3.2004E-03 (2003,019,0000) | 2.7838E-03 (2003,300,0000) |
| 1503 | -394.473 | -420.700 | 3.8026E-03 (2003,211,0000) | 3.2647E-03 (2003,300,0000) | 3.2239E-03 (2003,019,0000) | 3.2010E-03 (2003,062,0000) |
| 1504 | -392.227 | -420.811 | 3.8158E-03 (2003,211,0000) | 3.2708E-03 (2003,300,0000) | 3.2469E-03 (2003,019,0000) | 3.1163E-03 (2003,062,0000) |
| 1505 | -389.981 | -420.921 | 3.8192E-03 (2003,211,0000) | 3.2669E-03 (2003,019,0000) | 3.2389E-03 (2003,300,0000) | 3.0175E-03 (2003,062,0000) |
| 1506 | -387.735 | -421.030 | 3.8131E-03 (2003,211,0000) | 3.2879E-03 (2003,019,0000) | 3.1949E-03 (2003,300,0000) | 2.9076E-03 (2003,062,0000) |
| 1507 | -385.489 | -421.138 | 3.7973E-03 (2003,211,0000) | 3.3060E-03 (2003,019,0000) | 3.2861E-03 (2003,300,0000) | 2.8142E-03 (2003,062,0000) |
| 1508 | -383.243 | -421.246 | 3.7717E-03 (2003,211,0000) | 3.3583E-03 (2003,300,0000) | 3.3236E-03 (2003,019,0000) | 2.6999E-03 (2003,062,0000) |
| 1509 | -380.997 | -421.353 | 3.7368E-03 (2003,211,0000) | 3.3401E-03 (2003,019,0000) | 3.3276E-03 (2003,300,0000) | 2.5809E-03 (2003,062,0000) |
| 1510 | -345.056 | -422.982 | 5.4694E-03 (2003,037,0000) | 3.4801E-03 (2003,300,0000) | 3.4427E-03 (2003,019,0000) | 3.1639E-03 (2003,269,0000) |
| 1511 | -333.823 | -423.459 | 4.8801E-03 (2003,037,0000) | 3.3968E-03 (2003,300,0000) | 3.3712E-03 (2003,019,0000) | 3.2505E-03 (2003,269,0000) |
| 1512 | -259.670 | -426.206 | 3.1756E-03 (2003,265,0000) | 3.1601E-03 (2003,271,0000) | 2.8181E-03 (2003,038,0000) | 2.6587E-03 (2003,026,0000) |
| 1513 | -257.422 | -426.278 | 3.2148E-03 (2003,265,0000) | 3.1993E-03 (2003,271,0000) | 2.8529E-03 (2003,038,0000) | 2.6147E-03 (2003,026,0000) |
| 1514 | -255.175 | -426.350 | 3.2370E-03 (2003,265,0000) | 3.2327E-03 (2003,271,0000) | 2.8637E-03 (2003,038,0000) | 2.5665E-03 (2003,026,0000) |
| 1515 | -252.927 | -426.421 | 3.2713E-03 (2003,265,0000) | 3.2651E-03 (2003,271,0000) | 2.9004E-03 (2003,038,0000) | 2.5166E-03 (2003,026,0000) |
| 1516 | -250.680 | -426.492 | 3.2950E-03 (2003,271,0000) | 3.2943E-03 (2003,265,0000) | 2.9053E-03 (2003,038,0000) | 2.4638E-03 (2003,026,0000) |
| 1517 | -248.432 | -426.562 | 3.3204E-03 (2003,271,0000) | 3.3119E-03 (2003,265,0000) | 2.9159E-03 (2003,038,0000) | 2.4093E-03 (2003,026,0000) |
| 1518 | -246.185 | -426.631 | 3.3407E-03 (2003,271,0000) | 3.3193E-03 (2003,265,0000) | 2.9199E-03 (2003,038,0000) | 2.3539E-03 (2003,026,0000) |
| 1519 | -243.937 | -426.700 | 3.3616E-03 (2003,271,0000) | 3.3173E-03 (2003,265,0000) | 2.9295E-03 (2003,038,0000) | 2.3738E-03 (2003,017,0000) |
| 1520 | -241.690 | -426.768 | 3.3744E-03 (2003,271,0000) | 3.3047E-03 (2003,265,0000) | 2.9239E-03 (2003,038,0000) | 2.4323E-03 (2003,017,0000) |
| 1521 | -239.442 | -426.836 | 3.3821E-03 (2003,271,0000) | 3.2788E-03 (2003,265,0000) | 2.9071E-03 (2003,038,0000) | 2.4895E-03 (2003,017,0000) |
| 1522 | -237.195 | -426.903 | 3.3890E-03 (2003,271,0000) | 3.2445E-03 (2003,265,0000) | 2.8931E-03 (2003,038,0000) | 2.5509E-03 (2003,017,0000) |
| 1523 | -234.947 | -426.969 | 3.3869E-03 (2003,271,0000) | 3.2004E-03 (2003,265,0000) | 2.8638E-03 (2003,038,0000) | 2.6069E-03 (2003,017,0000) |
| 1524 | -232.699 | -427.034 | 3.3827E-03 (2003,271,0000) | 3.1492E-03 (2003,265,0000) | 2.8344E-03 (2003,038,0000) | 2.6699E-03 (2003,017,0000) |
| 1525 | -230.452 | -427.099 | 3.3733E-03 (2003,271,0000) | 3.0975E-03 (2003,265,0000) | 2.7967E-03 (2003,038,0000) | 2.7310E-03 (2003,017,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1526 | -228.204 | -427.164 | 3.3605E-03 (2003,271,0000) | 3.0418E-03 (2003,265,0000) | 2.7945E-03 (2003,017,0000) | 2.7536E-03 (2003,038,0000) |
| 1527 | -225.956 | -427.227 | 3.3379E-03 (2003,271,0000) | 2.9824E-03 (2003,265,0000) | 2.8498E-03 (2003,017,0000) | 2.6998E-03 (2003,038,0000) |
| 1528 | -223.708 | -427.290 | 3.3134E-03 (2003,271,0000) | 2.9204E-03 (2003,265,0000) | 2.9115E-03 (2003,017,0000) | 2.6444E-03 (2003,038,0000) |
| 1529 | -221.461 | -427.353 | 3.5059E-03 (2003,298,0000) | 3.2870E-03 (2003,271,0000) | 2.9752E-03 (2003,017,0000) | 2.8586E-03 (2003,265,0000) |
| 1530 | -219.213 | -427.415 | 3.8113E-03 (2003,298,0000) | 3.2519E-03 (2003,271,0000) | 3.0336E-03 (2003,017,0000) | 2.9491E-03 (2003,157,0000) |
| 1531 | -216.965 | -427.476 | 4.1008E-03 (2003,298,0000) | 3.2114E-03 (2003,271,0000) | 3.1120E-03 (2003,157,0000) | 3.0907E-03 (2003,017,0000) |
| 1532 | -214.717 | -427.536 | 4.3677E-03 (2003,298,0000) | 3.2743E-03 (2003,157,0000) | 3.1688E-03 (2003,271,0000) | 3.1473E-03 (2003,017,0000) |
| 1533 | -212.469 | -427.596 | 3.3479E-03 (2003,157,0000) | 3.2006E-03 (2003,017,0000) | 3.1182E-03 (2003,271,0000) | 2.7960E-03 (2003,178,0000) |
| 1534 | -210.222 | -427.656 | 3.3908E-03 (2003,157,0000) | 3.2536E-03 (2003,017,0000) | 3.0634E-03 (2003,271,0000) | 2.8386E-03 (2003,178,0000) |
| 1535 | -207.974 | -427.714 | 3.3038E-03 (2003,017,0000) | 3.2266E-03 (2003,157,0000) | 3.0057E-03 (2003,271,0000) | 2.8767E-03 (2003,178,0000) |
| 1536 | -205.726 | -427.772 | 5.0731E-03 (2003,298,0000) | 3.8710E-03 (2003,157,0000) | 3.3538E-03 (2003,017,0000) | 2.9494E-03 (2003,271,0000) |
| 1537 | -203.478 | -427.830 | 4.7019E-03 (2003,298,0000) | 3.9740E-03 (2003,157,0000) | 3.3966E-03 (2003,017,0000) | 2.9392E-03 (2003,178,0000) |
| 1538 | -385.355 | -418.357 | 3.9184E-03 (2003,211,0000) | 3.4202E-03 (2003,019,0000) | 3.3654E-03 (2003,300,0000) | 2.9453E-03 (2003,062,0000) |
| 1539 | -347.182 | -420.104 | 5.6002E-03 (2003,037,0000) | 3.5517E-03 (2003,019,0000) | 3.5031E-03 (2003,300,0000) | 3.1137E-03 (2003,269,0000) |
| 1540 | -266.320 | -423.202 | 3.1293E-03 (2003,257,0000) | 3.1270E-03 (2003,265,0000) | 3.0766E-03 (2003,271,0000) | 2.8895E-03 (2003,026,0000) |
| 1541 | -264.073 | -423.276 | 3.1568E-03 (2003,265,0000) | 3.1253E-03 (2003,271,0000) | 2.8625E-03 (2003,026,0000) | 2.7776E-03 (2003,038,0000) |
| 1542 | -261.826 | -423.350 | 3.2266E-03 (2003,265,0000) | 3.1731E-03 (2003,271,0000) | 2.8694E-03 (2003,257,0000) | 2.8296E-03 (2003,026,0000) |
| 1543 | -259.580 | -423.423 | 3.2699E-03 (2003,265,0000) | 3.2160E-03 (2003,271,0000) | 2.8605E-03 (2003,038,0000) | 2.7898E-03 (2003,026,0000) |
| 1544 | -257.333 | -423.496 | 3.3114E-03 (2003,265,0000) | 3.2566E-03 (2003,271,0000) | 2.8938E-03 (2003,038,0000) | 2.7456E-03 (2003,026,0000) |
| 1545 | -255.086 | -423.568 | 3.3398E-03 (2003,265,0000) | 3.2928E-03 (2003,271,0000) | 2.9207E-03 (2003,038,0000) | 2.6958E-03 (2003,026,0000) |
| 1546 | -252.840 | -423.639 | 3.3611E-03 (2003,265,0000) | 3.3253E-03 (2003,271,0000) | 2.9191E-03 (2003,038,0000) | 2.6424E-03 (2003,026,0000) |
| 1547 | -250.593 | -423.709 | 3.3881E-03 (2003,265,0000) | 3.3556E-03 (2003,271,0000) | 2.9373E-03 (2003,038,0000) | 2.5874E-03 (2003,026,0000) |
| 1548 | -248.346 | -423.779 | 3.4082E-03 (2003,265,0000) | 3.3847E-03 (2003,271,0000) | 2.9510E-03 (2003,038,0000) | 2.5295E-03 (2003,026,0000) |
| 1549 | -246.099 | -423.849 | 3.4207E-03 (2003,265,0000) | 3.4112E-03 (2003,271,0000) | 2.9747E-03 (2003,038,0000) | 2.4697E-03 (2003,026,0000) |
| 1550 | -243.853 | -423.917 | 3.4281E-03 (2003,271,0000) | 3.4192E-03 (2003,265,0000) | 2.9666E-03 (2003,038,0000) | 2.4112E-03 (2003,026,0000) |
| 1551 | -241.606 | -423.986 | 3.4476E-03 (2003,271,0000) | 3.4093E-03 (2003,265,0000) | 2.9773E-03 (2003,038,0000) | 2.4607E-03 (2003,017,0000) |
| 1552 | -239.359 | -424.053 | 3.4608E-03 (2003,271,0000) | 3.3871E-03 (2003,265,0000) | 2.9707E-03 (2003,038,0000) | 2.5224E-03 (2003,017,0000) |
| 1553 | -237.112 | -424.120 | 3.4656E-03 (2003,271,0000) | 3.3517E-03 (2003,265,0000) | 2.9492E-03 (2003,038,0000) | 2.5796E-03 (2003,017,0000) |
| 1554 | -234.865 | -424.186 | 3.4690E-03 (2003,271,0000) | 3.3070E-03 (2003,265,0000) | 2.9234E-03 (2003,038,0000) | 2.6411E-03 (2003,017,0000) |
| 1555 | -232.618 | -424.252 | 3.4683E-03 (2003,271,0000) | 3.2554E-03 (2003,265,0000) | 2.8969E-03 (2003,038,0000) | 2.7039E-03 (2003,017,0000) |
| 1556 | -230.371 | -424.317 | 3.4597E-03 (2003,271,0000) | 3.2031E-03 (2003,265,0000) | 2.8590E-03 (2003,038,0000) | 2.7648E-03 (2003,017,0000) |
| 1557 | -228.125 | -424.381 | 3.4505E-03 (2003,271,0000) | 3.1470E-03 (2003,265,0000) | 2.8332E-03 (2003,017,0000) | 2.8187E-03 (2003,038,0000) |
| 1558 | -225.878 | -424.445 | 3.4346E-03 (2003,271,0000) | 3.0873E-03 (2003,265,0000) | 2.9205E-03 (2003,298,0000) | 2.8982E-03 (2003,017,0000) |
| 1559 | -223.631 | -424.508 | 3.4129E-03 (2003,271,0000) | 3.2440E-03 (2003,298,0000) | 3.0258E-03 (2003,265,0000) | 2.9619E-03 (2003,017,0000) |
| 1560 | -221.384 | -424.570 | 3.5663E-03 (2003,298,0000) | 3.3864E-03 (2003,271,0000) | 3.0242E-03 (2003,017,0000) | 2.9619E-03 (2003,265,0000) |
| 1561 | -219.137 | -424.632 | 3.8791E-03 (2003,298,0000) | 3.3531E-03 (2003,271,0000) | 3.0863E-03 (2003,017,0000) | 3.0430E-03 (2003,157,0000) |
| 1562 | -216.890 | -424.693 | 3.5681E-03 (2003,298,0000) | 3.3128E-03 (2003,271,0000) | 3.1890E-03 (2003,157,0000) | 3.1464E-03 (2003,017,0000) |
| 1563 | -214.643 | -424.754 | 3.2676E-03 (2003,271,0000) | 3.2629E-03 (2003,157,0000) | 3.2039E-03 (2003,017,0000) | 2.8262E-03 (2003,178,0000) |
| 1564 | -212.396 | -424.813 | 3.3344E-03 (2003,157,0000) | 3.2613E-03 (2003,017,0000) | 3.2196E-03 (2003,271,0000) | 2.8755E-03 (2003,178,0000) |
| 1565 | -210.149 | -424.873 | 3.4628E-03 (2003,157,0000) | 3.3177E-03 (2003,017,0000) | 3.1675E-03 (2003,271,0000) | 2.9202E-03 (2003,178,0000) |
| 1566 | -207.902 | -424.931 | 3.3725E-03 (2003,017,0000) | 3.1875E-03 (2003,157,0000) | 3.1103E-03 (2003,271,0000) | 2.9606E-03 (2003,178,0000) |
| 1567 | -205.654 | -424.989 | 5.1312E-03 (2003,298,0000) | 4.0237E-03 (2003,157,0000) | 3.4285E-03 (2003,017,0000) | 3.0573E-03 (2003,271,0000) |
| 1568 | -203.407 | -425.047 | 5.0287E-03 (2003,298,0000) | 4.1457E-03 (2003,157,0000) | 3.4764E-03 (2003,017,0000) | 3.0258E-03 (2003,178,0000) |
| 1569 | -349.306 | -417.225 | 5.7140E-03 (2003,037,0000) | 3.6600E-03 (2003,019,0000) | 3.5195E-03 (2003,300,0000) | 3.0498E-03 (2003,269,0000) |
| 1570 | -329.101 | -418.081 | 4.7879E-03 (2003,037,0000) | 3.6149E-03 (2003,300,0000) | 3.4868E-03 (2003,019,0000) | 3.2493E-03 (2003,269,0000) |
| 1571 | -326.856 | -418.173 | 4.4813E-03 (2003,037,0000) | 3.5306E-03 (2003,300,0000) | 3.4544E-03 (2003,019,0000) | 3.2515E-03 (2003,269,0000) |
| 1572 | -302.157 | -419.144 | 4.0166E-03 (2003,257,0000) | 3.1296E-03 (2003,269,0000) | 2.9893E-03 (2003,019,0000) | 2.8006E-03 (2003,140,0000) |
| 1573 | -266.227 | -420.420 | 3.1714E-03 (2003,265,0000) | 3.1279E-03 (2003,271,0000) | 3.0202E-03 (2003,026,0000) | 2.7602E-03 (2003,038,0000) |
| 1574 | -263.981 | -420.494 | 3.2222E-03 (2003,265,0000) | 3.1755E-03 (2003,271,0000) | 2.9968E-03 (2003,026,0000) | 2.7849E-03 (2003,038,0000) |
| 1575 | -261.735 | -420.568 | 3.2889E-03 (2003,265,0000) | 3.2237E-03 (2003,271,0000) | 2.9644E-03 (2003,026,0000) | 2.8474E-03 (2003,038,0000) |
| 1576 | -259.489 | -420.641 | 3.3615E-03 (2003,265,0000) | 3.2700E-03 (2003,271,0000) | 2.9257E-03 (2003,026,0000) | 2.8921E-03 (2003,038,0000) |
| 1577 | -257.244 | -420.713 | 3.4023E-03 (2003,265,0000) | 3.3130E-03 (2003,271,0000) | 2.9249E-03 (2003,038,0000) | 2.8801E-03 (2003,026,0000) |
| 1578 | -254.998 | -420.785 | 3.4079E-03 (2003,265,0000) | 3.3476E-03 (2003,271,0000) | 2.9139E-03 (2003,038,0000) | 2.8291E-03 (2003,026,0000) |
| 1579 | -252.752 | -420.856 | 3.4437E-03 (2003,265,0000) | 3.3820E-03 (2003,271,0000) | 2.9359E-03 (2003,038,0000) | 2.7742E-03 (2003,026,0000) |
| 1580 | -250.506 | -420.927 | 3.4762E-03 (2003,265,0000) | 3.4179E-03 (2003,271,0000) | 2.9633E-03 (2003,038,0000) | 2.7159E-03 (2003,026,0000) |
| 1581 | -248.260 | -420.997 | 3.5007E-03 (2003,265,0000) | 3.4495E-03 (2003,271,0000) | 2.9892E-03 (2003,038,0000) | 2.6553E-03 (2003,026,0000) |
| 1582 | -246.014 | -421.066 | 3.5167E-03 (2003,265,0000) | 3.4785E-03 (2003,271,0000) | 3.0136E-03 (2003,038,0000) | 2.5932E-03 (2003,026,0000) |
| 1583 | -243.768 | -421.135 | 3.5168E-03 (2003,265,0000) | 3.4992E-03 (2003,271,0000) | 3.0190E-03 (2003,038,0000) | 2.5291E-03 (2003,026,0000) |
| 1584 | -241.522 | -421.203 | 3.5168E-03 (2003,271,0000) | 3.5057E-03 (2003,265,0000) | 3.0098E-03 (2003,038,0000) | 2.4801E-03 (2003,017,0000) |
| 1585 | -239.276 | -421.270 | 3.5364E-03 (2003,271,0000) | 3.4885E-03 (2003,265,0000) | 3.0188E-03 (2003,038,0000) | 2.5513E-03 (2003,017,0000) |
| 1586 | -237.030 | -421.337 | 3.5493E-03 (2003,271,0000) | 3.4538E-03 (2003,265,0000) | 3.0056E-03 (2003,038,0000) | 2.6145E-03 (2003,017,0000) |
| 1587 | -234.784 | -421.403 | 3.5536E-03 (2003,271,0000) | 3.4104E-03 (2003,265,0000) | 2.9852E-03 (2003,038,0000) | 2.6774E-03 (2003,017,0000) |
| 1588 | -232.538 | -421.469 | 3.5553E-03 (2003,271,0000) | 3.3575E-03 (2003,265,0000) | 2.9560E-03 (2003,038,0000) | 2.7430E-03 (2003,017,0000) |
| 1589 | -230.291 | -421.534 | 3.5519E-03 (2003,271,0000) | 3.3051E-03 (2003,265,0000) | 2.9231E-03 (2003,038,0000) | 2.8083E-03 (2003,017,0000) |
| 1590 | -228.045 | -421.598 | 3.5403E-03 (2003,271,0000) | 3.2465E-03 (2003,265,0000) | 2.8815E-03 (2003,038,0000) | 2.8654E-03 (2003,017,0000) |
| 1591 | -225.799 | -421.662 | 3.5307E-03 (2003,271,0000) | 3.1875E-03 (2003,265,0000) | 2.9680E-03 (2003,298,0000) | 2.9385E-03 (2003,017,0000) |
| 1592 | -223.553 | -421.725 | 3.5121E-03 (2003,271,0000) | 3.3022E-03 (2003,298,0000) | 3.1251E-03 (2003,265,0000) | 3.0056E-03 (2003,017,0000) |
| 1593 | -221.307 | -421.787 | 3.6338E-03 (2003,298,0000) | 3.4876E-03 (2003,271,0000) | 3.0729E-03 (2003,017,0000) | 3.0609E-03 (2003,265,0000) |
| 1594 | -219.061 | -421.849 | 3.9555E-03 (2003,298,0000) | 3.4561E-03 (2003,271,0000) | 3.1385E-03 (2003,017,0000) | 3.1280E-03 (2003,157,0000) |
| 1595 | -216.814 | -421.910 | 3.8315E-03 (2003,298,0000) | 3.4180E-03 (2003,271,0000) | 3.2839E-03 (2003,157,0000) | 3.2005E-03 (2003,017,0000) |
| 1596 | -214.568 | -421.971 | 3.3791E-03 (2003,157,0000) | 3.3751E-03 (2003,271,0000) | 3.2626E-03 (2003,017,0000) | 2.9008E-03 (2003,178,0000) |
| 1597 | -212.322 | -422.030 | 3.5190E-03 (2003,157,0000) | 3.3303E-03 (2003,271,0000) | 3.3248E-03 (2003,017,0000) | 2.9524E-03 (2003,178,0000) |
| 1598 | -210.076 | -422.090 | 3.7388E-03 (2003,157,0000) | 3.3862E-03 (2003,017,0000) | 3.2817E-03 (2003,271,0000) | 2.9996E-03 (2003,178,0000) |
| 1599 | -207.829 | -422.148 | 3.4401E-03 (2003,017,0000) | 3.2210E-03 (2003,271,0000) | 3.2101E-03 (2003,157,0000) | 3.0419E-03 (2003,178,0000) |
| 1600 | -205.583 | -422.206 | 3.4962E-03 (2003,017,0000) | 3.3408E-03 (2003,157,0000) | 3.1611E-03 (2003,271,0000) | 3.0787E-03 (2003,178,0000) |
| 1601 | -203.337 | -422.264 | 5.1493E-03 (2003,298,0000) | 4.3248E-03 (2003,157,0000) | 3.5547E-03 (2003,017,0000) | 3.1096E-03 (2003,178,0000) |
| 1602 | -326.742 | -415.392 | 4.6419E-03 (2003,037,0000) | 3.7462E-03 (2003,300,0000) | 3.5239E-03 (2003,019,0000) | 3.2445E-03 (2003,269,0000) |
| 1603 | -324.498 | -415.483 | 4.4176E-03 (2003,037,0000) | 3.6424E-03 (2003,300,0000) | 3.4844E-03 (2003,019,0000) | 3.2456E-03 (2003,269,0000) |
| 1604 | -322.253 | -415.574 | 4.1216E-03 (2003,037,0000) | 3.5431E-03 (2003,300,0000) | 3.4424E-03 (2003,019,0000) | 3.2437E-03 (2003,269,0000) |
| 1605 | -302.052 | -416.362 | 3.1013E-03 (2003,269,0000) | 3.0504E-03 (2003,257,0000) | 3.0445E-03 (2003,019,0000) | 2.8625E-03 (2003,140,0000) |
| 1606 | -268.380 | -417.562 | 3.5214E-03 (2003,257,0000) | 3.2917E-03 (2003,265,0000) | 3.1674E-03 (2003,026,0000) | 3.1276E-03 (2003,271,0000) |
| 1607 | -266.134 | -417.637 | 3.2333E-03 (2003,265,0000) | 3.1751E-03 (2003,271,0000) | 3.1542E-03 (2003,026,0000) | 2.7454E-03 (2003,038,0000) |
| 1608 | -263.889 | -417.712 | 3.2759E-03 (2003,265,0000) | 3.2234E-03 (2003,271,0000) | 3.1323E-03 (2003,026,0000) | 2.7633E-03 (2003,038,0000) |
| 1609 | -261.644 | -417.785 | 3.3517E-03 (2003,265,0000) | 3.2731E-03 (2003,271,0000) | 3.1018E-03 (2003,026,0000) | 2.8558E-03 (2003,038,0000) |
| 1610 | -259.399 | -417.858 | 3.4222E-03 (2003,265,0000) | 3.3205E-03 (2003,271,0000) | 3.0639E-03 (2003,026,0000) | 2.9044E-03 (2003,038,0000) |
| 1611 | -257.154 | -417.931 | 3.4529E-03 (2003,265,0000) | 3.3628E-03 (2003,271,0000) | 3.0181E-03 (2003,026,0000) | 2.9283E-03 (2003,038,0000) |
| 1612 | -254.909 | -418.003 | 3.4810E-03 (2003,265,0000) | 3.4002E-03 (2003,271,0000) | 2.9664E-03 (2003,026,0000) | 2.9140E-03 (2003,038,0000) |
| 1613 | -252.664 | -418.074 | 3.5251E-03 (2003,265,0000) | 3.4414E-03 (2003,271,0000) | 2.9558E-03 (2003,038,0000) | 2.9100E-03 (2003,026,0000) |
| 1614 | -250.419 | -418.144 | 3.5596E-03 (2003,265,0000) | 3.4775E-03 (2003,271,0000) | 2.9820E-03 (2003,038,0000) | 2.8490E-03 (2003,026,0000) |
| 1615 | -248.174 | -418.214 | 3.6049E-03 (2003,265,0000) | 3.5160E-03 (2003,271,0000) | 3.0367E-03 (2003,038,0000) | 2.7852E-03 (2003,026,0000) |
| 1616 | -245.928 | -418.284 | 3.6036E-03 (2003,265,0000) | 3.5412E-03 (2003,271,0000) | 3.0433E-03 (2003,038,0000) | 2.7190E-03 (2003,026,0000) |
| 1617 | -243.683 | -418.352 | 3.6158E-03 (2003,265,0000) | 3.5688E-03 (2003,271,0000) | 3.0606E-03 (2003,038,0000) | 2.6514E-03 (2003,026,0000) |
| 1618 | -241.438 | -418.420 | 3.6002E-03 (2003,265,0000) | 3.5900E-03 (2003,271,0000) | 3.0618E-03 (2003,038,0000) | 2.5844E-03 (2003,026,0000) |
| 1619 | -239.193 | -418.488 | 3.6061E-03 (2003,271,0000) | 3.5753E-03 (2003,265,0000) | 3.0556E-03 (2003,038,0000) | 2.5682E-03 (2003,017,0000) |
| 1620 | -236.947 | -418.555 | 3.6245E-03 (2003,271,0000) | 3.5466E-03 (2003,265,0000) | 3.0540E-03 (2003,038,0000) | 2.7810E-03 (2003,269,0000) |
| 1621 | -234.702 | -418.621 | 3.6355E-03 (2003,271,0000) | 3.5030E-03 (2003,265,0000) | 3.0383E-03 (2003,038,0000) | 2.7792E-03 (2003,269,0000) |
| 1622 | -232.457 | -418.686 | 3.6412E-03 (2003,271,0000) | 3.4510E-03 (2003,265,0000) | 3.0145E-03 (2003,038,0000) | 2.7783E-03 (2003,269,0000) |
| 1623 | -230.211 | -418.751 | 3.6407E-03 (2003,271,0000) | 3.3990E-03 (2003,265,0000) | 2.9833E-03 (2003,038,0000) | 2.8424E-03 (2003,017,0000) |
| 1624 | -227.966 | -418.815 | 3.6371E-03 (2003,271,0000) | 3.3410E-03 (2003,265,0000) | 2.9459E-03 (2003,038,0000) | 2.9111E-03 (2003,017,0000) |
| 1625 | -225.721 | -418.879 | 3.6275E-03 (2003,271,0000) | 3.2809E-03 (2003,265,0000) | 3.0238E-03 (2003,298,0000) | 2.9802E-03 (2003,017,0000) |
| 1626 | -223.475 | -418.942 | 3.6117E-03 (2003,271,0000) | 3.3657E-03 (2003,298,0000) | 3.2189E-03 (2003,265,0000) | 3.0487E-03 (2003,017,0000) |
| 1627 | -221.230 | -419.004 | 3.7080E-03 (2003,298,0000) | 3.5919E-03 (2003,271,0000) | 3.1549E-03 (2003,265,0000) | 3.1175E-03 (2003,017,0000) |
| 1628 | -218.984 | -419.066 | 4.0400E-03 (2003,298,0000) | 3.5644E-03 (2003,271,0000) | 3.1882E-03 (2003,017,0000) | 3.1865E-03 (2003,157,0000) |
| 1629 | -216.739 | -419.127 | 4.1015E-03 (2003,298,0000) | 3.5280E-03 (2003,271,0000) | 3.3707E-03 (2003,157,0000) | 3.2544E-03 (2003,017,0000) |
| 1630 | -214.494 | -419.188 | 4.5526E-03 (2003,298,0000) | 3.6038E-03 (2003,157,0000) | 3.4895E-03 (2003,271,0000) | 3.3223E-03 (2003,017,0000) |
| 1631 | -212.248 | -419.248 | 4.1338E-03 (2003,298,0000) | 3.7358E-03 (2003,157,0000) | 3.4459E-03 (2003,271,0000) | 3.3866E-03 (2003,017,0000) |
| 1632 | -210.003 | -419.307 | 3.8198E-03 (2003,157,0000) | 3.4497E-03 (2003,017,0000) | 3.3953E-03 (2003,271,0000) | 3.0756E-03 (2003,178,0000) |
| 1633 | -207.757 | -419.365 | 3.5071E-03 (2003,017,0000) | 3.3341E-03 (2003,271,0000) | 3.1976E-03 (2003,157,0000) | 3.1194E-03 (2003,178,0000) |
| 1634 | -205.512 | -419.423 | 4.2095E-03 (2003,157,0000) | 3.5736E-03 (2003,017,0000) | 3.4996E-03 (2003,298,0000) | 3.2837E-03 (2003,271,0000) |
| 1635 | -203.266 | -419.481 | 5.3043E-03 (2003,298,0000) | 4.5332E-03 (2003,157,0000) | 3.6336E-03 (2003,017,0000) | 3.2219E-03 (2003,271,0000) |
| 1636 | -328.872 | -412.519 | 4.9373E-03 (2003,037,0000) | 4.0564E-03 (2003,300,0000) | 3.6281E-03 (2003,019,0000) | 3.2394E-03 (2003,140,0000) |
| 1637 | -326.629 | -412.611 | 4.7033E-03 (2003,037,0000) | 3.9915E-03 (2003,300,0000) | 3.5892E-03 (2003,019,0000) | 3.2719E-03 (2003,140,0000) |
| 1638 | -324.385 | -412.702 | 4.4655E-03 (2003,037,0000) | 3.8663E-03 (2003,300,0000) | 3.5463E-03 (2003,019,0000) | 3.2887E-03 (2003,140,0000) |
| 1639 | -322.141 | -412.793 | 4.2319E-03 (2003,037,0000) | 3.7782E-03 (2003,300,0000) | 3.5015E-03 (2003,019,0000) | 3.3066E-03 (2003,140,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1640 | -319.898 | -412.883 | 4.0050E-03 (2003,037,0000) | 3.6931E-03 (2003,300,0000) | 3.4546E-03 (2003,019,0000) | 3.3211E-03 (2003,140,0000) |
| 1641 | -317.654 | -412.972 | 3.5786E-03 (2003,037,0000) | 3.4728E-03 (2003,300,0000) | 3.4044E-03 (2003,019,0000) | 3.2191E-03 (2003,269,0000) |
| 1642 | -301.947 | -413.580 | 3.1015E-03 (2003,269,0000) | 3.0942E-03 (2003,019,0000) | 2.9376E-03 (2003,140,0000) | 2.6300E-03 (2003,257,0000) |
| 1643 | -272.775 | -414.628 | 3.2867E-03 (2003,026,0000) | 3.1344E-03 (2003,265,0000) | 3.0621E-03 (2003,271,0000) | 2.8590E-03 (2003,257,0000) |
| 1644 | -270.530 | -414.705 | 3.2962E-03 (2003,026,0000) | 3.2058E-03 (2003,265,0000) | 3.1178E-03 (2003,271,0000) | 2.9409E-03 (2003,257,0000) |
| 1645 | -268.286 | -414.780 | 3.2966E-03 (2003,026,0000) | 3.2490E-03 (2003,265,0000) | 3.1698E-03 (2003,271,0000) | 2.7138E-03 (2003,038,0000) |
| 1646 | -266.042 | -414.855 | 3.2879E-03 (2003,026,0000) | 3.2831E-03 (2003,265,0000) | 3.2206E-03 (2003,271,0000) | 2.7213E-03 (2003,038,0000) |
| 1647 | -263.798 | -414.929 | 3.3926E-03 (2003,265,0000) | 3.2735E-03 (2003,271,0000) | 3.2696E-03 (2003,026,0000) | 2.8360E-03 (2003,038,0000) |
| 1648 | -261.553 | -415.003 | 3.4017E-03 (2003,265,0000) | 3.3195E-03 (2003,271,0000) | 3.2411E-03 (2003,026,0000) | 2.8077E-03 (2003,038,0000) |
| 1649 | -259.309 | -415.076 | 3.4773E-03 (2003,265,0000) | 3.3674E-03 (2003,271,0000) | 3.2039E-03 (2003,026,0000) | 2.8991E-03 (2003,038,0000) |
| 1650 | -257.065 | -415.149 | 3.5097E-03 (2003,265,0000) | 3.4108E-03 (2003,271,0000) | 3.1597E-03 (2003,026,0000) | 2.8880E-03 (2003,038,0000) |
| 1651 | -254.820 | -415.220 | 3.5470E-03 (2003,265,0000) | 3.4499E-03 (2003,271,0000) | 3.1081E-03 (2003,026,0000) | 2.9024E-03 (2003,038,0000) |
| 1652 | -252.576 | -415.292 | 3.5974E-03 (2003,265,0000) | 3.4941E-03 (2003,271,0000) | 3.0498E-03 (2003,026,0000) | 2.9542E-03 (2003,038,0000) |
| 1653 | -250.332 | -415.362 | 3.6713E-03 (2003,265,0000) | 3.5396E-03 (2003,271,0000) | 3.0376E-03 (2003,038,0000) | 2.9863E-03 (2003,026,0000) |
| 1654 | -248.087 | -415.432 | 3.6859E-03 (2003,265,0000) | 3.5745E-03 (2003,271,0000) | 3.0577E-03 (2003,038,0000) | 2.9196E-03 (2003,026,0000) |
| 1655 | -245.843 | -415.501 | 3.7012E-03 (2003,265,0000) | 3.6111E-03 (2003,271,0000) | 3.0784E-03 (2003,038,0000) | 2.8807E-03 (2003,269,0000) |
| 1656 | -243.598 | -415.570 | 3.7002E-03 (2003,265,0000) | 3.6359E-03 (2003,271,0000) | 3.0911E-03 (2003,038,0000) | 2.8704E-03 (2003,269,0000) |
| 1657 | -241.354 | -415.638 | 3.6886E-03 (2003,265,0000) | 3.6601E-03 (2003,271,0000) | 3.0996E-03 (2003,038,0000) | 2.8322E-03 (2003,269,0000) |
| 1658 | -239.109 | -415.705 | 3.6770E-03 (2003,271,0000) | 3.6591E-03 (2003,265,0000) | 3.0973E-03 (2003,038,0000) | 2.6349E-03 (2003,026,0000) |
| 1659 | -236.865 | -415.772 | 3.7016E-03 (2003,271,0000) | 3.6300E-03 (2003,265,0000) | 3.1006E-03 (2003,038,0000) | 2.8707E-03 (2003,269,0000) |
| 1660 | -234.620 | -415.838 | 3.7148E-03 (2003,271,0000) | 3.5868E-03 (2003,265,0000) | 3.0895E-03 (2003,038,0000) | 2.8717E-03 (2003,269,0000) |
| 1661 | -232.376 | -415.904 | 3.7243E-03 (2003,271,0000) | 3.5357E-03 (2003,265,0000) | 3.0709E-03 (2003,038,0000) | 2.8708E-03 (2003,269,0000) |
| 1662 | -230.131 | -415.969 | 3.7305E-03 (2003,271,0000) | 3.4843E-03 (2003,265,0000) | 3.0439E-03 (2003,038,0000) | 2.8758E-03 (2003,017,0000) |
| 1663 | -227.887 | -416.033 | 3.7308E-03 (2003,271,0000) | 3.4275E-03 (2003,265,0000) | 3.0116E-03 (2003,038,0000) | 2.9475E-03 (2003,017,0000) |
| 1664 | -225.642 | -416.096 | 3.7273E-03 (2003,271,0000) | 3.3682E-03 (2003,265,0000) | 3.0861E-03 (2003,298,0000) | 3.0188E-03 (2003,017,0000) |
| 1665 | -223.398 | -416.159 | 3.7158E-03 (2003,271,0000) | 3.4399E-03 (2003,298,0000) | 3.3066E-03 (2003,265,0000) | 3.0919E-03 (2003,017,0000) |
| 1666 | -221.153 | -416.222 | 3.7922E-03 (2003,298,0000) | 3.6970E-03 (2003,271,0000) | 3.2418E-03 (2003,265,0000) | 3.1640E-03 (2003,017,0000) |
| 1667 | -218.908 | -416.284 | 3.6682E-03 (2003,271,0000) | 3.3736E-03 (2003,298,0000) | 3.2299E-03 (2003,017,0000) | 3.1777E-03 (2003,265,0000) |
| 1668 | -216.664 | -416.345 | 4.4489E-03 (2003,298,0000) | 3.6410E-03 (2003,271,0000) | 3.4592E-03 (2003,157,0000) | 3.3066E-03 (2003,017,0000) |
| 1669 | -214.419 | -416.405 | 3.5989E-03 (2003,271,0000) | 3.4246E-03 (2003,157,0000) | 3.3678E-03 (2003,017,0000) | 3.0493E-03 (2003,265,0000) |
| 1670 | -212.174 | -416.465 | 3.6132E-03 (2003,157,0000) | 3.5591E-03 (2003,271,0000) | 3.4379E-03 (2003,017,0000) | 3.0952E-03 (2003,178,0000) |
| 1671 | -209.930 | -416.524 | 3.7867E-03 (2003,157,0000) | 3.5124E-03 (2003,271,0000) | 3.5069E-03 (2003,017,0000) | 3.1463E-03 (2003,178,0000) |
| 1672 | -207.685 | -416.583 | 5.3296E-03 (2003,298,0000) | 4.3487E-03 (2003,157,0000) | 3.5836E-03 (2003,017,0000) | 3.4668E-03 (2003,271,0000) |
| 1673 | -328.758 | -409.737 | 5.0130E-03 (2003,037,0000) | 4.2300E-03 (2003,300,0000) | 3.6901E-03 (2003,019,0000) | 3.3552E-03 (2003,140,0000) |
| 1674 | -326.515 | -409.829 | 4.7715E-03 (2003,037,0000) | 4.1796E-03 (2003,300,0000) | 3.6484E-03 (2003,019,0000) | 3.4221E-03 (2003,140,0000) |
| 1675 | -324.272 | -409.921 | 4.5133E-03 (2003,037,0000) | 4.0330E-03 (2003,300,0000) | 3.6029E-03 (2003,019,0000) | 3.4097E-03 (2003,140,0000) |
| 1676 | -322.029 | -410.011 | 4.2669E-03 (2003,037,0000) | 3.9496E-03 (2003,300,0000) | 3.5563E-03 (2003,019,0000) | 3.4323E-03 (2003,140,0000) |
| 1677 | -319.786 | -410.101 | 4.0276E-03 (2003,037,0000) | 3.8792E-03 (2003,300,0000) | 3.5067E-03 (2003,019,0000) | 3.4601E-03 (2003,140,0000) |
| 1678 | -317.543 | -410.191 | 3.7948E-03 (2003,037,0000) | 3.7702E-03 (2003,300,0000) | 3.4583E-03 (2003,140,0000) | 3.4561E-03 (2003,019,0000) |
| 1679 | -315.300 | -410.279 | 3.5500E-03 (2003,300,0000) | 3.4459E-03 (2003,037,0000) | 3.4041E-03 (2003,019,0000) | 3.3484E-03 (2003,140,0000) |
| 1680 | -313.057 | -410.367 | 3.5271E-03 (2003,300,0000) | 3.4343E-03 (2003,140,0000) | 3.3636E-03 (2003,037,0000) | 3.3543E-03 (2003,019,0000) |
| 1681 | -310.814 | -410.455 | 3.3432E-03 (2003,140,0000) | 3.3427E-03 (2003,300,0000) | 3.3057E-03 (2003,019,0000) | 3.2024E-03 (2003,269,0000) |
| 1682 | -308.571 | -410.542 | 3.2921E-03 (2003,140,0000) | 3.2610E-03 (2003,019,0000) | 3.1885E-03 (2003,269,0000) | 3.1823E-03 (2003,300,0000) |
| 1683 | -301.842 | -410.799 | 3.1405E-03 (2003,019,0000) | 3.1234E-03 (2003,269,0000) | 3.0807E-03 (2003,140,0000) | 2.9470E-03 (2003,257,0000) |
| 1684 | -299.599 | -410.883 | 3.1756E-03 (2003,257,0000) | 3.1023E-03 (2003,019,0000) | 3.1007E-03 (2003,269,0000) | 3.0156E-03 (2003,140,0000) |
| 1685 | -297.356 | -410.967 | 3.4562E-03 (2003,257,0000) | 3.0796E-03 (2003,269,0000) | 3.0656E-03 (2003,019,0000) | 2.9552E-03 (2003,140,0000) |
| 1686 | -295.113 | -411.050 | 4.3871E-03 (2003,257,0000) | 3.1004E-03 (2003,269,0000) | 3.0830E-03 (2003,265,0000) | 3.0315E-03 (2003,019,0000) |
| 1687 | -272.680 | -411.846 | 3.4049E-03 (2003,026,0000) | 3.1857E-03 (2003,265,0000) | 3.1063E-03 (2003,271,0000) | 2.7541E-03 (2003,257,0000) |
| 1688 | -270.436 | -411.922 | 3.4216E-03 (2003,026,0000) | 3.2879E-03 (2003,265,0000) | 3.1611E-03 (2003,271,0000) | 3.1176E-03 (2003,257,0000) |
| 1689 | -268.193 | -411.998 | 3.4268E-03 (2003,026,0000) | 3.3389E-03 (2003,265,0000) | 3.2154E-03 (2003,271,0000) | 2.9898E-03 (2003,257,0000) |
| 1690 | -265.949 | -412.073 | 3.4222E-03 (2003,026,0000) | 3.3536E-03 (2003,265,0000) | 3.2656E-03 (2003,271,0000) | 2.7230E-03 (2003,038,0000) |
| 1691 | -263.706 | -412.147 | 3.4800E-03 (2003,265,0000) | 3.4071E-03 (2003,026,0000) | 3.3204E-03 (2003,271,0000) | 2.9848E-03 (2003,257,0000) |
| 1692 | -261.462 | -412.221 | 3.4637E-03 (2003,265,0000) | 3.3826E-03 (2003,026,0000) | 3.3645E-03 (2003,271,0000) | 2.7921E-03 (2003,038,0000) |
| 1693 | -259.219 | -412.294 | 3.5173E-03 (2003,265,0000) | 3.4124E-03 (2003,271,0000) | 3.3477E-03 (2003,026,0000) | 2.8274E-03 (2003,038,0000) |
| 1694 | -256.975 | -412.366 | 3.5832E-03 (2003,265,0000) | 3.4597E-03 (2003,271,0000) | 3.3045E-03 (2003,026,0000) | 2.8917E-03 (2003,038,0000) |
| 1695 | -254.732 | -412.438 | 3.6109E-03 (2003,265,0000) | 3.5001E-03 (2003,271,0000) | 3.2531E-03 (2003,026,0000) | 2.8908E-03 (2003,038,0000) |
| 1696 | -252.488 | -412.509 | 3.6574E-03 (2003,265,0000) | 3.5444E-03 (2003,271,0000) | 3.1932E-03 (2003,026,0000) | 2.9373E-03 (2003,038,0000) |
| 1697 | -250.245 | -412.580 | 3.7335E-03 (2003,265,0000) | 3.5900E-03 (2003,271,0000) | 3.1290E-03 (2003,026,0000) | 3.0423E-03 (2003,038,0000) |
| 1698 | -248.001 | -412.650 | 3.7700E-03 (2003,265,0000) | 3.6325E-03 (2003,271,0000) | 3.0787E-03 (2003,038,0000) | 3.0602E-03 (2003,026,0000) |
| 1699 | -245.757 | -412.719 | 3.7789E-03 (2003,265,0000) | 3.6706E-03 (2003,271,0000) | 3.0997E-03 (2003,038,0000) | 2.9874E-03 (2003,026,0000) |
| 1700 | -243.514 | -412.788 | 3.7773E-03 (2003,265,0000) | 3.6984E-03 (2003,271,0000) | 3.1189E-03 (2003,038,0000) | 2.9550E-03 (2003,269,0000) |
| 1701 | -241.270 | -412.856 | 3.7634E-03 (2003,265,0000) | 3.7285E-03 (2003,271,0000) | 3.1318E-03 (2003,038,0000) | 2.9591E-03 (2003,269,0000) |
| 1702 | -239.026 | -412.923 | 3.7538E-03 (2003,271,0000) | 3.7387E-03 (2003,265,0000) | 3.1410E-03 (2003,038,0000) | 2.9628E-03 (2003,269,0000) |
| 1703 | -236.783 | -412.990 | 3.7746E-03 (2003,271,0000) | 3.7035E-03 (2003,265,0000) | 3.1432E-03 (2003,038,0000) | 2.9645E-03 (2003,269,0000) |
| 1704 | -234.539 | -413.056 | 3.7940E-03 (2003,271,0000) | 3.6608E-03 (2003,265,0000) | 3.1391E-03 (2003,038,0000) | 2.9633E-03 (2003,269,0000) |
| 1705 | -232.295 | -413.121 | 3.8072E-03 (2003,271,0000) | 3.6110E-03 (2003,265,0000) | 3.1277E-03 (2003,038,0000) | 2.9638E-03 (2003,269,0000) |
| 1706 | -230.051 | -413.186 | 3.8177E-03 (2003,271,0000) | 3.5616E-03 (2003,265,0000) | 3.1063E-03 (2003,038,0000) | 2.9640E-03 (2003,269,0000) |
| 1707 | -227.808 | -413.250 | 3.8235E-03 (2003,271,0000) | 3.5057E-03 (2003,265,0000) | 3.0779E-03 (2003,038,0000) | 2.9828E-03 (2003,017,0000) |
| 1708 | -225.564 | -413.314 | 3.8233E-03 (2003,271,0000) | 3.4472E-03 (2003,265,0000) | 3.1572E-03 (2003,298,0000) | 3.0568E-03 (2003,017,0000) |
| 1709 | -223.320 | -413.377 | 3.8173E-03 (2003,271,0000) | 3.5228E-03 (2003,298,0000) | 3.3864E-03 (2003,265,0000) | 3.1326E-03 (2003,017,0000) |
| 1710 | -221.076 | -413.439 | 3.8858E-03 (2003,298,0000) | 3.8001E-03 (2003,271,0000) | 3.3237E-03 (2003,265,0000) | 3.2081E-03 (2003,017,0000) |
| 1711 | -218.832 | -413.501 | 3.7738E-03 (2003,271,0000) | 3.2695E-03 (2003,017,0000) | 3.2603E-03 (2003,265,0000) | 3.1262E-03 (2003,157,0000) |
| 1712 | -216.588 | -413.562 | 3.7461E-03 (2003,271,0000) | 3.3408E-03 (2003,017,0000) | 3.2479E-03 (2003,157,0000) | 3.1980E-03 (2003,265,0000) |
| 1713 | -214.344 | -413.622 | 3.7168E-03 (2003,271,0000) | 3.5040E-03 (2003,157,0000) | 3.4202E-03 (2003,017,0000) | 3.1346E-03 (2003,265,0000) |
| 1714 | -212.101 | -413.682 | 3.8064E-03 (2003,157,0000) | 3.6816E-03 (2003,271,0000) | 3.5011E-03 (2003,017,0000) | 3.4586E-03 (2003,298,0000) |
| 1715 | -209.857 | -413.741 | 3.8103E-03 (2003,157,0000) | 3.6323E-03 (2003,271,0000) | 3.5676E-03 (2003,017,0000) | 3.2101E-03 (2003,178,0000) |
| 1716 | -207.613 | -413.800 | 4.1593E-03 (2003,157,0000) | 3.6428E-03 (2003,017,0000) | 3.5846E-03 (2003,271,0000) | 3.2560E-03 (2003,178,0000) |
| 1717 | -328.643 | -406.956 | 5.0960E-03 (2003,037,0000) | 4.4036E-03 (2003,300,0000) | 3.7484E-03 (2003,019,0000) | 3.4725E-03 (2003,140,0000) |
| 1718 | -326.401 | -407.048 | 4.8416E-03 (2003,037,0000) | 4.3658E-03 (2003,300,0000) | 3.7042E-03 (2003,019,0000) | 3.5504E-03 (2003,140,0000) |
| 1719 | -324.159 | -407.139 | 4.5693E-03 (2003,037,0000) | 4.2085E-03 (2003,300,0000) | 3.6546E-03 (2003,019,0000) | 3.5371E-03 (2003,140,0000) |
| 1720 | -321.917 | -407.230 | 4.3092E-03 (2003,037,0000) | 4.1306E-03 (2003,300,0000) | 3.6045E-03 (2003,019,0000) | 3.5606E-03 (2003,140,0000) |
| 1721 | -319.675 | -407.320 | 4.0673E-03 (2003,300,0000) | 4.0600E-03 (2003,037,0000) | 3.6086E-03 (2003,140,0000) | 3.5534E-03 (2003,019,0000) |
| 1722 | -317.433 | -407.409 | 4.0383E-03 (2003,300,0000) | 3.8249E-03 (2003,037,0000) | 3.6919E-03 (2003,140,0000) | 3.5025E-03 (2003,019,0000) |
| 1723 | -315.191 | -407.498 | 3.8425E-03 (2003,300,0000) | 3.5778E-03 (2003,037,0000) | 3.5774E-03 (2003,140,0000) | 3.4476E-03 (2003,019,0000) |
| 1724 | -312.949 | -407.586 | 3.7777E-03 (2003,300,0000) | 3.6598E-03 (2003,140,0000) | 3.3982E-03 (2003,257,0000) | 3.3968E-03 (2003,019,0000) |
| 1725 | -310.706 | -407.673 | 3.5734E-03 (2003,300,0000) | 3.5339E-03 (2003,140,0000) | 3.3478E-03 (2003,019,0000) | 3.2079E-03 (2003,269,0000) |
| 1726 | -308.464 | -407.760 | 3.4320E-03 (2003,140,0000) | 3.3840E-03 (2003,300,0000) | 3.3022E-03 (2003,019,0000) | 3.1893E-03 (2003,269,0000) |
| 1727 | -306.222 | -407.847 | 3.3518E-03 (2003,140,0000) | 3.2607E-03 (2003,019,0000) | 3.2074E-03 (2003,300,0000) | 3.1719E-03 (2003,269,0000) |
| 1728 | -303.980 | -407.932 | 3.2736E-03 (2003,140,0000) | 3.2203E-03 (2003,019,0000) | 3.1526E-03 (2003,269,0000) | 3.0238E-03 (2003,300,0000) |
| 1729 | -301.737 | -408.017 | 3.1789E-03 (2003,019,0000) | 3.0951E-03 (2003,269,0000) | 2.8905E-03 (2003,140,0000) | 2.7770E-03 (2003,300,0000) |
| 1730 | -299.495 | -408.101 | 3.1408E-03 (2003,019,0000) | 3.0618E-03 (2003,269,0000) | 2.7692E-03 (2003,140,0000) | 2.6375E-03 (2003,265,0000) |
| 1731 | -297.253 | -408.185 | 3.1053E-03 (2003,019,0000) | 3.0738E-03 (2003,269,0000) | 3.0340E-03 (2003,257,0000) | 3.0153E-03 (2003,140,0000) |
| 1732 | -295.010 | -408.268 | 3.0700E-03 (2003,019,0000) | 3.0282E-03 (2003,269,0000) | 2.8942E-03 (2003,140,0000) | 2.8607E-03 (2003,257,0000) |
| 1733 | -292.768 | -408.351 | 3.4490E-03 (2003,257,0000) | 3.0348E-03 (2003,019,0000) | 3.0130E-03 (2003,269,0000) | 2.8988E-03 (2003,265,0000) |
| 1734 | -286.040 | -408.594 | 4.3382E-03 (2003,257,0000) | 3.4932E-03 (2003,088,0000) | 3.2375E-03 (2003,265,0000) | 3.1618E-03 (2003,026,0000) |
| 1735 | -281.555 | -408.753 | 4.3645E-03 (2003,257,0000) | 3.5755E-03 (2003,088,0000) | 3.3572E-03 (2003,265,0000) | 3.3186E-03 (2003,026,0000) |
| 1736 | -279.313 | -408.832 | 4.4157E-03 (2003,257,0000) | 3.5786E-03 (2003,088,0000) | 3.4457E-03 (2003,265,0000) | 3.3841E-03 (2003,026,0000) |
| 1737 | -274.828 | -408.988 | 4.3628E-03 (2003,257,0000) | 3.6070E-03 (2003,265,0000) | 3.4859E-03 (2003,026,0000) | 3.3624E-03 (2003,088,0000) |
| 1738 | -272.585 | -409.064 | 3.5199E-03 (2003,026,0000) | 3.2699E-03 (2003,265,0000) | 3.1482E-03 (2003,271,0000) | 3.0428E-03 (2003,257,0000) |
| 1739 | -270.342 | -409.141 | 3.5432E-03 (2003,026,0000) | 3.2618E-03 (2003,265,0000) | 3.1977E-03 (2003,271,0000) | 2.7183E-03 (2003,019,0000) |
| 1740 | -268.100 | -409.216 | 3.5557E-03 (2003,026,0000) | 3.3890E-03 (2003,265,0000) | 3.2565E-03 (2003,271,0000) | 2.9375E-03 (2003,257,0000) |
| 1741 | -265.857 | -409.291 | 3.5563E-03 (2003,026,0000) | 3.5079E-03 (2003,265,0000) | 3.3108E-03 (2003,271,0000) | 3.1978E-03 (2003,257,0000) |
| 1742 | -263.614 | -409.365 | 3.7058E-03 (2003,265,0000) | 3.5793E-03 (2003,257,0000) | 3.5457E-03 (2003,026,0000) | 3.3679E-03 (2003,271,0000) |
| 1743 | -261.372 | -409.439 | 3.7304E-03 (2003,265,0000) | 3.5243E-03 (2003,026,0000) | 3.4208E-03 (2003,271,0000) | 3.4080E-03 (2003,257,0000) |
| 1744 | -259.129 | -409.512 | 3.6716E-03 (2003,265,0000) | 3.4929E-03 (2003,026,0000) | 3.4605E-03 (2003,271,0000) | 2.9062E-03 (2003,038,0000) |
| 1745 | -256.886 | -409.584 | 3.7732E-03 (2003,265,0000) | 3.5093E-03 (2003,271,0000) | 3.4508E-03 (2003,026,0000) | 3.0793E-03 (2003,257,0000) |
| 1746 | -254.643 | -409.656 | 3.6806E-03 (2003,265,0000) | 3.5506E-03 (2003,271,0000) | 3.4001E-03 (2003,026,0000) | 2.8933E-03 (2003,038,0000) |
| 1747 | -252.400 | -409.727 | 3.7186E-03 (2003,265,0000) | 3.5937E-03 (2003,271,0000) | 3.3412E-03 (2003,026,0000) | 2.9296E-03 (2003,038,0000) |
| 1748 | -250.158 | -409.798 | 3.7581E-03 (2003,265,0000) | 3.6390E-03 (2003,271,0000) | 3.2754E-03 (2003,026,0000) | 2.9831E-03 (2003,038,0000) |
| 1749 | -247.915 | -409.867 | 3.7960E-03 (2003,265,0000) | 3.6803E-03 (2003,271,0000) | 3.2035E-03 (2003,026,0000) | 3.0633E-03 (2003,038,0000) |
| 1750 | -245.672 | -409.937 | 3.8495E-03 (2003,265,0000) | 3.7247E-03 (2003,271,0000) | 3.1282E-03 (2003,026,0000) | 3.1204E-03 (2003,038,0000) |
| 1751 | -243.429 | -410.005 | 3.8439E-03 (2003,265,0000) | 3.7607E-03 (2003,271,0000) | 3.1439E-03 (2003,038,0000) | 3.0487E-03 (2003,026,0000) |
| 1752 | -241.186 | -410.073 | 3.8283E-03 (2003,265,0000) | 3.7926E-03 (2003,271,0000) | 3.1646E-03 (2003,038,0000) | 3.0502E-03 (2003,269,0000) |
| 1753 | -238.943 | -410.141 | 3.8208E-03 (2003,271,0000) | 3.8017E-03 (2003,265,0000) | 3.1776E-03 (2003,038,0000) | 3.0519E-03 (2003,269,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1754 | -236.700 | -410.207 | 3.8462E-03 (2003,271,0000) | 3.7670E-03 (2003,265,0000) | 3.1871E-03 (2003,038,0000) | 3.0540E-03 (2003,269,0000) |
| 1755 | -234.457 | -410.273 | 3.8682E-03 (2003,271,0000) | 3.7245E-03 (2003,265,0000) | 3.1899E-03 (2003,038,0000) | 3.0571E-03 (2003,269,0000) |
| 1756 | -232.214 | -410.339 | 3.8854E-03 (2003,271,0000) | 3.6778E-03 (2003,265,0000) | 3.1840E-03 (2003,038,0000) | 3.0599E-03 (2003,269,0000) |
| 1757 | -229.971 | -410.404 | 3.9012E-03 (2003,271,0000) | 3.6284E-03 (2003,265,0000) | 3.1710E-03 (2003,038,0000) | 3.0621E-03 (2003,269,0000) |
| 1758 | -227.728 | -410.468 | 3.9120E-03 (2003,271,0000) | 3.5757E-03 (2003,265,0000) | 3.1503E-03 (2003,038,0000) | 3.0642E-03 (2003,269,0000) |
| 1759 | -225.485 | -410.531 | 3.9161E-03 (2003,271,0000) | 3.5193E-03 (2003,265,0000) | 3.2366E-03 (2003,298,0000) | 3.1213E-03 (2003,038,0000) |
| 1760 | -223.242 | -410.594 | 3.9131E-03 (2003,271,0000) | 3.6147E-03 (2003,298,0000) | 3.4593E-03 (2003,265,0000) | 3.1734E-03 (2003,017,0000) |
| 1761 | -220.999 | -410.657 | 3.8977E-03 (2003,271,0000) | 3.5349E-03 (2003,298,0000) | 3.3976E-03 (2003,265,0000) | 3.2437E-03 (2003,017,0000) |
| 1762 | -218.756 | -410.718 | 3.8794E-03 (2003,271,0000) | 3.3364E-03 (2003,265,0000) | 3.3130E-03 (2003,017,0000) | 3.1928E-03 (2003,157,0000) |
| 1763 | -216.513 | -410.779 | 3.8569E-03 (2003,271,0000) | 3.3885E-03 (2003,017,0000) | 3.3253E-03 (2003,157,0000) | 3.2744E-03 (2003,265,0000) |
| 1764 | -214.270 | -410.840 | 3.8267E-03 (2003,271,0000) | 3.4624E-03 (2003,017,0000) | 3.4184E-03 (2003,157,0000) | 3.2130E-03 (2003,265,0000) |
| 1765 | -212.027 | -410.900 | 3.7937E-03 (2003,271,0000) | 3.6225E-03 (2003,157,0000) | 3.5427E-03 (2003,017,0000) | 3.2117E-03 (2003,178,0000) |
| 1766 | -209.784 | -410.959 | 5.3903E-03 (2003,298,0000) | 4.3040E-03 (2003,157,0000) | 3.7655E-03 (2003,271,0000) | 3.6468E-03 (2003,017,0000) |
| 1767 | -328.529 | -404.175 | 5.1880E-03 (2003,037,0000) | 4.5851E-03 (2003,300,0000) | 3.8053E-03 (2003,019,0000) | 3.5867E-03 (2003,140,0000) |
| 1768 | -326.288 | -404.267 | 4.9196E-03 (2003,037,0000) | 4.5426E-03 (2003,300,0000) | 3.7561E-03 (2003,019,0000) | 3.6767E-03 (2003,140,0000) |
| 1769 | -324.047 | -404.358 | 4.6396E-03 (2003,037,0000) | 4.4687E-03 (2003,300,0000) | 3.7036E-03 (2003,019,0000) | 3.6928E-03 (2003,140,0000) |
| 1770 | -317.323 | -404.628 | 4.2459E-03 (2003,300,0000) | 3.8553E-03 (2003,140,0000) | 3.8538E-03 (2003,037,0000) | 3.5414E-03 (2003,019,0000) |
| 1771 | -315.081 | -404.717 | 4.1319E-03 (2003,300,0000) | 3.8532E-03 (2003,140,0000) | 3.6075E-03 (2003,037,0000) | 3.4876E-03 (2003,019,0000) |
| 1772 | -312.840 | -404.805 | 3.9982E-03 (2003,300,0000) | 3.8313E-03 (2003,140,0000) | 3.4570E-03 (2003,265,0000) | 3.4344E-03 (2003,019,0000) |
| 1773 | -310.598 | -404.892 | 3.8303E-03 (2003,300,0000) | 3.7120E-03 (2003,140,0000) | 3.3834E-03 (2003,019,0000) | 3.2044E-03 (2003,269,0000) |
| 1774 | -308.357 | -404.979 | 3.6131E-03 (2003,300,0000) | 3.5946E-03 (2003,140,0000) | 3.3384E-03 (2003,019,0000) | 3.1891E-03 (2003,269,0000) |
| 1775 | -306.115 | -405.065 | 3.5730E-03 (2003,140,0000) | 3.4513E-03 (2003,300,0000) | 3.2963E-03 (2003,019,0000) | 3.2963E-03 (2003,257,0000) |
| 1776 | -303.874 | -405.151 | 3.3289E-03 (2003,140,0000) | 3.2527E-03 (2003,019,0000) | 3.1845E-03 (2003,300,0000) | 3.1433E-03 (2003,269,0000) |
| 1777 | -301.632 | -405.236 | 3.2832E-03 (2003,140,0000) | 3.2140E-03 (2003,019,0000) | 3.1302E-03 (2003,269,0000) | 3.0169E-03 (2003,300,0000) |
| 1778 | -299.391 | -405.320 | 4.4469E-03 (2003,257,0000) | 3.4193E-03 (2003,140,0000) | 3.3736E-03 (2003,265,0000) | 3.1786E-03 (2003,019,0000) |
| 1779 | -297.149 | -405.404 | 3.3461E-03 (2003,257,0000) | 3.1627E-03 (2003,140,0000) | 3.1403E-03 (2003,019,0000) | 3.0932E-03 (2003,269,0000) |
| 1780 | -294.907 | -405.487 | 3.1022E-03 (2003,019,0000) | 3.0069E-03 (2003,269,0000) | 2.8517E-03 (2003,140,0000) | 2.8000E-03 (2003,026,0000) |
| 1781 | -292.666 | -405.569 | 3.0689E-03 (2003,019,0000) | 2.9804E-03 (2003,269,0000) | 2.9117E-03 (2003,026,0000) | 2.8549E-03 (2003,265,0000) |
| 1782 | -290.424 | -405.651 | 3.2686E-03 (2003,257,0000) | 3.0354E-03 (2003,019,0000) | 3.0210E-03 (2003,026,0000) | 2.9752E-03 (2003,269,0000) |
| 1783 | -288.182 | -405.732 | 3.5865E-03 (2003,257,0000) | 3.1241E-03 (2003,026,0000) | 3.0592E-03 (2003,265,0000) | 3.0023E-03 (2003,019,0000) |
| 1784 | -285.941 | -405.812 | 3.2224E-03 (2003,026,0000) | 3.1735E-03 (2003,257,0000) | 3.0326E-03 (2003,265,0000) | 2.9707E-03 (2003,019,0000) |
| 1785 | -283.699 | -405.892 | 3.4327E-03 (2003,257,0000) | 3.3136E-03 (2003,026,0000) | 3.1074E-03 (2003,265,0000) | 2.9978E-03 (2003,088,0000) |
| 1786 | -281.457 | -405.972 | 3.3957E-03 (2003,026,0000) | 3.1028E-03 (2003,265,0000) | 3.0453E-03 (2003,257,0000) | 2.9714E-03 (2003,271,0000) |
| 1787 | -279.216 | -406.050 | 4.4866E-03 (2003,257,0000) | 3.6448E-03 (2003,088,0000) | 3.5567E-03 (2003,265,0000) | 3.4710E-03 (2003,026,0000) |
| 1788 | -274.732 | -406.206 | 4.5131E-03 (2003,257,0000) | 3.7681E-03 (2003,265,0000) | 3.5887E-03 (2003,026,0000) | 3.5295E-03 (2003,088,0000) |
| 1789 | -272.490 | -406.282 | 3.6312E-03 (2003,026,0000) | 3.3146E-03 (2003,265,0000) | 3.1867E-03 (2003,271,0000) | 2.9972E-03 (2003,257,0000) |
| 1790 | -270.248 | -406.359 | 3.6628E-03 (2003,026,0000) | 3.4728E-03 (2003,265,0000) | 3.4529E-03 (2003,257,0000) | 3.2428E-03 (2003,271,0000) |
| 1791 | -268.006 | -406.434 | 3.6812E-03 (2003,026,0000) | 3.3688E-03 (2003,265,0000) | 3.2899E-03 (2003,271,0000) | 2.7417E-03 (2003,047,0000) |
| 1792 | -265.764 | -406.509 | 3.6882E-03 (2003,026,0000) | 3.5639E-03 (2003,265,0000) | 3.3504E-03 (2003,271,0000) | 3.1834E-03 (2003,257,0000) |
| 1793 | -263.523 | -406.583 | 3.6835E-03 (2003,026,0000) | 3.6161E-03 (2003,265,0000) | 3.4029E-03 (2003,271,0000) | 3.0547E-03 (2003,257,0000) |
| 1794 | -261.281 | -406.657 | 3.8179E-03 (2003,265,0000) | 3.6669E-03 (2003,026,0000) | 3.4828E-03 (2003,257,0000) | 3.4585E-03 (2003,271,0000) |
| 1795 | -259.039 | -406.730 | 3.8729E-03 (2003,265,0000) | 3.6380E-03 (2003,026,0000) | 3.5093E-03 (2003,271,0000) | 3.3394E-03 (2003,257,0000) |
| 1796 | -256.797 | -406.802 | 3.8902E-03 (2003,265,0000) | 3.5986E-03 (2003,026,0000) | 3.5579E-03 (2003,271,0000) | 3.1683E-03 (2003,257,0000) |
| 1797 | -254.555 | -406.874 | 3.7955E-03 (2003,265,0000) | 3.5971E-03 (2003,271,0000) | 3.5498E-03 (2003,026,0000) | 2.9662E-03 (2003,038,0000) |
| 1798 | -252.313 | -406.945 | 3.9155E-03 (2003,265,0000) | 3.6524E-03 (2003,271,0000) | 3.4920E-03 (2003,026,0000) | 3.0786E-03 (2003,269,0000) |
| 1799 | -250.071 | -407.015 | 3.9233E-03 (2003,265,0000) | 3.6978E-03 (2003,271,0000) | 3.4248E-03 (2003,026,0000) | 3.0757E-03 (2003,038,0000) |
| 1800 | -247.828 | -407.085 | 3.9250E-03 (2003,265,0000) | 3.7447E-03 (2003,271,0000) | 3.3510E-03 (2003,026,0000) | 3.1102E-03 (2003,038,0000) |
| 1801 | -245.586 | -407.154 | 3.9205E-03 (2003,265,0000) | 3.7795E-03 (2003,271,0000) | 3.2730E-03 (2003,026,0000) | 3.1426E-03 (2003,038,0000) |
| 1802 | -243.344 | -407.223 | 3.9060E-03 (2003,265,0000) | 3.8170E-03 (2003,271,0000) | 3.1910E-03 (2003,026,0000) | 3.1711E-03 (2003,038,0000) |
| 1803 | -241.102 | -407.291 | 3.8860E-03 (2003,265,0000) | 3.8526E-03 (2003,271,0000) | 3.1950E-03 (2003,038,0000) | 3.1366E-03 (2003,269,0000) |
| 1804 | -238.860 | -407.358 | 3.8838E-03 (2003,271,0000) | 3.8573E-03 (2003,265,0000) | 3.2173E-03 (2003,038,0000) | 3.1436E-03 (2003,269,0000) |
| 1805 | -236.618 | -407.425 | 3.9124E-03 (2003,271,0000) | 3.8201E-03 (2003,265,0000) | 3.2348E-03 (2003,038,0000) | 3.1494E-03 (2003,269,0000) |
| 1806 | -234.376 | -407.491 | 3.9382E-03 (2003,271,0000) | 3.7786E-03 (2003,265,0000) | 3.2443E-03 (2003,038,0000) | 3.1559E-03 (2003,269,0000) |
| 1807 | -232.133 | -407.557 | 3.9602E-03 (2003,271,0000) | 3.7324E-03 (2003,265,0000) | 3.2456E-03 (2003,038,0000) | 3.1609E-03 (2003,269,0000) |
| 1808 | -229.891 | -407.621 | 3.9789E-03 (2003,271,0000) | 3.6861E-03 (2003,265,0000) | 3.2403E-03 (2003,038,0000) | 3.1648E-03 (2003,269,0000) |
| 1809 | -227.649 | -407.685 | 3.9967E-03 (2003,271,0000) | 3.6362E-03 (2003,265,0000) | 3.2274E-03 (2003,038,0000) | 3.1674E-03 (2003,269,0000) |
| 1810 | -225.407 | -407.749 | 4.0066E-03 (2003,271,0000) | 3.5830E-03 (2003,265,0000) | 3.3251E-03 (2003,298,0000) | 3.2059E-03 (2003,038,0000) |
| 1811 | -223.165 | -407.812 | 4.0059E-03 (2003,271,0000) | 3.7156E-03 (2003,298,0000) | 3.5252E-03 (2003,265,0000) | 3.2140E-03 (2003,017,0000) |
| 1812 | -220.922 | -407.874 | 4.1010E-03 (2003,298,0000) | 4.0046E-03 (2003,271,0000) | 3.4661E-03 (2003,265,0000) | 3.2969E-03 (2003,017,0000) |
| 1813 | -218.680 | -407.936 | 4.4703E-03 (2003,298,0000) | 3.9958E-03 (2003,271,0000) | 3.4063E-03 (2003,265,0000) | 3.3832E-03 (2003,157,0000) |
| 1814 | -216.438 | -407.997 | 4.6580E-03 (2003,298,0000) | 3.9748E-03 (2003,271,0000) | 3.6239E-03 (2003,157,0000) | 3.4586E-03 (2003,017,0000) |
| 1815 | -214.195 | -408.057 | 3.9476E-03 (2003,271,0000) | 3.6691E-03 (2003,157,0000) | 3.5226E-03 (2003,017,0000) | 3.2849E-03 (2003,265,0000) |
| 1816 | -211.953 | -408.117 | 3.9017E-03 (2003,271,0000) | 3.5831E-03 (2003,017,0000) | 3.2550E-03 (2003,178,0000) | 3.2220E-03 (2003,265,0000) |
| 1817 | -317.212 | -401.847 | 4.4420E-03 (2003,300,0000) | 3.9472E-03 (2003,140,0000) | 3.8857E-03 (2003,037,0000) | 3.5752E-03 (2003,019,0000) |
| 1818 | -314.971 | -401.935 | 4.3553E-03 (2003,300,0000) | 4.0249E-03 (2003,140,0000) | 3.7234E-03 (2003,265,0000) | 3.6360E-03 (2003,037,0000) |
| 1819 | -312.731 | -402.023 | 4.2271E-03 (2003,300,0000) | 4.0106E-03 (2003,140,0000) | 3.7512E-03 (2003,265,0000) | 3.4662E-03 (2003,019,0000) |
| 1820 | -310.490 | -402.111 | 4.0801E-03 (2003,300,0000) | 3.9766E-03 (2003,140,0000) | 3.6815E-03 (2003,265,0000) | 3.5904E-03 (2003,257,0000) |
| 1821 | -308.249 | -402.198 | 3.9143E-03 (2003,140,0000) | 3.9113E-03 (2003,300,0000) | 3.7608E-03 (2003,257,0000) | 3.5679E-03 (2003,265,0000) |
| 1822 | -306.009 | -402.284 | 3.6251E-03 (2003,300,0000) | 3.6185E-03 (2003,140,0000) | 3.3246E-03 (2003,019,0000) | 3.1686E-03 (2003,269,0000) |
| 1823 | -303.768 | -402.369 | 3.4091E-03 (2003,140,0000) | 3.3751E-03 (2003,300,0000) | 3.2811E-03 (2003,019,0000) | 3.1368E-03 (2003,269,0000) |
| 1824 | -301.527 | -402.454 | 3.8288E-03 (2003,257,0000) | 3.5876E-03 (2003,140,0000) | 3.3161E-03 (2003,300,0000) | 3.2430E-03 (2003,019,0000) |
| 1825 | -299.286 | -402.538 | 3.3614E-03 (2003,140,0000) | 3.2031E-03 (2003,019,0000) | 3.1355E-03 (2003,257,0000) | 3.1171E-03 (2003,269,0000) |
| 1826 | -297.046 | -402.622 | 4.6341E-03 (2003,257,0000) | 3.5876E-03 (2003,265,0000) | 3.4775E-03 (2003,140,0000) | 3.1685E-03 (2003,019,0000) |
| 1827 | -294.805 | -402.705 | 4.3336E-03 (2003,257,0000) | 3.3622E-03 (2003,265,0000) | 3.3191E-03 (2003,140,0000) | 3.1316E-03 (2003,019,0000) |
| 1828 | -292.564 | -402.787 | 3.0957E-03 (2003,019,0000) | 3.0184E-03 (2003,269,0000) | 2.9834E-03 (2003,140,0000) | 2.9603E-03 (2003,265,0000) |
| 1829 | -290.323 | -402.869 | 3.3624E-03 (2003,257,0000) | 3.0622E-03 (2003,019,0000) | 3.0566E-03 (2003,265,0000) | 3.0559E-03 (2003,026,0000) |
| 1830 | -288.082 | -402.950 | 3.1686E-03 (2003,026,0000) | 3.0917E-03 (2003,257,0000) | 3.0472E-03 (2003,265,0000) | 3.0304E-03 (2003,019,0000) |
| 1831 | -285.841 | -403.031 | 3.4409E-03 (2003,257,0000) | 3.2744E-03 (2003,026,0000) | 3.1263E-03 (2003,265,0000) | 2.9995E-03 (2003,019,0000) |
| 1832 | -283.600 | -403.111 | 3.3751E-03 (2003,026,0000) | 3.0552E-03 (2003,265,0000) | 2.9687E-03 (2003,019,0000) | 2.9548E-03 (2003,271,0000) |
| 1833 | -281.359 | -403.190 | 3.4678E-03 (2003,026,0000) | 3.3065E-03 (2003,257,0000) | 3.1853E-03 (2003,265,0000) | 3.0122E-03 (2003,271,0000) |
| 1834 | -279.118 | -403.269 | 4.1542E-03 (2003,257,0000) | 3.5502E-03 (2003,026,0000) | 3.4695E-03 (2003,088,0000) | 3.4670E-03 (2003,265,0000) |
| 1835 | -276.877 | -403.347 | 4.6742E-03 (2003,257,0000) | 3.8311E-03 (2003,265,0000) | 3.7002E-03 (2003,088,0000) | 3.6240E-03 (2003,026,0000) |
| 1836 | -272.395 | -403.501 | 4.5313E-03 (2003,257,0000) | 3.9327E-03 (2003,265,0000) | 3.7387E-03 (2003,026,0000) | 3.4454E-03 (2003,088,0000) |
| 1837 | -270.154 | -403.577 | 4.3740E-03 (2003,257,0000) | 3.9872E-03 (2003,265,0000) | 3.7777E-03 (2003,026,0000) | 3.2846E-03 (2003,271,0000) |
| 1838 | -267.913 | -403.652 | 3.8043E-03 (2003,026,0000) | 3.5027E-03 (2003,265,0000) | 3.3315E-03 (2003,271,0000) | 3.0277E-03 (2003,257,0000) |
| 1839 | -265.672 | -403.727 | 3.8186E-03 (2003,026,0000) | 3.4544E-03 (2003,265,0000) | 3.3765E-03 (2003,271,0000) | 2.8878E-03 (2003,047,0000) |
| 1840 | -263.431 | -403.801 | 3.8195E-03 (2003,026,0000) | 3.6965E-03 (2003,265,0000) | 3.4417E-03 (2003,271,0000) | 3.1548E-03 (2003,257,0000) |
| 1841 | -261.190 | -403.875 | 3.8145E-03 (2003,265,0000) | 3.8083E-03 (2003,026,0000) | 3.4935E-03 (2003,271,0000) | 3.2630E-03 (2003,257,0000) |
| 1842 | -258.948 | -403.948 | 3.9967E-03 (2003,265,0000) | 3.7844E-03 (2003,026,0000) | 3.5505E-03 (2003,271,0000) | 3.4345E-03 (2003,257,0000) |
| 1843 | -256.707 | -404.020 | 4.0053E-03 (2003,265,0000) | 3.7486E-03 (2003,026,0000) | 3.5995E-03 (2003,271,0000) | 3.2541E-03 (2003,257,0000) |
| 1844 | -254.466 | -404.092 | 4.0104E-03 (2003,265,0000) | 3.7015E-03 (2003,026,0000) | 3.6499E-03 (2003,271,0000) | 3.1697E-03 (2003,269,0000) |
| 1845 | -252.225 | -404.163 | 4.0133E-03 (2003,265,0000) | 3.6973E-03 (2003,271,0000) | 3.6441E-03 (2003,026,0000) | 3.1803E-03 (2003,269,0000) |
| 1846 | -249.984 | -404.233 | 4.0088E-03 (2003,265,0000) | 3.7462E-03 (2003,271,0000) | 3.5772E-03 (2003,026,0000) | 3.1926E-03 (2003,269,0000) |
| 1847 | -247.742 | -404.303 | 4.0027E-03 (2003,265,0000) | 3.7950E-03 (2003,271,0000) | 3.5040E-03 (2003,026,0000) | 3.2015E-03 (2003,269,0000) |
| 1848 | -245.501 | -404.372 | 3.9881E-03 (2003,265,0000) | 3.8284E-03 (2003,271,0000) | 3.4231E-03 (2003,026,0000) | 3.2089E-03 (2003,269,0000) |
| 1849 | -243.260 | -404.441 | 3.9665E-03 (2003,265,0000) | 3.8688E-03 (2003,271,0000) | 3.3380E-03 (2003,026,0000) | 3.2175E-03 (2003,269,0000) |
| 1850 | -241.018 | -404.509 | 3.9381E-03 (2003,265,0000) | 3.9064E-03 (2003,271,0000) | 3.2479E-03 (2003,026,0000) | 3.2348E-03 (2003,038,0000) |
| 1851 | -238.777 | -404.576 | 3.9411E-03 (2003,271,0000) | 3.9044E-03 (2003,265,0000) | 3.2630E-03 (2003,038,0000) | 3.2396E-03 (2003,269,0000) |
| 1852 | -236.536 | -404.643 | 3.9733E-03 (2003,271,0000) | 3.8630E-03 (2003,265,0000) | 3.2869E-03 (2003,038,0000) | 3.2490E-03 (2003,269,0000) |
| 1853 | -234.294 | -404.709 | 4.0021E-03 (2003,271,0000) | 3.8219E-03 (2003,265,0000) | 3.3036E-03 (2003,038,0000) | 3.2572E-03 (2003,269,0000) |
| 1854 | -232.053 | -404.774 | 4.0307E-03 (2003,271,0000) | 3.7778E-03 (2003,265,0000) | 3.3130E-03 (2003,038,0000) | 3.2637E-03 (2003,269,0000) |
| 1855 | -229.811 | -404.839 | 4.0569E-03 (2003,271,0000) | 3.7348E-03 (2003,265,0000) | 3.3148E-03 (2003,038,0000) | 3.2690E-03 (2003,269,0000) |
| 1856 | -211.879 | -405.335 | 4.0150E-03 (2003,271,0000) | 3.6266E-03 (2003,017,0000) | 3.2893E-03 (2003,265,0000) | 3.2871E-03 (2003,178,0000) |
| 1857 | -314.862 | -399.154 | 4.5879E-03 (2003,300,0000) | 4.2084E-03 (2003,140,0000) | 3.9734E-03 (2003,265,0000) | 3.6769E-03 (2003,037,0000) |
| 1858 | -312.622 | -399.242 | 4.4636E-03 (2003,300,0000) | 4.2018E-03 (2003,140,0000) | 3.8817E-03 (2003,265,0000) | 3.4922E-03 (2003,019,0000) |
| 1859 | -310.382 | -399.330 | 4.3150E-03 (2003,300,0000) | 4.1685E-03 (2003,140,0000) | 3.8337E-03 (2003,265,0000) | 3.4983E-03 (2003,257,0000) |
| 1860 | -308.142 | -399.416 | 4.1504E-03 (2003,300,0000) | 4.0992E-03 (2003,140,0000) | 3.7797E-03 (2003,265,0000) | 3.7407E-03 (2003,257,0000) |
| 1861 | -305.902 | -399.502 | 3.8879E-03 (2003,300,0000) | 3.8320E-03 (2003,140,0000) | 3.3465E-03 (2003,019,0000) | 3.1697E-03 (2003,269,0000) |
| 1862 | -303.662 | -399.588 | 3.6485E-03 (2003,300,0000) | 3.6219E-03 (2003,140,0000) | 3.3032E-03 (2003,019,0000) | 3.1429E-03 (2003,269,0000) |
| 1863 | -301.422 | -399.673 | 3.9987E-03 (2003,257,0000) | 3.7793E-03 (2003,140,0000) | 3.5535E-03 (2003,300,0000) | 3.4381E-03 (2003,265,0000) |
| 1864 | -299.182 | -399.757 | 4.6490E-03 (2003,257,0000) | 3.8502E-03 (2003,265,0000) | 3.7685E-03 (2003,140,0000) | 3.3481E-03 (2003,300,0000) |
| 1865 | -296.942 | -399.841 | 4.8246E-03 (2003,257,0000) | 3.9251E-03 (2003,265,0000) | 3.6740E-03 (2003,140,0000) | 3.1890E-03 (2003,019,0000) |
| 1866 | -294.702 | -399.924 | 4.7905E-03 (2003,257,0000) | 3.8217E-03 (2003,265,0000) | 3.5479E-03 (2003,140,0000) | 3.1528E-03 (2003,019,0000) |
| 1867 | -292.462 | -400.006 | 4.2842E-03 (2003,257,0000) | 3.4255E-03 (2003,265,0000) | 3.3304E-03 (2003,140,0000) | 3.1161E-03 (2003,019,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1868 | -290.222 | -400.088 | 3.5686E-03 (2003,257,0000) | 3.1763E-03 (2003,265,0000) | 3.0837E-03 (2003,026,0000) | 3.0827E-03 (2003,019,0000) |
| 1869 | -287.982 | -400.169 | 3.2031E-03 (2003,026,0000) | 3.0521E-03 (2003,265,0000) | 3.0503E-03 (2003,019,0000) | 2.9575E-03 (2003,269,0000) |
| 1870 | -285.742 | -400.249 | 3.3187E-03 (2003,026,0000) | 3.0338E-03 (2003,265,0000) | 3.0186E-03 (2003,019,0000) | 2.9388E-03 (2003,271,0000) |
| 1871 | -283.502 | -400.329 | 3.4276E-03 (2003,026,0000) | 3.0742E-03 (2003,265,0000) | 2.9912E-03 (2003,271,0000) | 2.9889E-03 (2003,019,0000) |
| 1872 | -281.261 | -400.408 | 3.6130E-03 (2003,257,0000) | 3.5289E-03 (2003,026,0000) | 3.3071E-03 (2003,265,0000) | 3.1629E-03 (2003,088,0000) |
| 1873 | -279.021 | -400.487 | 3.6225E-03 (2003,026,0000) | 3.2264E-03 (2003,265,0000) | 3.0984E-03 (2003,271,0000) | 2.9349E-03 (2003,019,0000) |
| 1874 | -276.781 | -400.565 | 3.8972E-03 (2003,257,0000) | 3.7063E-03 (2003,026,0000) | 3.4985E-03 (2003,265,0000) | 3.3764E-03 (2003,088,0000) |
| 1875 | -274.541 | -400.642 | 4.8312E-03 (2003,257,0000) | 4.2162E-03 (2003,265,0000) | 3.8749E-03 (2003,088,0000) | 3.7783E-03 (2003,026,0000) |
| 1876 | -272.300 | -400.719 | 3.8392E-03 (2003,026,0000) | 3.6478E-03 (2003,257,0000) | 3.5575E-03 (2003,265,0000) | 3.2602E-03 (2003,271,0000) |
| 1877 | -270.060 | -400.795 | 4.5158E-03 (2003,257,0000) | 4.1911E-03 (2003,265,0000) | 3.8872E-03 (2003,026,0000) | 3.4902E-03 (2003,088,0000) |
| 1878 | -267.820 | -400.870 | 4.2429E-03 (2003,257,0000) | 4.0448E-03 (2003,265,0000) | 3.9227E-03 (2003,026,0000) | 3.3715E-03 (2003,271,0000) |
| 1879 | -265.579 | -400.945 | 3.9445E-03 (2003,026,0000) | 3.4838E-03 (2003,265,0000) | 3.4127E-03 (2003,271,0000) | 3.0446E-03 (2003,047,0000) |
| 1880 | -263.339 | -401.019 | 3.9537E-03 (2003,026,0000) | 3.5686E-03 (2003,265,0000) | 3.4708E-03 (2003,271,0000) | 3.0919E-03 (2003,047,0000) |
| 1881 | -261.099 | -401.093 | 3.9481E-03 (2003,026,0000) | 3.7879E-03 (2003,265,0000) | 3.5290E-03 (2003,271,0000) | 3.1200E-03 (2003,047,0000) |
| 1882 | -258.858 | -401.166 | 4.0414E-03 (2003,265,0000) | 3.9295E-03 (2003,026,0000) | 3.5819E-03 (2003,271,0000) | 3.4270E-03 (2003,257,0000) |
| 1883 | -256.618 | -401.238 | 4.1287E-03 (2003,265,0000) | 3.8989E-03 (2003,026,0000) | 3.6407E-03 (2003,271,0000) | 3.3382E-03 (2003,257,0000) |
| 1884 | -216.287 | -402.432 | 5.0748E-03 (2003,298,0000) | 4.1863E-03 (2003,271,0000) | 3.7544E-03 (2003,157,0000) | 3.5616E-03 (2003,017,0000) |
| 1885 | -214.046 | -402.493 | 4.1427E-03 (2003,271,0000) | 3.5770E-03 (2003,017,0000) | 3.4077E-03 (2003,265,0000) | 3.2463E-03 (2003,178,0000) |
| 1886 | -211.805 | -402.552 | 4.4915E-03 (2003,298,0000) | 4.1768E-03 (2003,157,0000) | 4.1582E-03 (2003,271,0000) | 3.7314E-03 (2003,017,0000) |
| 1887 | -314.752 | -396.373 | 4.8198E-03 (2003,300,0000) | 4.3928E-03 (2003,140,0000) | 4.0684E-03 (2003,265,0000) | 3.7335E-03 (2003,037,0000) |
| 1888 | -312.513 | -396.461 | 4.7025E-03 (2003,300,0000) | 4.3830E-03 (2003,140,0000) | 4.1014E-03 (2003,265,0000) | 3.5146E-03 (2003,019,0000) |
| 1889 | -310.274 | -396.548 | 4.5618E-03 (2003,300,0000) | 4.3506E-03 (2003,140,0000) | 4.0803E-03 (2003,265,0000) | 3.4613E-03 (2003,019,0000) |
| 1890 | -308.035 | -396.635 | 4.4038E-03 (2003,300,0000) | 4.2978E-03 (2003,140,0000) | 4.0328E-03 (2003,265,0000) | 3.7064E-03 (2003,257,0000) |
| 1891 | -305.796 | -396.721 | 4.0998E-03 (2003,300,0000) | 3.9327E-03 (2003,140,0000) | 3.3617E-03 (2003,019,0000) | 3.1489E-03 (2003,269,0000) |
| 1892 | -303.556 | -396.807 | 4.1336E-03 (2003,140,0000) | 4.1214E-03 (2003,257,0000) | 4.0183E-03 (2003,300,0000) | 3.8834E-03 (2003,265,0000) |
| 1893 | -301.317 | -396.892 | 3.9161E-03 (2003,140,0000) | 3.8067E-03 (2003,257,0000) | 3.7951E-03 (2003,300,0000) | 3.4686E-03 (2003,265,0000) |
| 1894 | -299.078 | -396.976 | 4.7224E-03 (2003,257,0000) | 4.1220E-03 (2003,265,0000) | 3.9905E-03 (2003,140,0000) | 3.5955E-03 (2003,300,0000) |
| 1895 | -296.839 | -397.059 | 4.8782E-03 (2003,257,0000) | 4.1491E-03 (2003,265,0000) | 3.8778E-03 (2003,140,0000) | 3.3653E-03 (2003,300,0000) |
| 1896 | -294.599 | -397.142 | 4.6493E-03 (2003,257,0000) | 3.8231E-03 (2003,265,0000) | 3.6747E-03 (2003,140,0000) | 3.1646E-03 (2003,019,0000) |
| 1897 | -292.360 | -397.225 | 3.7518E-03 (2003,257,0000) | 3.3302E-03 (2003,140,0000) | 3.3030E-03 (2003,265,0000) | 3.1285E-03 (2003,019,0000) |
| 1898 | -290.121 | -397.306 | 3.6700E-03 (2003,257,0000) | 3.2752E-03 (2003,265,0000) | 3.1773E-03 (2003,140,0000) | 3.1012E-03 (2003,026,0000) |
| 1899 | -287.882 | -397.387 | 4.6311E-03 (2003,257,0000) | 3.7218E-03 (2003,265,0000) | 3.3500E-03 (2003,088,0000) | 3.2724E-03 (2003,140,0000) |
| 1900 | -285.642 | -397.468 | 4.1443E-03 (2003,257,0000) | 3.4691E-03 (2003,265,0000) | 3.3532E-03 (2003,026,0000) | 3.2958E-03 (2003,088,0000) |
| 1901 | -283.403 | -397.548 | 3.5316E-03 (2003,257,0000) | 3.4715E-03 (2003,026,0000) | 3.3002E-03 (2003,265,0000) | 3.0715E-03 (2003,088,0000) |
| 1902 | -281.163 | -397.627 | 3.5833E-03 (2003,026,0000) | 3.3558E-03 (2003,257,0000) | 3.2875E-03 (2003,265,0000) | 3.0856E-03 (2003,271,0000) |
| 1903 | -278.924 | -397.705 | 3.6857E-03 (2003,026,0000) | 3.5781E-03 (2003,257,0000) | 3.3897E-03 (2003,265,0000) | 3.2188E-03 (2003,088,0000) |
| 1904 | -276.684 | -397.783 | 3.7794E-03 (2003,026,0000) | 3.5971E-03 (2003,257,0000) | 3.4473E-03 (2003,265,0000) | 3.2354E-03 (2003,088,0000) |
| 1905 | -274.445 | -397.861 | 3.8621E-03 (2003,026,0000) | 3.4300E-03 (2003,265,0000) | 3.3139E-03 (2003,257,0000) | 3.2387E-03 (2003,271,0000) |
| 1906 | -272.206 | -397.937 | 3.9332E-03 (2003,026,0000) | 3.7051E-03 (2003,257,0000) | 3.6205E-03 (2003,265,0000) | 3.2934E-03 (2003,271,0000) |
| 1907 | -269.966 | -398.013 | 3.9913E-03 (2003,026,0000) | 3.5228E-03 (2003,265,0000) | 3.3460E-03 (2003,271,0000) | 3.2001E-03 (2003,047,0000) |
| 1908 | -267.726 | -398.089 | 4.0357E-03 (2003,026,0000) | 3.4353E-03 (2003,265,0000) | 3.3907E-03 (2003,271,0000) | 3.1608E-03 (2003,047,0000) |
| 1909 | -265.487 | -398.164 | 4.0665E-03 (2003,026,0000) | 3.4925E-03 (2003,265,0000) | 3.4448E-03 (2003,271,0000) | 3.1882E-03 (2003,047,0000) |
| 1910 | -263.247 | -398.238 | 4.0832E-03 (2003,026,0000) | 3.9190E-03 (2003,265,0000) | 3.5172E-03 (2003,271,0000) | 3.4668E-03 (2003,257,0000) |
| 1911 | -261.008 | -398.311 | 4.0857E-03 (2003,026,0000) | 3.6953E-03 (2003,265,0000) | 3.5588E-03 (2003,271,0000) | 3.2652E-03 (2003,047,0000) |
| 1912 | -258.768 | -398.384 | 4.0739E-03 (2003,026,0000) | 3.7259E-03 (2003,265,0000) | 3.6097E-03 (2003,271,0000) | 3.2713E-03 (2003,047,0000) |
| 1913 | -256.528 | -398.456 | 4.2703E-03 (2003,265,0000) | 4.0474E-03 (2003,026,0000) | 3.6777E-03 (2003,271,0000) | 3.4190E-03 (2003,257,0000) |
| 1914 | -254.289 | -398.528 | 4.2486E-03 (2003,265,0000) | 4.0062E-03 (2003,026,0000) | 3.7274E-03 (2003,271,0000) | 3.3917E-03 (2003,047,0000) |
| 1915 | -213.972 | -399.710 | 4.2670E-03 (2003,271,0000) | 3.6431E-03 (2003,017,0000) | 3.5763E-03 (2003,157,0000) | 3.4598E-03 (2003,265,0000) |
| 1916 | -211.732 | -399.770 | 4.2394E-03 (2003,271,0000) | 3.7104E-03 (2003,017,0000) | 3.4024E-03 (2003,265,0000) | 3.3160E-03 (2003,178,0000) |
| 1917 | -209.492 | -399.829 | 4.2371E-03 (2003,271,0000) | 3.9214E-03 (2003,157,0000) | 3.8264E-03 (2003,017,0000) | 3.3685E-03 (2003,178,0000) |
| 1918 | -314.642 | -393.592 | 5.0531E-03 (2003,300,0000) | 4.5585E-03 (2003,140,0000) | 4.1629E-03 (2003,265,0000) | 3.8111E-03 (2003,037,0000) |
| 1919 | -312.404 | -393.680 | 4.9466E-03 (2003,300,0000) | 4.5810E-03 (2003,140,0000) | 4.2621E-03 (2003,265,0000) | 3.5320E-03 (2003,019,0000) |
| 1920 | -310.166 | -393.767 | 4.8230E-03 (2003,300,0000) | 4.5851E-03 (2003,140,0000) | 4.4287E-03 (2003,265,0000) | 3.4750E-03 (2003,019,0000) |
| 1921 | -307.927 | -393.854 | 4.6584E-03 (2003,300,0000) | 4.5229E-03 (2003,140,0000) | 4.3023E-03 (2003,265,0000) | 3.6755E-03 (2003,257,0000) |
| 1922 | -305.689 | -393.940 | 4.4739E-03 (2003,300,0000) | 4.4485E-03 (2003,140,0000) | 4.2736E-03 (2003,265,0000) | 3.9573E-03 (2003,257,0000) |
| 1923 | -303.451 | -394.025 | 4.3279E-03 (2003,140,0000) | 4.2748E-03 (2003,300,0000) | 4.0726E-03 (2003,257,0000) | 4.0558E-03 (2003,265,0000) |
| 1924 | -301.212 | -394.110 | 4.4880E-03 (2003,257,0000) | 4.2914E-03 (2003,140,0000) | 4.2869E-03 (2003,265,0000) | 4.0751E-03 (2003,300,0000) |
| 1925 | -298.974 | -394.194 | 4.7317E-03 (2003,257,0000) | 4.3353E-03 (2003,265,0000) | 4.2047E-03 (2003,140,0000) | 3.8529E-03 (2003,300,0000) |
| 1926 | -296.735 | -394.278 | 4.8231E-03 (2003,257,0000) | 4.2617E-03 (2003,265,0000) | 4.0681E-03 (2003,140,0000) | 3.6171E-03 (2003,300,0000) |
| 1927 | -294.497 | -394.361 | 4.9083E-03 (2003,257,0000) | 4.2254E-03 (2003,265,0000) | 3.9215E-03 (2003,140,0000) | 3.3678E-03 (2003,300,0000) |
| 1928 | -292.258 | -394.443 | 5.0150E-03 (2003,257,0000) | 4.2297E-03 (2003,265,0000) | 3.7824E-03 (2003,140,0000) | 3.1653E-03 (2003,269,0000) |
| 1929 | -290.020 | -394.525 | 5.1112E-03 (2003,257,0000) | 4.2741E-03 (2003,265,0000) | 3.6617E-03 (2003,140,0000) | 3.1990E-03 (2003,088,0000) |
| 1930 | -287.781 | -394.606 | 5.2191E-03 (2003,257,0000) | 4.3526E-03 (2003,265,0000) | 3.5445E-03 (2003,140,0000) | 3.4805E-03 (2003,088,0000) |
| 1931 | -285.543 | -394.686 | 5.2161E-03 (2003,257,0000) | 4.3368E-03 (2003,265,0000) | 3.7186E-03 (2003,088,0000) | 3.4129E-03 (2003,140,0000) |
| 1932 | -283.304 | -394.766 | 5.2310E-03 (2003,257,0000) | 4.3630E-03 (2003,265,0000) | 3.9341E-03 (2003,088,0000) | 3.5049E-03 (2003,026,0000) |
| 1933 | -281.065 | -394.845 | 3.6262E-03 (2003,026,0000) | 3.3696E-03 (2003,257,0000) | 3.3211E-03 (2003,265,0000) | 3.1949E-03 (2003,047,0000) |
| 1934 | -278.827 | -394.924 | 3.7402E-03 (2003,026,0000) | 3.5761E-03 (2003,257,0000) | 3.4289E-03 (2003,265,0000) | 3.2622E-03 (2003,088,0000) |
| 1935 | -276.588 | -395.002 | 3.8445E-03 (2003,026,0000) | 3.3956E-03 (2003,265,0000) | 3.3237E-03 (2003,257,0000) | 3.2711E-03 (2003,047,0000) |
| 1936 | -274.349 | -395.079 | 3.9376E-03 (2003,026,0000) | 3.3330E-03 (2003,265,0000) | 3.2909E-03 (2003,047,0000) | 3.2702E-03 (2003,271,0000) |
| 1937 | -272.111 | -395.156 | 4.0191E-03 (2003,026,0000) | 3.3860E-03 (2003,265,0000) | 3.3241E-03 (2003,271,0000) | 3.3211E-03 (2003,047,0000) |
| 1938 | -269.872 | -395.232 | 4.0875E-03 (2003,026,0000) | 3.5129E-03 (2003,265,0000) | 3.3821E-03 (2003,271,0000) | 3.3592E-03 (2003,047,0000) |
| 1939 | -267.633 | -395.307 | 4.1430E-03 (2003,026,0000) | 3.7102E-03 (2003,265,0000) | 3.4392E-03 (2003,271,0000) | 3.3993E-03 (2003,257,0000) |
| 1940 | -265.394 | -395.382 | 4.1837E-03 (2003,026,0000) | 3.9772E-03 (2003,265,0000) | 3.7108E-03 (2003,257,0000) | 3.4969E-03 (2003,271,0000) |
| 1941 | -263.156 | -395.456 | 4.2086E-03 (2003,026,0000) | 4.0476E-03 (2003,265,0000) | 3.6083E-03 (2003,257,0000) | 3.5509E-03 (2003,271,0000) |
| 1942 | -260.917 | -395.530 | 4.2188E-03 (2003,026,0000) | 4.2048E-03 (2003,265,0000) | 3.6419E-03 (2003,257,0000) | 3.6014E-03 (2003,271,0000) |
| 1943 | -258.678 | -395.602 | 4.2150E-03 (2003,026,0000) | 4.1060E-03 (2003,265,0000) | 3.6485E-03 (2003,271,0000) | 3.4558E-03 (2003,047,0000) |
| 1944 | -216.136 | -396.868 | 5.1106E-03 (2003,298,0000) | 4.3839E-03 (2003,271,0000) | 3.7936E-03 (2003,157,0000) | 3.6632E-03 (2003,017,0000) |
| 1945 | -213.897 | -396.928 | 4.9818E-03 (2003,298,0000) | 4.3898E-03 (2003,271,0000) | 4.0500E-03 (2003,157,0000) | 3.7552E-03 (2003,017,0000) |
| 1946 | -211.658 | -396.988 | 4.3631E-03 (2003,271,0000) | 3.7719E-03 (2003,017,0000) | 3.7063E-03 (2003,157,0000) | 3.4481E-03 (2003,265,0000) |
| 1947 | -209.419 | -397.047 | 4.8376E-03 (2003,298,0000) | 4.6117E-03 (2003,157,0000) | 4.3782E-03 (2003,271,0000) | 3.9463E-03 (2003,017,0000) |
| 1948 | -285.443 | -391.905 | 5.2032E-03 (2003,257,0000) | 4.4282E-03 (2003,265,0000) | 3.6672E-03 (2003,088,0000) | 3.5926E-03 (2003,140,0000) |
| 1949 | -283.205 | -391.985 | 3.8930E-03 (2003,257,0000) | 3.5279E-03 (2003,026,0000) | 3.5032E-03 (2003,265,0000) | 3.3185E-03 (2003,047,0000) |
| 1950 | -280.967 | -392.064 | 3.6592E-03 (2003,026,0000) | 3.3061E-03 (2003,047,0000) | 3.1696E-03 (2003,265,0000) | 3.1425E-03 (2003,271,0000) |
| 1951 | -278.730 | -392.142 | 3.7828E-03 (2003,026,0000) | 3.6956E-03 (2003,257,0000) | 3.4919E-03 (2003,265,0000) | 3.3996E-03 (2003,047,0000) |
| 1952 | -276.492 | -392.220 | 4.1545E-03 (2003,257,0000) | 3.8974E-03 (2003,026,0000) | 3.7757E-03 (2003,088,0000) | 3.7529E-03 (2003,265,0000) |
| 1953 | -274.254 | -392.298 | 4.0023E-03 (2003,026,0000) | 3.7985E-03 (2003,257,0000) | 3.6427E-03 (2003,265,0000) | 3.5570E-03 (2003,088,0000) |
| 1954 | -272.016 | -392.374 | 4.0958E-03 (2003,026,0000) | 3.5684E-03 (2003,265,0000) | 3.5014E-03 (2003,047,0000) | 3.4339E-03 (2003,257,0000) |
| 1955 | -269.778 | -392.450 | 4.1755E-03 (2003,026,0000) | 3.7473E-03 (2003,265,0000) | 3.6512E-03 (2003,257,0000) | 3.5350E-03 (2003,047,0000) |
| 1956 | -267.540 | -392.526 | 4.2416E-03 (2003,026,0000) | 3.8076E-03 (2003,265,0000) | 3.5659E-03 (2003,257,0000) | 3.5593E-03 (2003,047,0000) |
| 1957 | -265.302 | -392.600 | 4.2932E-03 (2003,026,0000) | 4.1826E-03 (2003,265,0000) | 3.9415E-03 (2003,257,0000) | 3.5924E-03 (2003,047,0000) |
| 1958 | -263.064 | -392.674 | 4.7840E-03 (2003,265,0000) | 4.3280E-03 (2003,026,0000) | 4.2610E-03 (2003,257,0000) | 3.6721E-03 (2003,047,0000) |
| 1959 | -260.826 | -392.748 | 4.7282E-03 (2003,265,0000) | 4.3487E-03 (2003,026,0000) | 4.0230E-03 (2003,257,0000) | 3.6781E-03 (2003,047,0000) |
| 1960 | -258.588 | -392.821 | 4.5949E-03 (2003,265,0000) | 4.3515E-03 (2003,026,0000) | 3.7881E-03 (2003,257,0000) | 3.6797E-03 (2003,271,0000) |
| 1961 | -213.823 | -394.146 | 5.1188E-03 (2003,298,0000) | 4.4877E-03 (2003,271,0000) | 4.0868E-03 (2003,157,0000) | 3.8105E-03 (2003,017,0000) |
| 1962 | -211.584 | -394.206 | 5.3100E-03 (2003,298,0000) | 4.4971E-03 (2003,271,0000) | 4.4114E-03 (2003,157,0000) | 3.9170E-03 (2003,017,0000) |
| 1963 | -285.344 | -389.124 | 5.1163E-03 (2003,257,0000) | 4.4731E-03 (2003,265,0000) | 3.7774E-03 (2003,140,0000) | 3.5822E-03 (2003,088,0000) |
| 1964 | -283.107 | -389.203 | 3.5406E-03 (2003,026,0000) | 3.4758E-03 (2003,047,0000) | 3.2869E-03 (2003,265,0000) | 3.1287E-03 (2003,271,0000) |
| 1965 | -280.869 | -389.283 | 3.6802E-03 (2003,026,0000) | 3.5171E-03 (2003,047,0000) | 3.2401E-03 (2003,265,0000) | 3.1797E-03 (2003,271,0000) |
| 1966 | -278.632 | -389.361 | 3.8145E-03 (2003,026,0000) | 3.5611E-03 (2003,047,0000) | 3.3757E-03 (2003,265,0000) | 3.2549E-03 (2003,257,0000) |
| 1967 | -276.395 | -389.439 | 4.0230E-03 (2003,257,0000) | 3.9407E-03 (2003,026,0000) | 3.7387E-03 (2003,088,0000) | 3.7100E-03 (2003,265,0000) |
| 1968 | -274.158 | -389.516 | 5.4116E-03 (2003,257,0000) | 5.1952E-03 (2003,265,0000) | 4.6067E-03 (2003,088,0000) | 4.0568E-03 (2003,026,0000) |
| 1969 | -269.684 | -389.669 | 5.2582E-03 (2003,265,0000) | 5.0773E-03 (2003,257,0000) | 4.4468E-03 (2003,088,0000) | 4.2542E-03 (2003,026,0000) |
| 1970 | -267.447 | -389.744 | 5.1640E-03 (2003,265,0000) | 4.8580E-03 (2003,257,0000) | 4.3317E-03 (2003,026,0000) | 4.2516E-03 (2003,088,0000) |
| 1971 | -211.510 | -391.424 | 5.0504E-03 (2003,298,0000) | 4.5937E-03 (2003,271,0000) | 4.3799E-03 (2003,157,0000) | 3.9662E-03 (2003,017,0000) |
| 1972 | -209.273 | -391.483 | 4.5446E-03 (2003,271,0000) | 3.9164E-03 (2003,017,0000) | 3.5413E-03 (2003,038,0000) | 3.4633E-03 (2003,265,0000) |
| 1973 | -278.535 | -386.580 | 3.8341E-03 (2003,026,0000) | 3.7300E-03 (2003,047,0000) | 3.2805E-03 (2003,265,0000) | 3.2659E-03 (2003,271,0000) |
| 1974 | -276.299 | -386.658 | 4.0728E-03 (2003,257,0000) | 3.9716E-03 (2003,026,0000) | 3.7896E-03 (2003,088,0000) | 3.7846E-03 (2003,047,0000) |
| 1975 | -215.910 | -388.522 | 4.6341E-03 (2003,298,0000) | 4.6204E-03 (2003,271,0000) | 3.8832E-03 (2003,038,0000) | 3.7910E-03 (2003,017,0000) |
| 1976 | -213.599 | -385.800 | 4.7249E-03 (2003,271,0000) | 4.3447E-03 (2003,298,0000) | 4.0127E-03 (2003,157,0000) | 3.9728E-03 (2003,038,0000) |
| 1977 | -211.363 | -385.860 | 4.7636E-03 (2003,271,0000) | 4.4590E-03 (2003,298,0000) | 4.3584E-03 (2003,157,0000) | 4.0519E-03 (2003,017,0000) |
| 1978 | -209.054 | -383.137 | 4.8765E-03 (2003,271,0000) | 4.7617E-03 (2003,157,0000) | 4.5466E-03 (2003,298,0000) | 4.2246E-03 (2003,017,0000) |
| 1979 | -206.746 | -380.413 | 4.9031E-03 (2003,271,0000) | 4.1559E-03 (2003,017,0000) | 3.9215E-03 (2003,038,0000) | 3.7809E-03 (2003,157,0000) |
| 1980 | -204.440 | -377.689 | 5.4925E-03 (2003,157,0000) | 5.0975E-03 (2003,271,0000) | 4.5654E-03 (2003,017,0000) | 4.0284E-03 (2003,038,0000) |
| 1981 | -202.136 | -374.965 | 5.0545E-03 (2003,271,0000) | 4.8886E-03 (2003,157,0000) | 4.5631E-03 (2003,017,0000) | 3.9115E-03 (2003,038,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1982 | -202.065 | -372.183 | 4.9815E-03 (2003,271,0000) | 4.4234E-03 (2003,017,0000) | 4.0292E-03 (2003,110,0000) | 3.9308E-03 (2003,038,0000) |
| 1983 | -201.994 | -369.401 | 5.0568E-03 (2003,271,0000) | 4.7082E-03 (2003,157,0000) | 4.5434E-03 (2003,017,0000) | 4.2806E-03 (2003,110,0000) |
| 1984 | -199.763 | -369.458 | 5.0288E-03 (2003,271,0000) | 4.6108E-03 (2003,017,0000) | 4.2816E-03 (2003,110,0000) | 4.2175E-03 (2003,157,0000) |
| 1985 | -199.693 | -366.676 | 5.5270E-03 (2003,157,0000) | 5.1385E-03 (2003,271,0000) | 4.8509E-03 (2003,017,0000) | 4.5894E-03 (2003,110,0000) |
| 1986 | -195.231 | -366.787 | 6.3049E-03 (2003,157,0000) | 5.2065E-03 (2003,271,0000) | 5.1977E-03 (2003,017,0000) | 4.6902E-03 (2003,110,0000) |
| 1987 | -197.393 | -363.950 | 5.3627E-03 (2003,157,0000) | 5.1316E-03 (2003,271,0000) | 4.9161E-03 (2003,017,0000) | 4.8480E-03 (2003,110,0000) |
| 1988 | -192.798 | -358.497 | 5.2386E-03 (2003,110,0000) | 5.0551E-03 (2003,271,0000) | 4.9513E-03 (2003,017,0000) | 4.1325E-03 (2003,241,0000) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1198 | -355.887 | -464.319 | 9.6150E-05 | 1593 | -221.307 | -421.787 | 2.3250E-04 |
| 1199 | -353.629 | -464.418 | 9.7596E-05 | 1594 | -219.061 | -421.849 | 2.3655E-04 |
| 1200 | -351.371 | -464.517 | 9.8528E-05 | 1595 | -216.814 | -421.910 | 2.3625E-04 |
| 1201 | -362.536 | -461.234 | 9.7446E-05 | 1596 | -214.568 | -421.971 | 2.3217E-04 |
| 1202 | -360.279 | -461.336 | 9.8316E-05 | 1597 | -212.322 | -422.030 | 2.3262E-04 |
| 1203 | -358.021 | -461.436 | 9.9536E-05 | 1598 | -210.076 | -422.090 | 2.3881E-04 |
| 1204 | -355.764 | -461.536 | 1.0093E-04 | 1599 | -207.829 | -422.148 | 2.2397E-04 |
| 1205 | -353.507 | -461.636 | 1.0215E-04 | 1600 | -205.583 | -422.206 | 2.2723E-04 |
| 1206 | -351.249 | -461.735 | 1.0259E-04 | 1601 | -203.337 | -422.264 | 2.5945E-04 |
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| 1871 | -283.502 | -400.329 | 1.8956E-04 |
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| 1911 | -261.008 | -398.311 | 2.1530E-04 |

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| 1548 | -248.346 | -423.779 | 1.8128E-04 | 1943 | -258.678 | -395.602 | 2.3131E-04 |
| 1549 | -246.099 | -423.849 | 1.8732E-04 | 1944 | -216.136 | -396.868 | 2.9478E-04 |
| 1550 | -243.853 | -423.917 | 1.8665E-04 | 1945 | -213.897 | -396.928 | 2.9670E-04 |
| 1551 | -241.606 | -423.986 | 1.9393E-04 | 1946 | -211.658 | -396.988 | 2.7522E-04 |
| 1552 | -239.359 | -424.053 | 1.9855E-04 | 1947 | -209.419 | -397.047 | 3.0258E-04 |
| 1553 | -237.112 | -424.120 | 1.9567E-04 | 1948 | -285.443 | -391.905 | 2.2813E-04 |
| 1554 | -234.865 | -424.186 | 1.9731E-04 | 1949 | -283.205 | -391.985 | 2.1714E-04 |
| 1555 | -232.618 | -424.252 | 2.0255E-04 | 1950 | -280.967 | -392.064 | 2.0156E-04 |
| 1556 | -230.371 | -424.317 | 2.0207E-04 | 1951 | -278.730 | -392.142 | 2.1805E-04 |
| 1557 | -228.125 | -424.381 | 2.1325E-04 | 1952 | -276.492 | -392.220 | 2.2487E-04 |
| 1558 | -225.878 | -424.445 | 2.1887E-04 | 1953 | -274.254 | -392.298 | 2.2294E-04 |
| 1559 | -223.631 | -424.508 | 2.2293E-04 | 1954 | -272.016 | -392.374 | 2.2078E-04 |
| 1560 | -221.384 | -424.570 | 2.2628E-04 | 1955 | -269.778 | -392.450 | 2.2613E-04 |
| 1561 | -219.137 | -424.632 | 2.3074E-04 | 1956 | -267.540 | -392.526 | 2.2770E-04 |
| 1562 | -216.890 | -424.693 | 2.2951E-04 | 1957 | -265.302 | -392.600 | 2.3464E-04 |
| 1563 | -214.643 | -424.754 | 2.2319E-04 | 1958 | -263.064 | -392.674 | 2.4434E-04 |
| 1564 | -212.396 | -424.813 | 2.1971E-04 | 1959 | -260.826 | -392.748 | 2.4472E-04 |
| 1565 | -210.149 | -424.873 | 2.2112E-04 | 1960 | -258.588 | -392.821 | 2.4299E-04 |
| 1566 | -207.902 | -424.931 | 2.1885E-04 | 1961 | -213.823 | -394.146 | 3.0386E-04 |
| 1567 | -205.654 | -424.989 | 2.5088E-04 | 1962 | -211.584 | -394.206 | 3.0860E-04 |
| 1568 | -203.407 | -425.047 | 2.5284E-04 | 1963 | -285.344 | -389.124 | 2.3188E-04 |
| 1569 | -349.306 | -417.225 | 1.5075E-04 | 1964 | -283.107 | -389.203 | 2.1326E-04 |
| 1570 | -329.101 | -418.081 | 1.5806E-04 | 1965 | -280.869 | -389.283 | 2.1110E-04 |
| 1571 | -326.856 | -418.173 | 1.5744E-04 | 1966 | -278.632 | -389.361 | 2.1742E-04 |
| 1572 | -302.157 | -419.144 | 1.7569E-04 | 1967 | -276.395 | -389.439 | 2.2755E-04 |
| 1573 | -266.227 | -420.420 | 1.8176E-04 | 1968 | -274.158 | -389.516 | 2.4606E-04 |
| 1574 | -263.981 | -420.494 | 1.8183E-04 | 1969 | -269.684 | -389.669 | 2.4901E-04 |
| 1575 | -261.735 | -420.568 | 1.8511E-04 | 1970 | -267.447 | -389.744 | 2.4912E-04 |
| 1576 | -259.489 | -420.641 | 1.8927E-04 | 1971 | -211.510 | -391.424 | 3.1355E-04 |
| 1577 | -257.244 | -420.713 | 1.9030E-04 | 1972 | -209.273 | -391.483 | 2.8036E-04 |
| 1578 | -254.998 | -420.785 | 1.8263E-04 | 1973 | -278.535 | -386.580 | 2.1690E-04 |
| 1579 | -252.752 | -420.856 | 1.8202E-04 | 1974 | -276.299 | -386.658 | 2.3200E-04 |
| 1580 | -250.506 | -420.927 | 1.8552E-04 | 1975 | -215.910 | -388.522 | 3.1047E-04 |
| 1581 | -248.260 | -420.997 | 1.8962E-04 | 1976 | -213.599 | -385.800 | 3.1922E-04 |
| 1582 | -246.014 | -421.066 | 1.9391E-04 | 1977 | -211.363 | -385.860 | 3.2406E-04 |
| 1583 | -243.768 | -421.135 | 1.9455E-04 | 1978 | -209.054 | -383.137 | 3.3697E-04 |
| 1584 | -241.522 | -421.203 | 1.9458E-04 | 1979 | -206.746 | -380.413 | 3.1504E-04 |
| 1585 | -239.276 | -421.270 | 2.0376E-04 | 1980 | -204.440 | -377.689 | 3.5936E-04 |
| 1586 | -237.030 | -421.337 | 2.0709E-04 | 1981 | -202.136 | -374.965 | 3.5143E-04 |
| 1587 | -234.784 | -421.403 | 2.0975E-04 | 1982 | -202.065 | -372.183 | 3.3843E-04 |
| 1588 | -232.538 | -421.469 | 2.1307E-04 | 1983 | -201.994 | -369.401 | 3.6174E-04 |
| 1589 | -230.291 | -421.534 | 2.1693E-04 | 1984 | -199.763 | -369.458 | 3.5777E-04 |
| 1590 | -228.045 | -421.598 | 2.1049E-04 | 1985 | -199.693 | -366.676 | 3.8843E-04 |
| 1591 | -225.799 | -421.662 | 2.2440E-04 | 1986 | -195.231 | -366.787 | 4.0560E-04 |
| 1592 | -223.553 | -421.725 | 2.2851E-04 | 1987 | -197.393 | -363.950 | 3.9465E-04 |
| | | | | 1988 | -192.798 | -358.497 | 4.0126E-04 |

**********

CALPOST Version 5.6394 Level 070622

**********

SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 1986 | -195.231 | -366.787 | DISCRETE | 6.3049E-03 (2003,157,0000) | RANK 1 | 24 | HOUR |
| 1986 | -195.231 | -366.787 | DISCRETE | 5.2065E-03 (2003,271,0000) | RANK 2 | 24 | HOUR |
| 1986 | -195.231 | -366.787 | DISCRETE | 5.1977E-03 (2003,017,0000) | RANK 3 | 24 | HOUR |
| 1987 | -197.393 | -363.950 | DISCRETE | 4.8480E-03 (2003,110,0000) | RANK 4 | 24 | HOUR |
| 1986 | -195.231 | -366.787 | DISCRETE | 4.0560E-04 | RANK 1 | 8736 | HOUR |

```
*************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*************************************************************************************************************************



 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.98   Level: 060911


  Run Title:
     CALPOST SPC Facility
     2003 CALPUFF Run
     CALPOST Control File for Zion

 ---------------------------------------------------------------------------------

 INPUT GROUP: 1 -- General run control parameters
 --------------

      Option to run all periods found
      in the met. file(s)  (METRUN)        Default: 0   ! METRUN =   1  !

          METRUN = 0 - Run period explicitly defined below
          METRUN = 1 - Run all periods in CALPUFF data file(s)

      Starting date:    Year  (ISYR) --    No default   ! ISYR  =  2003   !
      (used only if     Month (ISMO) --    No default   ! ISMO  =  0   !
       METRUN = 0)      Day   (ISDY) --    No default   ! ISDY  =  0   !
                        Hour  (ISHR) --    No default   ! ISHR  =  0   !

      Number of hours to process (NHRS) -- No default   ! NHRS  =  0  !

      Process every hour of data?(NREP) -- Default: 1   ! NREP  =  1  !
       (1 = every hour processed,
        2 = every 2nd hour processed,
        5 = every 5th hour processed, etc.)

 Species & Concentration/Deposition Information
 ----------------------------------------------

       Species to process (ASPEC)       -- No default   ! ASPEC = PM10  !
       (ASPEC = VISIB for visibility processing)

       Layer/deposition code (ILAYER)   -- Default: 1   ! ILAYER =  1  !
         '1'  for CALPUFF concentrations,
         '-1' for dry deposition fluxes,
         '-2' for wet deposition fluxes,
         '-3' for wet+dry deposition fluxes.

       Scaling factors of the form:     -- Defaults:    ! A =  0.0    !
             X(new) = X(old) * A + B         A = 0.0    ! B =  0.0    !
         (NOT applied if A = B = 0.0)        B = 0.0

       Add Hourly Background Concentrations/Fluxes?
                                 (LBACK)  -- Default: F   ! LBACK =  F !

 Source information
 ------------------

   Option to process source contributions:
          0 =  Process only total reported contributions
          1 =  Sum all individual source contributions and process
          2 =  Run in TRACEBACK mode to identify source
               contributions at a SINGLE receptor
                              (MSOURCE) -- Default: 0   ! MSOURCE =  0  !

 Receptor information
 --------------------

   Gridded receptors processed?    (LG) -- Default: F   ! LG  = F  !
   Discrete receptors processed?   (LD) -- Default: F   ! LD  = T  !
   CTSG Complex terrain receptors processed?
                                  (LCT) -- Default: F   ! LCT = F  !

 --Report results by DISCRETE receptor RING?
   (only used when LD = T)     (LDRING) -- Default: F   ! LDRING = F  !

 --Select range of DISCRETE receptors (only used when LD = T):

   Select ALL DISCRETE receptors by setting NDRECP flag to -1;
                                 OR
   Select SPECIFIC DISCRETE receptors by entering a flag (0,1) for each
      0 = discrete receptor not processed
      1 = discrete receptor processed
   using repeated value notation to select blocks of receptors:
      23*1, 15*0, 12*1
   Flag for all receptors after the last one assigned is set to 0
   (NDRECP) -- Default: -1
                                              ! NDRECP =  1988*0, 224*1  !


 --Select range of GRIDDED receptors (only used when LG = T):

        X index of LL corner (IBGRID) -- Default: -1     ! IBGRID = -1  !
            (-1 OR 1 <= IBGRID <= NX)

        Y index of LL corner (JBGRID) -- Default: -1     ! JBGRID = -1  !
            (-1 OR 1 <= JBGRID <= NY)

        X index of UR corner (IEGRID) -- Default: -1     ! IEGRID = -1  !
            (-1 OR 1 <= IEGRID <= NX)

        Y index of UR corner (JEGRID) -- Default: -1     ! JEGRID = -1  !
            (-1 OR 1 <= JEGRID <= NY)

   Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1


 --Specific gridded receptors can also be excluded from CALPOST
   processing by filling a processing grid array with 0s and 1s.  If the
   processing flag for receptor index (i,j) is 1 (ON), that receptor
   will be processed if it lies within the range delineated by IBGRID,
```

```
  JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be
  processed in the run.  By default, all array values are set to 1 (ON).

  Number of gridded receptor rows provided in Subgroup (1a) to
  identify specific gridded receptors to process
                           (NGONOFF) -- Default: 0      ! NGONOFF =  0  !

!END!


--------------
Subgroup (1a) -- Specific gridded receptors included/excluded
--------------

    Specific gridded receptors are excluded from CALPOST processing
    by filling a processing grid array with 0s and 1s.  A total of
    NGONOFF lines are read here.  Each line corresponds to one 'row'
    in the sampling grid, starting with the NORTHERNMOST row that
    contains receptors that you wish to exclude, and finishing with
    row 1 to the SOUTH (no intervening rows may be skipped).  Within
    a row, each receptor position is assigned either a 0 or 1,
    starting with the westernmost receptor.
       0 = gridded receptor not processed
       1 = gridded receptor processed

    Repeated value notation may be used to select blocks of receptors:
       23*1, 15*0, 12*1

    Because all values are initially set to 1, any receptors north of
    the first row entered, or east of the last value provided in a row,
    remain ON.

    (NGXRECP) -- Default: 1


-------------------------------------------------------------------------------

INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)
--------------

    Identify the Base Time Zone for the CALPUFF simulation
                             (BTZONE) -- No default   * BTZONE =  0.*

    Particle growth curve f(RH) for hygroscopic species
                               (MFRH) -- Default: 2   ! MFRH   =  2  !

         1 =  IWAQM (1998) f(RH) curve (originally used with MVISBK=1)
         2 =  FLAG (2000) f(RH) tabulation
         3 =  EPA (2003) f(RH) tabulation

    Maximum relative humidity (%) used in particle growth curve
                                (RHMAX) -- Default: 98  ! RHMAX  = 98.0 !

    Modeled species to be included in computing the light extinction
     Include SULFATE?          (LVSO4) -- Default: T   ! LVSO4  = T  !
     Include NITRATE?          (LVNO3) -- Default: T   ! LVNO3  = T  !
     Include ORGANIC CARBON?   (LVOC)  -- Default: T   ! LVOC   = T  !
     Include COARSE PARTICLES? (LVPMC) -- Default: T   ! LVPMC  = T  !
     Include FINE PARTICLES?   (LVPMF) -- Default: T   ! LVPMF  = T  !
     Include ELEMENTAL CARBON? (LVEC)  -- Default: T   ! LVEC   = T  !

    And, when ranking for TOP-N, TOP-50, and Exceedance tables,
     Include BACKGROUND?       (LVBK)  -- Default: T   ! LVBK   = T  !

    Species name used for particulates in MODEL.DAT file
                  COARSE    (SPECPMC) -- Default: PMC ! SPECPMC = PMC !
                  FINE      (SPECPMF) -- Default: PMF ! SPECPMF = PMF !

Extinction Efficiency (1/Mm per ug/m**3)
----------------------------------------
    MODELED particulate species:
               PM  COARSE       (EEPMC) -- Default: 0.6 ! EEPMC  = 0.6 !
               PM  FINE         (EEPMF) -- Default: 1.0 ! EEPMF  = 1.0 !
    BACKGROUND particulate species:
               PM  COARSE    (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
    Other species:
              AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4  = 3.0 !
              AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3  = 3.0 !
              ORGANIC CARBON   (EEOC)  -- Default: 4.0 ! EEOC   = 4.0 !
              SOIL             (EESOIL)-- Default: 1.0 ! EESOIL = 1.0 !
              ELEMENTAL CARBON (EEEC)  -- Default: 10. ! EEEC   = 10.0 !

Background Extinction Computation
---------------------------------

    Method used for the 24h-average of percent change of light extinction:
    Hourly ratio of source light extinction / background light extinction
    is averaged?               (LAVER) -- Default: F   ! LAVER = F  !


    Method used for background light extinction
                             (MVISBK) -- Default: 2   ! MVISBK =  2  !

         1 =  Supply single light extinction and hygroscopic fraction
              - Hourly F(RH) adjustment applied to hygroscopic background
                and modeled sulfate and nitrate
         2 =  Compute extinction from speciated PM measurements (A)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - F(RH) factor is capped at F(RHMAX)
         3 =  Compute extinction from speciated PM measurements (B)
              - Hourly F(RH) adjustment applied to observed and modeled sulfate
                and nitrate
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         4 =  Read hourly transmissometer background extinction measurements
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
              - Hour excluded if measurement invalid (missing, interference,
                or large RH)
              - Receptor-hour excluded if RH>RHMAX
              - Receptor-day excluded if fewer than 6 valid receptor-hours
         5 =  Read hourly nephelometer background extinction measurements
              - Rayleigh extinction value (BEXTRAY) added to measurement
              - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
```

```
            - Hour excluded if measurement invalid (missing, interference,
              or large RH)
            - Receptor-hour excluded if RH>RHMAX
            - Receptor-day excluded if fewer than 6 valid receptor-hours
      6 =  Compute extinction from speciated PM measurements
            - FLAG monthly RH adjustment factor applied to observed and
              modeled sulfate and nitrate
      7 =  Use observed weather or prognostic weather information for
           background extinction during weather events; otherwise, use Method 2
            - Hourly F(RH) adjustment applied to modeled sulfate and nitrate
            - F(RH) factor is capped at F(RHMAX)
            - During observed weather events, compute Bext from visual range
              if using an observed weather data file, or
            - During prognostic weather events, use Bext from the prognostic
              weather file
            - Use Method 2 for hours without a weather event

    Additional inputs used for MVISBK = 1:
    --------------------------------------
     Background light extinction (1/Mm)
                              (BEXTBK) -- No default   ! BEXTBK = 0.0 !
     Percentage of particles affected by relative humidity
                              (RHFRAC) -- No default   ! RHFRAC = 0.0 !

    Additional inputs used for MVISBK = 6:
    --------------------------------------
     Extinction coefficients for hygroscopic species (modeled and
     background) are computed using a monthly RH adjustment factor
     in place of an hourly RH factor (VISB.DAT file is NOT needed).
     Enter the 12 monthly factors here (RHFAC).  Month 1 is January.

     (RHFAC)  -- No default     ! RHFAC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 7:
    --------------------------------------
     The weather data file (DATSAV abbreviated space-delimited) that
     is identified as VSRN.DAT may contain data for more than one
     station.  Identify the stations that are needed in the order in
     which they will be used to obtain valid weather and visual range.
     The first station that contains valid data for an hour will be
     used.  Enter up to MXWSTA (set in PARAMS file) integer station IDs
     of up to 6 digits each as variable IDWSTA, and enter the corresponding
     time zone for each, as variable TZONE (= UTC-LST).

     A prognostic weather data file with Bext for weather events may be used
     in place of the observed weather file.  Identify this as the VSRN.DAT
     file and use a station ID of IDWSTA = 999999, and TZONE = 0.

     NOTE:  TZONE identifies the time zone used in the dataset.  The
            DATSAV abbreviated space-delimited data usually are prepared
            with UTC time rather than local time, so TZONE is typically
            set to zero.

     (IDWSTA)   -- No default
    ! IDWSTA = 999999 !
     (TZONE)    -- No default
    ! TZONE  = 0.0 !

    Additional inputs used for MVISBK = 2,3,6,7:
    ---------------------------------------------
     Background extinction coefficients are computed from monthly
     CONCENTRATIONS of ammonium sulfate (BKSO4), ammonium nitrate (BKNO3),
     coarse particulates (BKPMC), organic carbon (BKOC), soil (BKSOIL), and
     elemental carbon (BKEC).  Month 1 is January.
     (ug/m**3)

     (BKSO4)  -- No default     ! BKSO4 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKNO3)  -- No default     ! BKNO3 = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKPMC)  -- No default     ! BKPMC = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKOC)   -- No default     ! BKOC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKSOIL) -- No default     ! BKSOIL= 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !
     (BKEC)   -- No default     ! BKEC  = 0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0,
                                          0.0, 0.0, 0.0, 0.0 !

    Additional inputs used for MVISBK = 2,3,5,6,7:
    ----------------------------------------------
     Extinction due to Rayleigh scattering is added (1/Mm)
                             (BEXTRAY) -- Default: 10.0 ! BEXTRAY = 10.0 !

!END!
--------------------------------------------------------------------------------

INPUT GROUP: 3 -- Output options
--------------

Documentation
-------------

    Documentation records contained in the header of the
    CALPUFF output file may be written to the list file.
    Print documentation image?
                                (LDOC) -- Default: F   !  LDOC = F !

Output Units
------------
    Units for All Output       (IPRTU) -- Default: 1   ! IPRTU =  3   !
                    for           for
                Concentration    Deposition
       1 =         g/m**3         g/m**2/s
       2 =        mg/m**3        mg/m**2/s
       3 =        ug/m**3        ug/m**2/s
```

```
        4 =        ng/m**3        ng/m**2/s
        5 =      Odour Units

    Visibility: extinction expressed in 1/Mega-meters (IPRTU is ignored)


Averaging time(s) reported
--------------------------

    1-hr averages           (L1HR) -- Default: T   !   L1HR = F  !

    3-hr averages           (L3HR) -- Default: T   !   L3HR = F  !

    24-hr averages         (L24HR) -- Default: T   !  L24HR = T  !

    Run-length averages    (LRUNL) -- Default: T   !  LRUNL = T  !

    User-specified averaging time in hours - results for
    an averaging time of NAVG hours are reported for
    NAVG greater than 0:
                            (NAVG) -- Default: 0   !   NAVG =  0  !


Types of tabulations reported
-----------------------------

   1) Visibility: daily visibility tabulations are always reported
                  for the selected receptors when ASPEC = VISIB.
                  In addition, any of the other tabulations listed
                  below may be chosen to characterize the light
                  extinction coefficients.
                  [List file or Plot/Analysis File]


   2) Top 50 table for each averaging time selected
      [List file only]
                            (LT50) -- Default: T   !   LT50 = F  !

   3) Top 'N' table for each averaging time selected
      [List file or Plot file]
                          (LTOPN) -- Default: F   !  LTOPN = T  !

        -- Number of 'Top-N' values at each receptor
           selected (NTOP must be <= 4)
                            (NTOP) -- Default: 4   ! NTOP =  4   !

        -- Specific ranks of 'Top-N' values reported
           (NTOP values must be entered)
                   (ITOP(4) array) -- Default:     ! ITOP =  1 , 2 , 3 , 4   !
                                      1,2,3,4


   4) Threshold exceedance counts for each receptor and each averaging
      time selected
      [List file or Plot file]
                          (LEXCD) -- Default: F   !  LEXCD = F  !

        -- Identify the threshold for each averaging time by assigning a
           non-negative value (output units).

                                  -- Default: -1.0
           Threshold for  1-hr averages   (THRESH1) !  THRESH1 = -1.0  !
           Threshold for  3-hr averages   (THRESH3) !  THRESH3 = -1.0  !
           Threshold for 24-hr averages  (THRESH24) ! THRESH24 = -1.0  !
           Threshold for NAVG-hr averages (THRESHN) !  THRESHN = -1.0  !


        -- Counts for the shortest averaging period selected can be
           tallied daily, and receptors that experience more than NCOUNT
           counts over any NDAY period will be reported.  This type of
           exceedance violation output is triggered only if NDAY > 0.

           Accumulation period(Days)
                             (NDAY) -- Default: 0   !    NDAY =  0  !
           Number of exceedances allowed
                           (NCOUNT) -- Default: 1   !  NCOUNT =  1  !


   5) Selected day table(s)

      Echo Option -- Many records are written each averaging period
      selected and output is grouped by day
      [List file or Plot file]
                           (LECHO) -- Default: F   !  LECHO = F  !

      Timeseries Option -- Averages at all selected receptors for
      each selected averaging period are written to timeseries files.
      Each file contains one averaging period, and all receptors are
      written to a single record each averaging time.
      [TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LTIME) -- Default: F   !  LTIME = F  !

      Peak Value Option -- Averages at all selected receptors for
      each selected averaging period are screened and the peak value
      each period is written to timeseries files.
      Each file contains one averaging period.
      [PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
                           (LPEAK) -- Default: F   !  LPEAK = F  !

        -- Days selected for output
                      (IECHO(366)) -- Default: 366*0
           ! IECHO  = 366*0  !
           (366 values must be entered)

Plot output options
-------------------

     Plot files can be created for the Top-N, Exceedance, and Echo
     tables selected above.  Two formats for these files are available,
     DATA and GRID.  In the DATA format, results at all receptors are
     listed along with the receptor location [x,y,val1,val2,...].
     In the GRID format, results at only gridded receptors are written,
     using a compact representation.  The gridded values are written in
     rows (x varies), starting with the most southern row of the grid.
```

```
     The GRID format is given the .GRD extension, and includes headers
     compatible with the SURFER(R) plotting software.

     A plotting and analysis file can also be created for the daily
     peak visibility summary output, in DATA format only.

     Generate Plot file output in addition to writing tables
     to List file?
                                (LPLT) -- Default: F   ! LPLT  = T !

     Use GRID format rather than DATA format,
     when available?
                                (LGRD) -- Default: F   ! LGRD  = F !


 Auxiliary Output Files (for subsequent analyses)
 ------------------------------------------------

       Visibility

       A separate output file may be requested that contains the change
       in visibility at each selected receptor when ASPEC = VISIB.  This
       file can be processed to construct visibility measures that are
       not available in CALPOST.

       Output file with the visibility change at each receptor?
                                (MDVIS) -- Default: 0   ! MDVIS  =  0  !

            0 =  Do Not create file
            1 =  Create file of DAILY (24 hour) Delta-Deciview
            2 =  Create file of DAILY (24 hour) Extinction Change (%)
            3 =  Create file of HOURLY Delta-Deciview
            4 =  Create file of HOURLY Extinction Change (%)


 Additional Debug Output
 -----------------------

    Output selected information to List file
     for debugging?
                               (LDEBUG) -- Default: F  ! LDEBUG  = F !

    Output hourly extinction information to REPORT.HRV?
     (Visibility Method 7)
                              (LVEXTHR) -- Default: F  ! LVEXTHR = F !

 !END!

 ------------------------------------------------
 NOTICE: Starting year in control file sets the
         expected century for the simulation.  All
         YY years are converted to YYYY years in
         the range:  1953 2052
 ------------------------------------------------


*****************************************************************************************************************************
                                                CALPOST  Version 5.6394        Level 070622
*****************************************************************************************************************************



  CALPOST Control File Input Summary -------------------------

     Replace run data with data in Puff file 1=Y:    1
                        Run starting date -- year: 2003
                                            month:    0
                                              day:    0
                                       Julian day:    0
         Time at beginning of run  -  hour(0-23):    0
                                   -      second:    0
                               Run length (hours):    0


 Every hour of data processed -- NREP = 1


  Species & Concentration/Deposition Information
                                        Species: PM10
                        Layer of processed data:    1
     (>0=conc, -1=dry flux, -2=wet flux, -3=wet & dry flux)
                  Multiplicative scaling factor: 0.0000E+00
                        Additive scaling factor: 0.0000E+00
                 Hourly background values used?: F


  Source information
                 Source contribution processing: 0
                  0= No source contributions
                  1= Contributions are summed
                  2= TRACEBACK mode for 1 receptor
                  3= Reported TOTAL is processed


  Receptor information
                   Gridded receptors processed?: F
                  Discrete receptors processed?: T
       CTSG Complex terrain receptors processed?: F

  Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

```
0 0 0 
```

OUTPUT FILES

| Default Name | Unit No. | File Name and Path |
|---|---|---|
| CALPOST.LST | 8 | C:\SPC_FF\CALPOST\2003\2003_ZION_PM.LST |
| (TOPN) | 11 | C:\SPC_FF\CALPOST\2003\GRAPHICS\RANK()_SPECIES_ttHR_CONC_ZI.DAT |

CALPOST Version 5.6394 Level 070622

PM10 1

4 RANKED 24 HOUR AVERAGE CONCENTRATION VALUES AT EACH DISCRETE RECEPTOR (YEAR,DAY,ENDING TIME) (ug/m**3)

| RECEPTOR | COORDINATES (km) | | 1 RANK | 2 RANK | 3 RANK | 4 RANK |
|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 7.7466E-03 (2003,037,0000) | 5.3954E-03 (2003,058,0000) | 4.2792E-03 (2003,038,0000) | 3.8580E-03 (2003,299,0000) |
| 1990 | -306.221 | -311.322 | 7.8713E-03 (2003,037,0000) | 5.4024E-03 (2003,058,0000) | 4.4043E-03 (2003,038,0000) | 3.6812E-03 (2003,299,0000) |
| 1991 | -304.745 | -311.379 | 8.3055E-03 (2003,037,0000) | 5.4091E-03 (2003,058,0000) | 4.6513E-03 (2003,038,0000) | 3.7572E-03 (2003,209,0000) |
| 1992 | -303.268 | -311.436 | 8.7529E-03 (2003,037,0000) | 5.4178E-03 (2003,058,0000) | 5.0062E-03 (2003,038,0000) | 4.8203E-03 (2003,262,0000) |
| 1993 | -301.791 | -311.492 | 8.7444E-03 (2003,037,0000) | 5.4223E-03 (2003,058,0000) | 5.1124E-03 (2003,038,0000) | 4.8364E-03 (2003,140,0000) |
| 1994 | -307.626 | -309.412 | 7.6187E-03 (2003,037,0000) | 5.5099E-03 (2003,058,0000) | 4.2286E-03 (2003,038,0000) | 3.9783E-03 (2003,299,0000) |
| 1995 | -306.150 | -309.469 | 7.6887E-03 (2003,037,0000) | 5.5125E-03 (2003,058,0000) | 4.3429E-03 (2003,038,0000) | 3.7983E-03 (2003,299,0000) |
| 1996 | -304.673 | -309.526 | 8.1350E-03 (2003,037,0000) | 5.5177E-03 (2003,058,0000) | 4.5621E-03 (2003,038,0000) | 3.6840E-03 (2003,299,0000) |
| 1997 | -303.197 | -309.583 | 8.6793E-03 (2003,037,0000) | 5.5236E-03 (2003,058,0000) | 4.9195E-03 (2003,038,0000) | 4.6568E-03 (2003,262,0000) |
| 1998 | -301.720 | -309.640 | 8.4141E-03 (2003,037,0000) | 5.5227E-03 (2003,058,0000) | 4.8783E-03 (2003,038,0000) | 3.8111E-03 (2003,209,0000) |
| 1999 | -300.244 | -309.696 | 8.7665E-03 (2003,037,0000) | 5.5313E-03 (2003,058,0000) | 5.1979E-03 (2003,038,0000) | 5.0964E-03 (2003,140,0000) |
| 2000 | -298.767 | -309.752 | 8.7788E-03 (2003,037,0000) | 5.8718E-03 (2003,140,0000) | 5.5371E-03 (2003,058,0000) | 5.3303E-03 (2003,038,0000) |
| 2001 | -317.886 | -307.150 | 5.6549E-03 (2003,037,0000) | 5.4624E-03 (2003,058,0000) | 4.1899E-03 (2003,062,0000) | 4.1833E-03 (2003,299,0000) |
| 2002 | -316.410 | -307.209 | 6.0036E-03 (2003,037,0000) | 5.5128E-03 (2003,058,0000) | 4.2820E-03 (2003,299,0000) | 4.0508E-03 (2003,062,0000) |
| 2003 | -314.934 | -307.268 | 6.3113E-03 (2003,037,0000) | 5.5518E-03 (2003,058,0000) | 4.3398E-03 (2003,299,0000) | 3.8828E-03 (2003,062,0000) |
| 2004 | -313.458 | -307.327 | 6.6872E-03 (2003,037,0000) | 5.5806E-03 (2003,058,0000) | 4.3870E-03 (2003,299,0000) | 3.9989E-03 (2003,062,0000) |
| 2005 | -311.982 | -307.385 | 7.0352E-03 (2003,037,0000) | 5.6021E-03 (2003,058,0000) | 4.3976E-03 (2003,299,0000) | 4.0522E-03 (2003,062,0000) |
| 2006 | -309.030 | -307.501 | 7.5830E-03 (2003,037,0000) | 5.6231E-03 (2003,058,0000) | 4.2799E-03 (2003,299,0000) | 4.0963E-03 (2003,038,0000) |
| 2007 | -307.554 | -307.559 | 8.3429E-03 (2003,037,0000) | 5.6338E-03 (2003,058,0000) | 5.0027E-03 (2003,262,0000) | 4.4526E-03 (2003,038,0000) |
| 2008 | -306.078 | -307.616 | 8.0733E-03 (2003,037,0000) | 5.6293E-03 (2003,058,0000) | 4.4223E-03 (2003,038,0000) | 4.0400E-03 (2003,299,0000) |
| 2009 | -304.602 | -307.673 | 8.5817E-03 (2003,037,0000) | 5.6338E-03 (2003,058,0000) | 4.7737E-03 (2003,262,0000) | 4.7335E-03 (2003,038,0000) |
| 2010 | -303.125 | -307.730 | 8.1869E-03 (2003,037,0000) | 5.6275E-03 (2003,058,0000) | 4.6566E-03 (2003,038,0000) | 3.6344E-03 (2003,299,0000) |
| 2011 | -301.649 | -307.787 | 7.8501E-03 (2003,037,0000) | 5.6263E-03 (2003,058,0000) | 4.6570E-03 (2003,038,0000) | 3.5813E-03 (2003,209,0000) |
| 2012 | -300.173 | -307.843 | 8.3762E-03 (2003,037,0000) | 5.6313E-03 (2003,058,0000) | 4.9418E-03 (2003,038,0000) | 3.7518E-03 (2003,209,0000) |
| 2013 | -298.697 | -307.899 | 7.9831E-03 (2003,037,0000) | 5.6328E-03 (2003,058,0000) | 4.8974E-03 (2003,038,0000) | 3.8155E-03 (2003,300,0000) |
| 2014 | -317.812 | -305.297 | 5.5796E-03 (2003,058,0000) | 5.5206E-03 (2003,037,0000) | 4.5707E-03 (2003,062,0000) | 4.1525E-03 (2003,299,0000) |
| 2015 | -316.336 | -305.356 | 5.7287E-03 (2003,037,0000) | 5.4330E-03 (2003,058,0000) | 4.2185E-03 (2003,299,0000) | 3.9949E-03 (2003,062,0000) |
| 2016 | -314.860 | -305.415 | 6.2415E-03 (2003,037,0000) | 5.6731E-03 (2003,058,0000) | 4.3651E-03 (2003,299,0000) | 4.3522E-03 (2003,062,0000) |
| 2017 | -313.385 | -305.474 | 7.0423E-03 (2003,037,0000) | 5.7072E-03 (2003,058,0000) | 4.5760E-03 (2003,299,0000) | 4.4605E-03 (2003,062,0000) |
| 2018 | -311.909 | -305.533 | 7.4039E-03 (2003,037,0000) | 5.7282E-03 (2003,058,0000) | 4.6035E-03 (2003,299,0000) | 4.3668E-03 (2003,062,0000) |
| 2019 | -308.957 | -305.649 | 7.1536E-03 (2003,037,0000) | 5.7393E-03 (2003,058,0000) | 4.2873E-03 (2003,299,0000) | 3.9857E-03 (2003,038,0000) |
| 2020 | -307.482 | -305.706 | 7.6426E-03 (2003,037,0000) | 5.7430E-03 (2003,058,0000) | 4.2594E-03 (2003,299,0000) | 4.1782E-03 (2003,038,0000) |
| 2021 | -306.006 | -305.764 | 8.4054E-03 (2003,037,0000) | 5.7485E-03 (2003,058,0000) | 4.7752E-03 (2003,262,0000) | 4.5315E-03 (2003,038,0000) |
| 2022 | -304.530 | -305.821 | 8.6253E-03 (2003,037,0000) | 5.7485E-03 (2003,058,0000) | 5.0648E-03 (2003,262,0000) | 4.7266E-03 (2003,038,0000) |
| 2023 | -303.054 | -305.878 | 8.5023E-03 (2003,037,0000) | 5.7420E-03 (2003,058,0000) | 4.7568E-03 (2003,038,0000) | 4.1669E-03 (2003,262,0000) |
| 2024 | -301.579 | -305.934 | 8.7637E-03 (2003,037,0000) | 5.7426E-03 (2003,058,0000) | 4.9950E-03 (2003,038,0000) | 4.8029E-03 (2003,262,0000) |
| 2025 | -300.103 | -305.990 | 8.7706E-03 (2003,037,0000) | 5.7435E-03 (2003,058,0000) | 5.1121E-03 (2003,038,0000) | 4.6138E-03 (2003,262,0000) |
| 2026 | -298.627 | -306.046 | 8.6201E-03 (2003,037,0000) | 5.7425E-03 (2003,058,0000) | 5.1483E-03 (2003,038,0000) | 4.1643E-03 (2003,140,0000) |
| 2027 | -319.212 | -303.385 | 5.6238E-03 (2003,058,0000) | 4.9935E-03 (2003,037,0000) | 4.9254E-03 (2003,062,0000) | 3.9414E-03 (2003,299,0000) |
| 2028 | -317.737 | -303.445 | 5.6940E-03 (2003,058,0000) | 5.2869E-03 (2003,037,0000) | 4.7065E-03 (2003,062,0000) | 4.0706E-03 (2003,299,0000) |
| 2029 | -316.262 | -303.504 | 5.7495E-03 (2003,058,0000) | 5.6827E-03 (2003,037,0000) | 4.5612E-03 (2003,062,0000) | 4.2221E-03 (2003,299,0000) |
| 2030 | -314.786 | -303.563 | 5.9806E-03 (2003,037,0000) | 5.7911E-03 (2003,058,0000) | 4.3131E-03 (2003,299,0000) | 4.2977E-03 (2003,062,0000) |
| 2031 | -313.311 | -303.622 | 6.3941E-03 (2003,037,0000) | 5.8224E-03 (2003,058,0000) | 4.4187E-03 (2003,299,0000) | 4.2851E-03 (2003,062,0000) |
| 2032 | -311.836 | -303.680 | 7.3087E-03 (2003,037,0000) | 5.8579E-03 (2003,058,0000) | 4.6494E-03 (2003,299,0000) | 4.5243E-03 (2003,062,0000) |
| 2033 | -310.360 | -303.738 | 7.0631E-03 (2003,037,0000) | 5.8556E-03 (2003,058,0000) | 4.4818E-03 (2003,299,0000) | 4.0905E-03 (2003,062,0000) |
| 2034 | -308.885 | -303.796 | 7.1262E-03 (2003,037,0000) | 5.8607E-03 (2003,058,0000) | 4.3837E-03 (2003,299,0000) | 3.9386E-03 (2003,038,0000) |
| 2035 | -307.409 | -303.854 | 7.3280E-03 (2003,037,0000) | 5.8607E-03 (2003,058,0000) | 4.2989E-03 (2003,299,0000) | 4.0810E-03 (2003,038,0000) |
| 2036 | -305.934 | -303.911 | 7.8551E-03 (2003,037,0000) | 5.8613E-03 (2003,058,0000) | 4.2974E-03 (2003,038,0000) | 4.2743E-03 (2003,299,0000) |
| 2037 | -304.459 | -303.968 | 8.2202E-03 (2003,037,0000) | 5.8605E-03 (2003,058,0000) | 4.5121E-03 (2003,038,0000) | 4.1762E-03 (2003,299,0000) |
| 2038 | -302.983 | -304.025 | 8.4907E-03 (2003,037,0000) | 5.8579E-03 (2003,058,0000) | 4.7184E-03 (2003,038,0000) | 4.2082E-03 (2003,262,0000) |
| 2039 | -301.508 | -304.082 | 8.8091E-03 (2003,037,0000) | 5.8585E-03 (2003,058,0000) | 5.0058E-03 (2003,262,0000) | 4.9842E-03 (2003,038,0000) |
| 2040 | -300.032 | -304.138 | 8.9358E-03 (2003,037,0000) | 5.8621E-03 (2003,058,0000) | 5.1706E-03 (2003,038,0000) | 5.0763E-03 (2003,262,0000) |
| 2041 | -298.557 | -304.194 | 8.9260E-03 (2003,037,0000) | 5.8556E-03 (2003,058,0000) | 5.2898E-03 (2003,038,0000) | 5.1809E-03 (2003,140,0000) |
| 2042 | -319.137 | -301.533 | 5.7303E-03 (2003,058,0000) | 4.9733E-03 (2003,062,0000) | 4.6825E-03 (2003,037,0000) | 3.7942E-03 (2003,299,0000) |
| 2043 | -317.662 | -301.592 | 5.8046E-03 (2003,058,0000) | 5.0256E-03 (2003,037,0000) | 4.7747E-03 (2003,062,0000) | 3.9616E-03 (2003,299,0000) |
| 2044 | -316.187 | -301.651 | 5.8638E-03 (2003,058,0000) | 5.4628E-03 (2003,037,0000) | 4.6536E-03 (2003,062,0000) | 4.1491E-03 (2003,299,0000) |
| 2045 | -314.712 | -301.710 | 5.9097E-03 (2003,058,0000) | 5.7863E-03 (2003,037,0000) | 4.4709E-03 (2003,062,0000) | 4.2678E-03 (2003,299,0000) |
| 2046 | -313.237 | -301.769 | 6.2522E-03 (2003,037,0000) | 5.9426E-03 (2003,058,0000) | 4.4142E-03 (2003,299,0000) | 4.3953E-03 (2003,062,0000) |
| 2047 | -311.762 | -301.827 | 7.1017E-03 (2003,037,0000) | 5.9777E-03 (2003,058,0000) | 4.6523E-03 (2003,299,0000) | 4.5899E-03 (2003,062,0000) |
| 2048 | -310.287 | -301.886 | 7.4570E-03 (2003,037,0000) | 5.9918E-03 (2003,058,0000) | 4.6896E-03 (2003,299,0000) | 4.4887E-03 (2003,062,0000) |
| 2049 | -308.812 | -301.944 | 7.7789E-03 (2003,037,0000) | 6.0017E-03 (2003,058,0000) | 4.6808E-03 (2003,299,0000) | 4.4023E-03 (2003,262,0000) |
| 2050 | -307.337 | -302.001 | 7.5048E-03 (2003,037,0000) | 5.9860E-03 (2003,058,0000) | 4.4679E-03 (2003,299,0000) | 4.0760E-03 (2003,038,0000) |
| 2051 | -305.862 | -302.059 | 8.1784E-03 (2003,037,0000) | 5.9889E-03 (2003,058,0000) | 4.5046E-03 (2003,299,0000) | 4.3758E-03 (2003,038,0000) |
| 2052 | -304.387 | -302.116 | 8.4493E-03 (2003,037,0000) | 5.9861E-03 (2003,058,0000) | 4.6675E-03 (2003,262,0000) | 4.5745E-03 (2003,038,0000) |
| 2053 | -302.912 | -302.172 | 8.6860E-03 (2003,037,0000) | 5.9821E-03 (2003,058,0000) | 4.9425E-03 (2003,262,0000) | 4.7839E-03 (2003,038,0000) |
| 2054 | -301.437 | -302.229 | 8.7595E-03 (2003,037,0000) | 5.9738E-03 (2003,058,0000) | 4.9174E-03 (2003,038,0000) | 4.8731E-03 (2003,262,0000) |
| 2055 | -299.962 | -302.285 | 8.8443E-03 (2003,037,0000) | 5.9695E-03 (2003,058,0000) | 5.0745E-03 (2003,038,0000) | 4.8763E-03 (2003,262,0000) |
| 2056 | -298.487 | -302.341 | 8.8329E-03 (2003,037,0000) | 5.9658E-03 (2003,058,0000) | 5.1912E-03 (2003,038,0000) | 4.6470E-03 (2003,262,0000) |
| 2057 | -319.062 | -299.680 | 5.8318E-03 (2003,058,0000) | 5.1569E-03 (2003,062,0000) | 4.5739E-03 (2003,037,0000) | 3.7260E-03 (2003,299,0000) |
| 2058 | -317.588 | -299.740 | 5.9149E-03 (2003,058,0000) | 5.0699E-03 (2003,037,0000) | 5.0496E-03 (2003,062,0000) | 3.9718E-03 (2003,299,0000) |
| 2059 | -316.113 | -299.799 | 5.9824E-03 (2003,058,0000) | 5.5730E-03 (2003,037,0000) | 4.9542E-03 (2003,062,0000) | 4.1970E-03 (2003,299,0000) |
| 2060 | -314.639 | -299.858 | 6.0269E-03 (2003,058,0000) | 5.6899E-03 (2003,037,0000) | 4.6245E-03 (2003,062,0000) | 4.2485E-03 (2003,299,0000) |
| 2061 | -313.164 | -299.917 | 6.1751E-03 (2003,037,0000) | 6.0650E-03 (2003,058,0000) | 4.5471E-03 (2003,062,0000) | 4.4229E-03 (2003,299,0000) |
| 2062 | -311.689 | -299.975 | 6.5465E-03 (2003,037,0000) | 6.0900E-03 (2003,058,0000) | 4.5240E-03 (2003,299,0000) | 4.4044E-03 (2003,062,0000) |
| 2063 | -310.214 | -300.033 | 7.2571E-03 (2003,037,0000) | 6.1160E-03 (2003,058,0000) | 4.7009E-03 (2003,299,0000) | 4.5497E-03 (2003,062,0000) |
| 2064 | -308.740 | -300.091 | 7.6041E-03 (2003,037,0000) | 6.1245E-03 (2003,058,0000) | 4.7229E-03 (2003,299,0000) | 4.4539E-03 (2003,062,0000) |
| 2065 | -307.265 | -300.149 | 7.9083E-03 (2003,037,0000) | 6.1213E-03 (2003,058,0000) | 4.7016E-03 (2003,299,0000) | 4.3196E-03 (2003,062,0000) |
| 2066 | -305.790 | -300.206 | 7.4033E-03 (2003,037,0000) | 6.1057E-03 (2003,058,0000) | 4.4030E-03 (2003,299,0000) | 4.1253E-03 (2003,038,0000) |
| 2067 | -304.316 | -300.263 | 8.3832E-03 (2003,037,0000) | 6.1101E-03 (2003,058,0000) | 4.5742E-03 (2003,262,0000) | 4.5178E-03 (2003,299,0000) |
| 2068 | -302.841 | -300.320 | 8.6153E-03 (2003,037,0000) | 6.1110E-03 (2003,058,0000) | 4.7698E-03 (2003,262,0000) | 4.7095E-03 (2003,038,0000) |
| 2069 | -301.366 | -300.376 | 8.7645E-03 (2003,037,0000) | 6.1015E-03 (2003,058,0000) | 4.8857E-03 (2003,038,0000) | 4.8605E-03 (2003,262,0000) |
| 2070 | -299.891 | -300.432 | 8.8818E-03 (2003,037,0000) | 6.0961E-03 (2003,058,0000) | 5.0569E-03 (2003,038,0000) | 4.9159E-03 (2003,262,0000) |
| 2071 | -298.417 | -300.488 | 8.9479E-03 (2003,037,0000) | 6.0863E-03 (2003,058,0000) | 5.2220E-03 (2003,038,0000) | 4.9450E-03 (2003,262,0000) |
| 2072 | -318.988 | -297.828 | 5.9228E-03 (2003,058,0000) | 4.9792E-03 (2003,062,0000) | 4.0168E-03 (2003,037,0000) | 3.4324E-03 (2003,299,0000) |
| 2073 | -317.513 | -297.887 | 6.0141E-03 (2003,058,0000) | 5.0077E-03 (2003,062,0000) | 4.6098E-03 (2003,037,0000) | 3.7485E-03 (2003,299,0000) |
| 2074 | -316.039 | -297.946 | 6.0860E-03 (2003,058,0000) | 5.0144E-03 (2003,037,0000) | 4.8421E-03 (2003,062,0000) | 3.9564E-03 (2003,299,0000) |
| 2075 | -314.565 | -298.005 | 6.1519E-03 (2003,058,0000) | 5.7900E-03 (2003,037,0000) | 4.9616E-03 (2003,062,0000) | 4.2893E-03 (2003,299,0000) |
| 2076 | -313.090 | -298.064 | 6.1900E-03 (2003,058,0000) | 6.1441E-03 (2003,037,0000) | 4.7458E-03 (2003,062,0000) | 4.4362E-03 (2003,299,0000) |
| 2077 | -311.616 | -298.122 | 6.6461E-03 (2003,037,0000) | 6.2284E-03 (2003,058,0000) | 4.7397E-03 (2003,062,0000) | 4.5958E-03 (2003,299,0000) |
| 2078 | -310.142 | -298.181 | 7.0411E-03 (2003,037,0000) | 6.2470E-03 (2003,058,0000) | 4.6931E-03 (2003,299,0000) | 4.6245E-03 (2003,062,0000) |
| 2079 | -308.667 | -298.238 | 7.4098E-03 (2003,037,0000) | 6.2516E-03 (2003,058,0000) | 4.7478E-03 (2003,299,0000) | 4.5070E-03 (2003,062,0000) |
| 2080 | -307.193 | -298.296 | 7.7246E-03 (2003,037,0000) | 6.2517E-03 (2003,058,0000) | 4.7540E-03 (2003,299,0000) | 4.3516E-03 (2003,062,0000) |
| 2081 | -305.719 | -298.353 | 7.8988E-03 (2003,037,0000) | 6.2454E-03 (2003,058,0000) | 4.6809E-03 (2003,299,0000) | 4.2098E-03 (2003,038,0000) |
| 2082 | -304.244 | -298.410 | 8.2970E-03 (2003,037,0000) | 6.2426E-03 (2003,058,0000) | 4.6334E-03 (2003,299,0000) | 4.4470E-03 (2003,038,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2083 | -302.770 | -298.467 | 8.5187E-03 (2003,037,0000) | 6.2360E-03 (2003,058,0000) | 4.6338E-03 (2003,038,0000) | 4.5605E-03 (2003,262,0000) |
| 2084 | -301.295 | -298.524 | 8.6993E-03 (2003,037,0000) | 6.2296E-03 (2003,058,0000) | 4.8148E-03 (2003,038,0000) | 4.6826E-03 (2003,262,0000) |
| 2085 | -299.821 | -298.580 | 8.8344E-03 (2003,037,0000) | 6.2206E-03 (2003,058,0000) | 4.9921E-03 (2003,038,0000) | 4.7728E-03 (2003,262,0000) |
| 2086 | -318.913 | -295.975 | 6.0126E-03 (2003,058,0000) | 5.2283E-03 (2003,062,0000) | 3.8830E-03 (2003,037,0000) | 3.3901E-03 (2003,212,0000) |
| 2087 | -317.439 | -296.035 | 6.1124E-03 (2003,058,0000) | 5.1296E-03 (2003,062,0000) | 4.3961E-03 (2003,037,0000) | 3.6179E-03 (2003,299,0000) |
| 2088 | -315.965 | -296.094 | 6.1909E-03 (2003,058,0000) | 4.8519E-03 (2003,062,0000) | 4.6424E-03 (2003,037,0000) | 3.7710E-03 (2003,299,0000) |
| 2089 | -314.491 | -296.153 | 6.2552E-03 (2003,058,0000) | 5.2097E-03 (2003,037,0000) | 4.7898E-03 (2003,062,0000) | 4.0521E-03 (2003,299,0000) |
| 2090 | -313.017 | -296.212 | 6.3029E-03 (2003,058,0000) | 5.5629E-03 (2003,037,0000) | 4.5988E-03 (2003,062,0000) | 4.2163E-03 (2003,299,0000) |
| 2091 | -311.543 | -296.270 | 6.3393E-03 (2003,058,0000) | 6.1343E-03 (2003,037,0000) | 4.5710E-03 (2003,062,0000) | 4.4442E-03 (2003,299,0000) |
| 2092 | -310.069 | -296.328 | 6.8110E-03 (2003,037,0000) | 6.3777E-03 (2003,058,0000) | 4.6910E-03 (2003,062,0000) | 4.6649E-03 (2003,299,0000) |
| 2093 | -308.595 | -296.386 | 7.1901E-03 (2003,037,0000) | 6.3827E-03 (2003,058,0000) | 4.7516E-03 (2003,299,0000) | 4.5195E-03 (2003,062,0000) |
| 2094 | -307.121 | -296.444 | 7.5626E-03 (2003,037,0000) | 6.3939E-03 (2003,058,0000) | 4.7925E-03 (2003,299,0000) | 4.4803E-03 (2003,062,0000) |
| 2095 | -305.647 | -296.501 | 7.8345E-03 (2003,037,0000) | 6.3827E-03 (2003,058,0000) | 4.7765E-03 (2003,299,0000) | 4.2935E-03 (2003,062,0000) |
| 2096 | -304.173 | -296.558 | 8.1186E-03 (2003,037,0000) | 6.3766E-03 (2003,058,0000) | 4.7206E-03 (2003,299,0000) | 4.3404E-03 (2003,038,0000) |
| 2097 | -302.699 | -296.615 | 8.2184E-03 (2003,037,0000) | 6.3629E-03 (2003,058,0000) | 4.5791E-03 (2003,299,0000) | 4.4747E-03 (2003,038,0000) |
| 2098 | -301.225 | -296.671 | 8.6154E-03 (2003,037,0000) | 6.3632E-03 (2003,058,0000) | 4.7385E-03 (2003,038,0000) | 4.4858E-03 (2003,299,0000) |
| 2099 | -318.838 | -294.123 | 6.0999E-03 (2003,058,0000) | 5.5152E-03 (2003,062,0000) | 3.8264E-03 (2003,037,0000) | 3.3990E-03 (2003,212,0000) |
| 2100 | -317.364 | -294.182 | 6.2125E-03 (2003,058,0000) | 5.4185E-03 (2003,062,0000) | 4.3098E-03 (2003,037,0000) | 3.5337E-03 (2003,299,0000) |
| 2101 | -315.890 | -294.242 | 6.2957E-03 (2003,058,0000) | 5.0347E-03 (2003,062,0000) | 4.5221E-03 (2003,037,0000) | 3.6871E-03 (2003,299,0000) |
| 2102 | -314.417 | -294.301 | 6.3819E-03 (2003,058,0000) | 5.2374E-03 (2003,037,0000) | 5.1811E-03 (2003,062,0000) | 4.0375E-03 (2003,299,0000) |
| 2103 | -312.943 | -294.359 | 6.4299E-03 (2003,058,0000) | 5.6171E-03 (2003,037,0000) | 4.9088E-03 (2003,062,0000) | 4.2391E-03 (2003,299,0000) |
| 2104 | -311.470 | -294.418 | 6.4792E-03 (2003,058,0000) | 6.1331E-03 (2003,037,0000) | 4.8970E-03 (2003,062,0000) | 4.4542E-03 (2003,299,0000) |
| 2105 | -309.996 | -294.476 | 6.5658E-03 (2003,037,0000) | 6.5037E-03 (2003,058,0000) | 4.7449E-03 (2003,062,0000) | 4.6137E-03 (2003,299,0000) |
| 2106 | -308.522 | -294.534 | 6.9769E-03 (2003,037,0000) | 6.5280E-03 (2003,058,0000) | 4.7337E-03 (2003,299,0000) | 4.6503E-03 (2003,062,0000) |
| 2107 | -307.049 | -294.591 | 7.3620E-03 (2003,037,0000) | 6.5339E-03 (2003,058,0000) | 4.8094E-03 (2003,299,0000) | 4.5435E-03 (2003,062,0000) |
| 2108 | -305.575 | -294.648 | 7.6284E-03 (2003,037,0000) | 6.5228E-03 (2003,058,0000) | 4.8177E-03 (2003,299,0000) | 4.3263E-03 (2003,062,0000) |
| 2109 | -304.101 | -294.705 | 7.9478E-03 (2003,037,0000) | 6.5174E-03 (2003,058,0000) | 4.7967E-03 (2003,299,0000) | 4.2508E-03 (2003,062,0000) |
| 2110 | -302.627 | -294.762 | 8.2907E-03 (2003,037,0000) | 6.5163E-03 (2003,058,0000) | 4.7377E-03 (2003,299,0000) | 4.4666E-03 (2003,038,0000) |
| 2111 | -301.154 | -294.819 | 8.5145E-03 (2003,037,0000) | 6.5024E-03 (2003,058,0000) | 4.6587E-03 (2003,038,0000) | 4.6171E-03 (2003,299,0000) |
| 2112 | -318.763 | -292.271 | 6.1769E-03 (2003,058,0000) | 5.6962E-03 (2003,062,0000) | 3.5978E-03 (2003,037,0000) | 3.3959E-03 (2003,212,0000) |
| 2113 | -317.289 | -292.330 | 6.2971E-03 (2003,058,0000) | 5.4759E-03 (2003,062,0000) | 3.9945E-03 (2003,037,0000) | 3.4268E-03 (2003,212,0000) |
| 2114 | -315.816 | -292.389 | 6.4036E-03 (2003,058,0000) | 5.3969E-03 (2003,062,0000) | 4.4914E-03 (2003,037,0000) | 3.6229E-03 (2003,299,0000) |
| 2115 | -314.343 | -292.448 | 6.4898E-03 (2003,058,0000) | 5.2875E-03 (2003,062,0000) | 4.9505E-03 (2003,037,0000) | 3.8835E-03 (2003,299,0000) |
| 2116 | -312.870 | -292.507 | 6.5501E-03 (2003,058,0000) | 5.3819E-03 (2003,037,0000) | 5.0461E-03 (2003,062,0000) | 4.1230E-03 (2003,299,0000) |
| 2117 | -311.396 | -292.565 | 6.6111E-03 (2003,058,0000) | 5.8673E-03 (2003,037,0000) | 4.9902E-03 (2003,062,0000) | 4.3509E-03 (2003,299,0000) |
| 2118 | -309.923 | -292.623 | 6.6358E-03 (2003,058,0000) | 6.2984E-03 (2003,037,0000) | 4.7853E-03 (2003,062,0000) | 4.5407E-03 (2003,299,0000) |
| 2119 | -308.450 | -292.681 | 6.7415E-03 (2003,037,0000) | 6.6701E-03 (2003,058,0000) | 4.7316E-03 (2003,062,0000) | 4.6959E-03 (2003,299,0000) |
| 2120 | -306.976 | -292.739 | 7.1279E-03 (2003,037,0000) | 6.6695E-03 (2003,058,0000) | 4.8040E-03 (2003,299,0000) | 4.5402E-03 (2003,062,0000) |
| 2121 | -305.503 | -292.796 | 7.1635E-03 (2003,037,0000) | 6.6602E-03 (2003,058,0000) | 4.7477E-03 (2003,299,0000) | 4.2127E-03 (2003,062,0000) |
| 2122 | -304.030 | -292.853 | 7.4597E-03 (2003,037,0000) | 6.6554E-03 (2003,058,0000) | 4.7479E-03 (2003,299,0000) | 4.1077E-03 (2003,062,0000) |
| 2123 | -302.556 | -292.910 | 7.6492E-03 (2003,037,0000) | 6.6439E-03 (2003,058,0000) | 4.6724E-03 (2003,299,0000) | 4.2285E-03 (2003,038,0000) |
| 2124 | -301.083 | -292.966 | 7.9908E-03 (2003,037,0000) | 6.6315E-03 (2003,058,0000) | 4.6155E-03 (2003,299,0000) | 4.4347E-03 (2003,038,0000) |
| 2125 | -318.688 | -290.418 | 6.2436E-03 (2003,058,0000) | 5.8911E-03 (2003,062,0000) | 3.3884E-03 (2003,212,0000) | 3.3359E-03 (2003,037,0000) |
| 2126 | -317.215 | -290.478 | 6.3780E-03 (2003,058,0000) | 5.6833E-03 (2003,062,0000) | 3.7590E-03 (2003,037,0000) | 3.4129E-03 (2003,212,0000) |
| 2127 | -315.742 | -290.537 | 6.5017E-03 (2003,058,0000) | 5.5648E-03 (2003,062,0000) | 4.2036E-03 (2003,037,0000) | 3.4350E-03 (2003,212,0000) |
| 2128 | -314.269 | -290.596 | 6.5978E-03 (2003,058,0000) | 5.4030E-03 (2003,062,0000) | 4.6580E-03 (2003,037,0000) | 3.7127E-03 (2003,299,0000) |
| 2129 | -312.796 | -290.654 | 6.6725E-03 (2003,058,0000) | 5.2442E-03 (2003,062,0000) | 5.1236E-03 (2003,037,0000) | 3.9795E-03 (2003,299,0000) |
| 2130 | -311.323 | -290.713 | 6.7253E-03 (2003,058,0000) | 5.5519E-03 (2003,037,0000) | 4.9948E-03 (2003,062,0000) | 4.2177E-03 (2003,299,0000) |
| 2131 | -309.850 | -290.771 | 6.7831E-03 (2003,058,0000) | 6.0483E-03 (2003,037,0000) | 4.9587E-03 (2003,062,0000) | 4.4474E-03 (2003,299,0000) |
| 2132 | -308.377 | -290.829 | 6.8098E-03 (2003,058,0000) | 6.4942E-03 (2003,037,0000) | 4.8274E-03 (2003,062,0000) | 4.6344E-03 (2003,299,0000) |
| 2133 | -306.904 | -290.886 | 6.9181E-03 (2003,037,0000) | 6.8223E-03 (2003,058,0000) | 4.7789E-03 (2003,299,0000) | 4.7007E-03 (2003,062,0000) |
| 2134 | -305.431 | -290.943 | 6.8055E-03 (2003,058,0000) | 6.7678E-03 (2003,037,0000) | 4.6767E-03 (2003,299,0000) | 4.1258E-03 (2003,062,0000) |
| 2135 | -303.958 | -291.000 | 7.6739E-03 (2003,037,0000) | 6.8219E-03 (2003,058,0000) | 4.9217E-03 (2003,299,0000) | 4.4685E-03 (2003,062,0000) |
| 2136 | -302.485 | -291.057 | 7.9965E-03 (2003,037,0000) | 6.8147E-03 (2003,058,0000) | 4.9120E-03 (2003,299,0000) | 4.3909E-03 (2003,062,0000) |
| 2137 | -301.012 | -291.114 | 8.2733E-03 (2003,037,0000) | 6.8005E-03 (2003,058,0000) | 4.8491E-03 (2003,299,0000) | 4.4801E-03 (2003,038,0000) |
| 2138 | -318.613 | -288.566 | 6.3012E-03 (2003,058,0000) | 6.0200E-03 (2003,062,0000) | 3.3757E-03 (2003,212,0000) | 3.1911E-03 (2003,088,0000) |
| 2139 | -317.140 | -288.625 | 6.4505E-03 (2003,058,0000) | 5.8525E-03 (2003,062,0000) | 3.4759E-03 (2003,037,0000) | 3.3903E-03 (2003,212,0000) |
| 2140 | -315.668 | -288.684 | 6.5885E-03 (2003,058,0000) | 5.6912E-03 (2003,062,0000) | 3.9126E-03 (2003,037,0000) | 3.4097E-03 (2003,212,0000) |
| 2141 | -314.195 | -288.743 | 6.6985E-03 (2003,058,0000) | 5.5334E-03 (2003,062,0000) | 4.3667E-03 (2003,037,0000) | 3.5242E-03 (2003,299,0000) |
| 2142 | -312.722 | -288.802 | 6.7891E-03 (2003,058,0000) | 5.3789E-03 (2003,062,0000) | 4.8336E-03 (2003,037,0000) | 3.8091E-03 (2003,299,0000) |
| 2143 | -311.250 | -288.860 | 6.8554E-03 (2003,058,0000) | 5.3052E-03 (2003,037,0000) | 5.2255E-03 (2003,062,0000) | 4.0809E-03 (2003,299,0000) |
| 2144 | -309.777 | -288.918 | 6.9154E-03 (2003,058,0000) | 5.7739E-03 (2003,037,0000) | 5.0734E-03 (2003,062,0000) | 4.3306E-03 (2003,299,0000) |
| 2145 | -308.305 | -288.976 | 6.9515E-03 (2003,058,0000) | 6.2364E-03 (2003,037,0000) | 4.9277E-03 (2003,062,0000) | 4.5482E-03 (2003,299,0000) |
| 2146 | -306.832 | -289.034 | 6.9644E-03 (2003,058,0000) | 6.6627E-03 (2003,037,0000) | 4.7291E-03 (2003,299,0000) | 4.7113E-03 (2003,062,0000) |
| 2147 | -305.359 | -289.091 | 7.0796E-03 (2003,037,0000) | 6.9745E-03 (2003,058,0000) | 4.8633E-03 (2003,299,0000) | 4.5836E-03 (2003,062,0000) |
| 2148 | -303.887 | -289.148 | 7.4371E-03 (2003,037,0000) | 6.9736E-03 (2003,058,0000) | 4.9380E-03 (2003,299,0000) | 4.4448E-03 (2003,062,0000) |
| 2149 | -302.414 | -289.205 | 7.8268E-03 (2003,037,0000) | 6.9734E-03 (2003,058,0000) | 4.9727E-03 (2003,299,0000) | 4.4585E-03 (2003,062,0000) |
| 2150 | -300.941 | -289.261 | 8.1321E-03 (2003,037,0000) | 6.9571E-03 (2003,058,0000) | 4.9428E-03 (2003,299,0000) | 4.3859E-03 (2003,038,0000) |
| 2151 | -320.010 | -286.654 | 6.2924E-03 (2003,062,0000) | 6.1470E-03 (2003,058,0000) | 3.2864E-03 (2003,212,0000) | 3.1936E-03 (2003,088,0000) |
| 2152 | -318.538 | -286.714 | 6.3419E-03 (2003,058,0000) | 6.1466E-03 (2003,062,0000) | 3.3409E-03 (2003,212,0000) | 3.2129E-03 (2003,088,0000) |
| 2153 | -317.066 | -286.773 | 6.5112E-03 (2003,058,0000) | 5.9961E-03 (2003,062,0000) | 3.3634E-03 (2003,212,0000) | 3.2105E-03 (2003,088,0000) |
| 2154 | -315.593 | -286.832 | 6.6601E-03 (2003,058,0000) | 5.8429E-03 (2003,062,0000) | 3.6242E-03 (2003,037,0000) | 3.3779E-03 (2003,212,0000) |
| 2155 | -314.121 | -286.891 | 6.7877E-03 (2003,058,0000) | 5.6878E-03 (2003,062,0000) | 4.0734E-03 (2003,037,0000) | 3.3905E-03 (2003,212,0000) |
| 2156 | -312.649 | -286.950 | 6.8937E-03 (2003,058,0000) | 5.5245E-03 (2003,062,0000) | 4.5407E-03 (2003,037,0000) | 3.6218E-03 (2003,299,0000) |
| 2157 | -311.177 | -287.008 | 6.9788E-03 (2003,058,0000) | 5.3537E-03 (2003,062,0000) | 5.0138E-03 (2003,037,0000) | 3.9151E-03 (2003,299,0000) |
| 2158 | -309.704 | -287.066 | 7.0437E-03 (2003,058,0000) | 5.4937E-03 (2003,037,0000) | 5.1916E-03 (2003,062,0000) | 4.1896E-03 (2003,299,0000) |
| 2159 | -308.232 | -287.124 | 7.0769E-03 (2003,058,0000) | 5.9015E-03 (2003,037,0000) | 4.8873E-03 (2003,062,0000) | 4.4214E-03 (2003,299,0000) |
| 2160 | -306.760 | -287.181 | 7.1208E-03 (2003,058,0000) | 6.4261E-03 (2003,037,0000) | 4.8967E-03 (2003,062,0000) | 4.6554E-03 (2003,299,0000) |
| 2161 | -305.288 | -287.239 | 7.1258E-03 (2003,058,0000) | 6.8332E-03 (2003,037,0000) | 4.8217E-03 (2003,299,0000) | 4.6587E-03 (2003,062,0000) |
| 2162 | -303.815 | -287.296 | 7.1191E-03 (2003,058,0000) | 7.0118E-03 (2003,037,0000) | 4.8565E-03 (2003,299,0000) | 4.3564E-03 (2003,062,0000) |
| 2163 | -302.343 | -287.352 | 7.6461E-03 (2003,037,0000) | 7.1294E-03 (2003,058,0000) | 5.0142E-03 (2003,299,0000) | 4.5313E-03 (2003,062,0000) |
| 2164 | -300.871 | -287.409 | 7.9732E-03 (2003,037,0000) | 7.1115E-03 (2003,058,0000) | 5.0187E-03 (2003,299,0000) | 4.3787E-03 (2003,062,0000) |
| 2165 | -325.822 | -284.560 | 6.4699E-03 (2003,062,0000) | 5.1403E-03 (2003,058,0000) | 3.1168E-03 (2003,204,0000) | 3.0975E-03 (2003,212,0000) |
| 2166 | -324.350 | -284.621 | 6.4678E-03 (2003,062,0000) | 5.4158E-03 (2003,058,0000) | 3.1246E-03 (2003,212,0000) | 3.0978E-03 (2003,204,0000) |
| 2167 | -322.878 | -284.681 | 6.5528E-03 (2003,062,0000) | 5.6795E-03 (2003,058,0000) | 3.1528E-03 (2003,212,0000) | 3.0770E-03 (2003,204,0000) |
| 2168 | -321.407 | -284.742 | 6.5448E-03 (2003,062,0000) | 5.9279E-03 (2003,058,0000) | 3.1953E-03 (2003,212,0000) | 3.1227E-03 (2003,088,0000) |
| 2169 | -319.935 | -284.802 | 6.3135E-03 (2003,062,0000) | 6.1493E-03 (2003,058,0000) | 3.2398E-03 (2003,212,0000) | 3.1775E-03 (2003,088,0000) |
| 2170 | -318.463 | -284.861 | 6.3665E-03 (2003,058,0000) | 6.2995E-03 (2003,062,0000) | 3.3021E-03 (2003,212,0000) | 3.2222E-03 (2003,088,0000) |
| 2171 | -314.047 | -285.039 | 6.8642E-03 (2003,058,0000) | 5.8346E-03 (2003,062,0000) | 3.7835E-03 (2003,037,0000) | 3.3506E-03 (2003,212,0000) |
| 2172 | -312.575 | -285.097 | 6.9862E-03 (2003,058,0000) | 5.6586E-03 (2003,062,0000) | 4.2453E-03 (2003,037,0000) | 3.4180E-03 (2003,299,0000) |
| 2173 | -311.103 | -285.156 | 7.0857E-03 (2003,058,0000) | 5.4888E-03 (2003,062,0000) | 4.7210E-03 (2003,037,0000) | 3.7285E-03 (2003,299,0000) |
| 2174 | -309.632 | -285.214 | 7.1655E-03 (2003,058,0000) | 5.3288E-03 (2003,062,0000) | 5.2067E-03 (2003,037,0000) | 4.0289E-03 (2003,299,0000) |
| 2175 | -327.217 | -282.647 | 6.8194E-03 (2003,062,0000) | 4.7893E-03 (2003,058,0000) | 3.3163E-03 (2003,039,0000) | 3.0843E-03 (2003,204,0000) |
| 2176 | -325.745 | -282.708 | 6.5554E-03 (2003,062,0000) | 5.0745E-03 (2003,058,0000) | 3.0647E-03 (2003,204,0000) | 3.0520E-03 (2003,212,0000) |
| 2177 | -324.274 | -282.769 | 6.7081E-03 (2003,062,0000) | 5.3651E-03 (2003,058,0000) | 3.0798E-03 (2003,212,0000) | 3.0499E-03 (2003,039,0000) |
| 2178 | -322.802 | -282.829 | 6.7597E-03 (2003,062,0000) | 5.6437E-03 (2003,058,0000) | 3.1119E-03 (2003,212,0000) | 3.0255E-03 (2003,204,0000) |
| 2179 | -321.331 | -282.889 | 6.5581E-03 (2003,062,0000) | 5.8968E-03 (2003,058,0000) | 3.1447E-03 (2003,212,0000) | 3.0683E-03 (2003,088,0000) |
| 2180 | -319.859 | -282.949 | 6.5674E-03 (2003,062,0000) | 6.1437E-03 (2003,058,0000) | 3.2067E-03 (2003,212,0000) | 3.1586E-03 (2003,088,0000) |
| 2181 | -318.388 | -283.009 | 6.4749E-03 (2003,062,0000) | 6.3750E-03 (2003,058,0000) | 3.2640E-03 (2003,212,0000) | 3.2183E-03 (2003,088,0000) |
| 2182 | -309.559 | -283.361 | 7.2640E-03 (2003,058,0000) | 5.4294E-03 (2003,062,0000) | 4.9110E-03 (2003,037,0000) | 3.8458E-03 (2003,299,0000) |
| 2183 | -327.140 | -280.795 | 6.8218E-03 (2003,062,0000) | 4.6959E-03 (2003,058,0000) | 3.5681E-03 (2003,039,0000) | 3.0288E-03 (2003,204,0000) |
| 2184 | -325.669 | -280.856 | 6.7258E-03 (2003,062,0000) | 4.9934E-03 (2003,058,0000) | 3.2792E-03 (2003,039,0000) | 3.0107E-03 (2003,204,0000) |
| 2185 | -324.198 | -280.917 | 6.6533E-03 (2003,062,0000) | 5.2874E-03 (2003,058,0000) | 3.0998E-03 (2003,039,0000) | 3.0271E-03 (2003,212,0000) |
| 2186 | -322.726 | -280.977 | 6.5490E-03 (2003,062,0000) | 5.5722E-03 (2003,058,0000) | 3.0529E-03 (2003,212,0000) | 2.9696E-03 (2003,204,0000) |
| 2187 | -321.255 | -281.037 | 6.8001E-03 (2003,062,0000) | 5.8550E-03 (2003,058,0000) | 3.1034E-03 (2003,212,0000) | 3.0842E-03 (2003,039,0000) |
| 2188 | -319.784 | -281.097 | 6.7276E-03 (2003,062,0000) | 6.1218E-03 (2003,058,0000) | 3.1753E-03 (2003,212,0000) | 3.1158E-03 (2003,088,0000) |
| 2189 | -318.313 | -281.157 | 6.5839E-03 (2003,062,0000) | 6.3661E-03 (2003,058,0000) | 3.2061E-03 (2003,212,0000) | 3.1992E-03 (2003,088,0000) |
| 2190 | -327.063 | -278.943 | 6.9132E-03 (2003,062,0000) | 4.5893E-03 (2003,058,0000) | 3.9099E-03 (2003,039,0000) | 2.9703E-03 (2003,204,0000) |
| 2191 | -325.592 | -279.004 | 6.7780E-03 (2003,062,0000) | 4.8931E-03 (2003,058,0000) | 3.5223E-03 (2003,039,0000) | 2.9535E-03 (2003,204,0000) |
| 2192 | -324.121 | -279.064 | 7.0460E-03 (2003,062,0000) | 5.2108E-03 (2003,058,0000) | 3.6606E-03 (2003,039,0000) | 2.9832E-03 (2003,212,0000) |
| 2193 | -322.650 | -279.125 | 7.0002E-03 (2003,062,0000) | 5.5040E-03 (2003,058,0000) | 3.4846E-03 (2003,039,0000) | 3.0063E-03 (2003,212,0000) |
| 2194 | -321.180 | -279.185 | 6.8962E-03 (2003,062,0000) | 5.7920E-03 (2003,058,0000) | 3.3362E-03 (2003,039,0000) | 3.0556E-03 (2003,212,0000) |
| 2195 | -319.709 | -279.245 | 6.6209E-03 (2003,062,0000) | 6.0619E-03 (2003,058,0000) | 3.1231E-03 (2003,039,0000) | 3.0953E-03 (2003,212,0000) |
| 2196 | -318.238 | -279.305 | 6.6154E-03 (2003,062,0000) | 6.3252E-03 (2003,058,0000) | 3.1613E-03 (2003,088,0000) | 3.1304E-03 (2003,212,0000) |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2197 | -326.986 | -277.091 | 7.0441E-03 (2003,062,0000) | 4.4715E-03 (2003,058,0000) | 4.2926E-03 (2003,039,0000) | 2.9109E-03 (2003,204,0000) |
| 2198 | -325.515 | -277.152 | 6.8182E-03 (2003,062,0000) | 4.7795E-03 (2003,058,0000) | 3.9329E-03 (2003,039,0000) | 2.8945E-03 (2003,204,0000) |
| 2199 | -324.045 | -277.212 | 6.9824E-03 (2003,062,0000) | 5.0973E-03 (2003,058,0000) | 3.9043E-03 (2003,039,0000) | 2.9147E-03 (2003,212,0000) |
| 2200 | -322.574 | -277.273 | 6.9708E-03 (2003,062,0000) | 5.4120E-03 (2003,058,0000) | 3.7857E-03 (2003,039,0000) | 2.9618E-03 (2003,212,0000) |
| 2201 | -328.379 | -275.177 | 6.3499E-03 (2003,062,0000) | 4.0667E-03 (2003,039,0000) | 4.0084E-03 (2003,058,0000) | 2.8594E-03 (2003,204,0000) |
| 2202 | -326.909 | -275.239 | 6.5183E-03 (2003,062,0000) | 4.3259E-03 (2003,058,0000) | 4.1467E-03 (2003,039,0000) | 2.8472E-03 (2003,204,0000) |
| 2203 | -325.439 | -275.300 | 6.6522E-03 (2003,062,0000) | 4.6471E-03 (2003,058,0000) | 4.1323E-03 (2003,039,0000) | 2.8327E-03 (2003,204,0000) |
| 2204 | -323.969 | -275.360 | 6.9919E-03 (2003,062,0000) | 4.9790E-03 (2003,058,0000) | 4.2703E-03 (2003,039,0000) | 2.8616E-03 (2003,212,0000) |
| 2205 | -322.498 | -275.421 | 7.0004E-03 (2003,062,0000) | 5.2978E-03 (2003,058,0000) | 4.0889E-03 (2003,039,0000) | 2.9028E-03 (2003,212,0000) |
| 2206 | -326.832 | -273.387 | 6.5042E-03 (2003,062,0000) | 4.7583E-03 (2003,039,0000) | 4.1823E-03 (2003,058,0000) | 2.7846E-03 (2003,204,0000) |
| 2207 | -325.362 | -273.448 | 6.8376E-03 (2003,062,0000) | 4.7825E-03 (2003,039,0000) | 4.5090E-03 (2003,058,0000) | 2.7707E-03 (2003,204,0000) |
| 2208 | -323.892 | -273.508 | 6.9172E-03 (2003,062,0000) | 4.8404E-03 (2003,058,0000) | 4.6187E-03 (2003,039,0000) | 2.8088E-03 (2003,212,0000) |
| 2209 | -322.422 | -273.569 | 6.9756E-03 (2003,062,0000) | 5.1661E-03 (2003,058,0000) | 4.4214E-03 (2003,039,0000) | 2.8656E-03 (2003,212,0000) |
| 2210 | -325.285 | -271.595 | 6.6533E-03 (2003,062,0000) | 5.0945E-03 (2003,039,0000) | 4.3483E-03 (2003,058,0000) | 2.7056E-03 (2003,204,0000) |
| 2211 | -323.816 | -271.656 | 6.6824E-03 (2003,062,0000) | 4.7942E-03 (2003,039,0000) | 4.6740E-03 (2003,058,0000) | 2.7128E-03 (2003,212,0000) |
| 2212 | -322.346 | -271.717 | 6.9501E-03 (2003,062,0000) | 5.0152E-03 (2003,058,0000) | 4.7831E-03 (2003,039,0000) | 2.7832E-03 (2003,212,0000) |

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CALPOST Version 5.6394 Level 070622

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8736 HOUR AVERAGE CONCENTRATION AT EACH RECEPTOR FOR THE PERIOD ENDING YEAR: 2003 DAY: 365 HOUR(0-23): 0 SEC: 0

DISCRETE RECEPTORS: PM10 1

| RECEPTOR | COORDINATES (km) | | CONCENTRATION | RECEPTOR | COORDINATES (km) | | CONCENTRATION |
|---|---|---|---|---|---|---|---|
| 1989 | -307.698 | -311.264 | 2.7732E-04 | 2101 | -315.890 | -294.242 | 2.4590E-04 |
| 1990 | -306.221 | -311.322 | 2.8116E-04 | 2102 | -314.417 | -294.301 | 2.6269E-04 |
| 1991 | -304.745 | -311.379 | 2.9804E-04 | 2103 | -312.943 | -294.359 | 2.6382E-04 |
| 1992 | -303.268 | -311.436 | 3.2273E-04 | 2104 | -311.470 | -294.418 | 2.7361E-04 |
| 1993 | -301.791 | -311.492 | 3.2551E-04 | 2105 | -309.996 | -294.476 | 2.7901E-04 |
| 1994 | -307.626 | -309.412 | 2.7481E-04 | 2106 | -308.522 | -294.534 | 2.8504E-04 |
| 1995 | -306.150 | -309.469 | 2.7621E-04 | 2107 | -307.049 | -294.591 | 2.9081E-04 |
| 1996 | -304.673 | -309.526 | 2.9113E-04 | 2108 | -305.575 | -294.648 | 2.9187E-04 |
| 1997 | -303.197 | -309.583 | 3.1709E-04 | 2109 | -304.101 | -294.705 | 2.9827E-04 |
| 1998 | -301.720 | -309.640 | 3.0669E-04 | 2110 | -302.627 | -294.762 | 3.0903E-04 |
| 1999 | -300.244 | -309.696 | 3.2890E-04 | 2111 | -301.154 | -294.819 | 3.1524E-04 |
| 2000 | -298.767 | -309.752 | 3.3535E-04 | 2112 | -318.763 | -292.271 | 2.4227E-04 |
| 2001 | -317.886 | -307.150 | 2.5001E-04 | 2113 | -317.289 | -292.330 | 2.4562E-04 |
| 2002 | -316.410 | -307.209 | 2.5373E-04 | 2114 | -315.816 | -292.389 | 2.5361E-04 |
| 2003 | -314.934 | -307.268 | 2.5684E-04 | 2115 | -314.343 | -292.448 | 2.5972E-04 |
| 2004 | -313.458 | -307.327 | 2.6260E-04 | 2116 | -312.870 | -292.507 | 2.6309E-04 |
| 2005 | -311.982 | -307.385 | 2.6820E-04 | 2117 | -311.396 | -292.565 | 2.7077E-04 |
| 2006 | -309.030 | -307.501 | 2.7717E-04 | 2118 | -309.923 | -292.623 | 2.7498E-04 |
| 2007 | -307.554 | -307.559 | 3.0479E-04 | 2119 | -308.450 | -292.681 | 2.8220E-04 |
| 2008 | -306.078 | -307.616 | 2.8970E-04 | 2120 | -306.976 | -292.739 | 2.8627E-04 |
| 2009 | -304.602 | -307.673 | 3.1120E-04 | 2121 | -305.503 | -292.796 | 2.7879E-04 |
| 2010 | -303.125 | -307.730 | 2.9419E-04 | 2122 | -304.030 | -292.853 | 2.8309E-04 |
| 2011 | -301.649 | -307.787 | 2.8521E-04 | 2123 | -302.556 | -292.910 | 2.8527E-04 |
| 2012 | -300.173 | -307.843 | 3.0724E-04 | 2124 | -301.083 | -292.966 | 2.9385E-04 |
| 2013 | -298.697 | -307.899 | 2.9665E-04 | 2125 | -318.688 | -290.418 | 2.4102E-04 |
| 2014 | -317.812 | -305.297 | 2.5114E-04 | 2126 | -317.215 | -290.478 | 2.4565E-04 |
| 2015 | -316.336 | -305.356 | 2.4979E-04 | 2127 | -315.742 | -290.537 | 2.5154E-04 |
| 2016 | -314.860 | -305.415 | 2.5921E-04 | 2128 | -314.269 | -290.596 | 2.5691E-04 |
| 2017 | -313.385 | -305.474 | 2.7957E-04 | 2129 | -312.796 | -290.654 | 2.6231E-04 |
| 2018 | -311.909 | -305.533 | 2.8575E-04 | 2130 | -311.323 | -290.713 | 2.6525E-04 |
| 2019 | -308.957 | -305.649 | 2.6706E-04 | 2131 | -309.850 | -290.771 | 2.7362E-04 |
| 2020 | -307.482 | -305.706 | 2.7847E-04 | 2132 | -308.377 | -290.829 | 2.7942E-04 |
| 2021 | -306.006 | -305.764 | 3.0557E-04 | 2133 | -306.904 | -290.886 | 2.8532E-04 |
| 2022 | -304.530 | -305.821 | 3.1455E-04 | 2134 | -305.431 | -290.943 | 2.7124E-04 |
| 2023 | -303.054 | -305.878 | 3.0713E-04 | 2135 | -303.958 | -291.000 | 2.9741E-04 |
| 2024 | -301.579 | -305.934 | 3.2157E-04 | 2136 | -302.485 | -291.057 | 3.0386E-04 |
| 2025 | -300.103 | -305.990 | 3.2476E-04 | 2137 | -301.012 | -291.114 | 3.1036E-04 |
| 2026 | -298.627 | -306.046 | 3.2139E-04 | 2138 | -318.613 | -288.566 | 2.3821E-04 |
| 2027 | -319.212 | -303.385 | 2.4825E-04 | 2139 | -317.140 | -288.625 | 2.4344E-04 |
| 2028 | -317.737 | -303.445 | 2.4946E-04 | 2140 | -315.668 | -288.684 | 2.4879E-04 |
| 2029 | -316.262 | -303.504 | 2.5388E-04 | 2141 | -314.195 | -288.743 | 2.5417E-04 |
| 2030 | -314.786 | -303.563 | 2.5581E-04 | 2142 | -312.722 | -288.802 | 2.5961E-04 |
| 2031 | -313.311 | -303.622 | 2.6157E-04 | 2143 | -311.250 | -288.860 | 2.6511E-04 |
| 2032 | -311.836 | -303.680 | 2.8877E-04 | 2144 | -309.777 | -288.918 | 2.7088E-04 |
| 2033 | -310.360 | -303.738 | 2.7046E-04 | 2145 | -308.305 | -288.976 | 2.7676E-04 |
| 2034 | -308.885 | -303.796 | 2.6863E-04 | 2146 | -306.832 | -289.034 | 2.8129E-04 |
| 2035 | -307.409 | -303.854 | 2.7138E-04 | 2147 | -305.359 | -289.091 | 2.8730E-04 |
| 2036 | -305.934 | -303.911 | 2.8450E-04 | 2148 | -303.887 | -289.148 | 2.9215E-04 |
| 2037 | -304.459 | -303.968 | 2.9599E-04 | 2149 | -302.414 | -289.205 | 3.0153E-04 |
| 2038 | -302.983 | -304.025 | 3.0665E-04 | 2150 | -300.941 | -289.261 | 3.0816E-04 |
| 2039 | -301.508 | -304.082 | 3.2360E-04 | 2151 | -320.010 | -286.654 | 2.2980E-04 |
| 2040 | -300.032 | -304.138 | 3.3367E-04 | 2152 | -318.538 | -286.714 | 2.3528E-04 |
| 2041 | -298.557 | -304.194 | 3.3630E-04 | 2153 | -317.066 | -286.773 | 2.4068E-04 |
| 2042 | -319.137 | -301.533 | 2.4437E-04 | 2154 | -315.593 | -286.832 | 2.4608E-04 |
| 2043 | -317.662 | -301.592 | 2.4692E-04 | 2155 | -314.121 | -286.891 | 2.5156E-04 |
| 2044 | -316.187 | -301.651 | 2.5224E-04 | 2156 | -312.649 | -286.950 | 2.5697E-04 |
| 2045 | -314.712 | -301.710 | 2.5476E-04 | 2157 | -311.177 | -287.008 | 2.6253E-04 |
| 2046 | -313.237 | -301.769 | 2.6146E-04 | 2158 | -309.704 | -287.066 | 2.6830E-04 |
| 2047 | -311.762 | -301.827 | 2.8583E-04 | 2159 | -308.232 | -287.124 | 2.7049E-04 |
| 2048 | -310.287 | -301.886 | 2.9121E-04 | 2160 | -306.760 | -287.181 | 2.8031E-04 |
| 2049 | -308.812 | -301.944 | 2.9669E-04 | 2161 | -305.288 | -287.239 | 2.8415E-04 |
| 2050 | -307.337 | -302.001 | 2.7813E-04 | 2162 | -303.815 | -287.296 | 2.8142E-04 |
| 2051 | -305.862 | -302.059 | 2.9954E-04 | 2163 | -302.343 | -287.352 | 2.9919E-04 |
| 2052 | -304.387 | -302.116 | 3.0817E-04 | 2164 | -300.871 | -287.409 | 3.0492E-04 |
| 2053 | -302.912 | -302.172 | 3.1839E-04 | 2165 | -325.822 | -284.560 | 1.9879E-04 |
| 2054 | -301.437 | -302.229 | 3.2074E-04 | 2166 | -324.350 | -284.621 | 2.0540E-04 |
| 2055 | -299.962 | -302.285 | 3.2659E-04 | 2167 | -322.878 | -284.681 | 2.1468E-04 |
| 2056 | -298.487 | -302.341 | 3.2898E-04 | 2168 | -321.407 | -284.742 | 2.2135E-04 |
| 2057 | -319.062 | -299.680 | 2.4713E-04 | 2169 | -319.935 | -284.802 | 2.2507E-04 |
| 2058 | -317.588 | -299.740 | 2.5468E-04 | 2170 | -318.463 | -284.861 | 2.3242E-04 |
| 2059 | -316.113 | -299.799 | 2.6296E-04 | 2171 | -314.047 | -285.039 | 2.4897E-04 |
| 2060 | -314.639 | -299.858 | 2.5641E-04 | 2172 | -312.575 | -285.097 | 2.5439E-04 |
| 2061 | -313.164 | -299.917 | 2.6368E-04 | 2173 | -311.103 | -285.156 | 2.6006E-04 |
| 2062 | -311.689 | -299.975 | 2.6790E-04 | 2174 | -309.632 | -285.214 | 2.6590E-04 |
| 2063 | -310.214 | -300.033 | 2.8820E-04 | 2175 | -327.217 | -282.647 | 1.9710E-04 |
| 2064 | -308.740 | -300.091 | 2.9384E-04 | 2176 | -325.745 | -282.708 | 1.9695E-04 |
| 2065 | -307.265 | -300.149 | 2.9820E-04 | 2177 | -324.274 | -282.769 | 2.0625E-04 |
| 2066 | -305.790 | -300.206 | 2.7479E-04 | 2178 | -322.802 | -282.829 | 2.1302E-04 |
| 2067 | -304.316 | -300.263 | 3.0749E-04 | 2179 | -321.331 | -282.889 | 2.1662E-04 |
| 2068 | -302.841 | -300.320 | 3.1656E-04 | 2180 | -319.859 | -282.949 | 2.2377E-04 |
| 2069 | -301.366 | -300.376 | 3.2275E-04 | 2181 | -318.388 | -283.009 | 2.2966E-04 |
| 2070 | -299.891 | -300.432 | 3.2937E-04 | 2182 | -309.559 | -283.361 | 2.6314E-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | 3.3449E-04 | 2183 | -327.140 | -280.795 | 1.9437E-04 |
| 2072 | -318.988 | -297.828 | 2.3570E-04 | 2184 | -325.669 | -280.856 | 1.9690E-04 |
| 2073 | -317.513 | -297.887 | 2.4526E-04 | 2185 | -324.198 | -280.917 | 2.0066E-04 |
| 2074 | -316.039 | -297.946 | 2.4935E-04 | 2186 | -322.726 | -280.977 | 2.0464E-04 |
| 2075 | -314.565 | -298.005 | 2.6829E-04 | 2187 | -321.255 | -281.037 | 2.1518E-04 |
| 2076 | -313.090 | -298.064 | 2.6937E-04 | 2188 | -319.784 | -281.097 | 2.2113E-04 |
| 2077 | -311.616 | -298.122 | 2.7986E-04 | 2189 | -318.313 | -281.157 | 2.2669E-04 |
| 2078 | -310.142 | -298.181 | 2.8528E-04 | 2190 | -327.063 | -278.943 | 1.9292E-04 |
| 2079 | -308.667 | -298.238 | 2.9063E-04 | 2191 | -325.592 | -279.004 | 1.9451E-04 |
| 2080 | -307.193 | -298.296 | 2.9435E-04 | 2192 | -324.121 | -279.064 | 2.0258E-04 |
| 2081 | -305.719 | -298.353 | 2.9394E-04 | 2193 | -322.650 | -279.125 | 2.0735E-04 |
| 2082 | -304.244 | -298.410 | 3.0675E-04 | 2194 | -321.180 | -279.185 | 2.1246E-04 |
| 2083 | -302.770 | -298.467 | 3.1382E-04 | 2195 | -319.709 | -279.245 | 2.1612E-04 |
| 2084 | -301.295 | -298.524 | 3.2036E-04 | 2196 | -318.238 | -279.305 | 2.2305E-04 |
| 2085 | -299.821 | -298.580 | 3.2689E-04 | 2197 | -326.986 | -277.091 | 1.9169E-04 |
| 2086 | -318.913 | -295.975 | 2.3691E-04 | 2198 | -325.515 | -277.152 | 1.9359E-04 |
| 2087 | -317.439 | -296.035 | 2.4452E-04 | 2199 | -324.045 | -277.212 | 1.9966E-04 |
| 2088 | -315.965 | -296.094 | 2.4408E-04 | 2200 | -322.574 | -277.273 | 2.0466E-04 |
| 2089 | -314.491 | -296.153 | 2.5263E-04 | 2201 | -328.379 | -275.177 | 1.8036E-04 |
| 2090 | -313.017 | -296.212 | 2.5529E-04 | 2202 | -326.909 | -275.239 | 1.8553E-04 |
| 2091 | -311.543 | -296.270 | 2.6484E-04 | 2203 | -325.439 | -275.300 | 1.9051E-04 |
| 2092 | -310.069 | -296.328 | 2.8222E-04 | 2204 | -323.969 | -275.360 | 1.9778E-04 |
| 2093 | -308.595 | -296.386 | 2.8644E-04 | 2205 | -322.498 | -275.421 | 2.0234E-04 |
| 2094 | -307.121 | -296.444 | 2.9364E-04 | 2206 | -326.832 | -273.387 | 1.8604E-04 |
| 2095 | -305.647 | -296.501 | 2.9607E-04 | 2207 | -325.362 | -273.448 | 1.9173E-04 |
| 2096 | -304.173 | -296.558 | 3.0182E-04 | 2208 | -323.892 | -273.508 | 1.9592E-04 |
| 2097 | -302.699 | -296.615 | 3.0078E-04 | 2209 | -322.422 | -273.569 | 2.0037E-04 |
| 2098 | -301.225 | -296.671 | 3.1784E-04 | 2210 | -325.285 | -271.595 | 1.8981E-04 |
| 2099 | -318.838 | -294.123 | 2.4225E-04 | 2211 | -323.816 | -271.656 | 1.9277E-04 |
| 2100 | -317.364 | -294.182 | 2.5002E-04 | 2212 | -322.346 | -271.717 | 1.9869E-04 |

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CALPOST Version 5.6394 Level 070622
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SUMMARY SECTION

PM10 1

(ug/m**3)

| RECEPTOR | COORDINATES (km) | | TYPE | PEAK (YEAR,DAY,ENDING TIME) | FOR RANK | FOR AVERAGE PERIOD | |
|---|---|---|---|---|---|---|---|
| 2071 | -298.417 | -300.488 | DISCRETE | 8.9479E-03 (2003,037,0000) | RANK 1 | 24 | HOUR |
| 2163 | -302.343 | -287.352 | DISCRETE | 7.1294E-03 (2003,058,0000) | RANK 2 | 24 | HOUR |
| 2000 | -298.767 | -309.752 | DISCRETE | 5.5371E-03 (2003,058,0000) | RANK 3 | 24 | HOUR |
| 2000 | -298.767 | -309.752 | DISCRETE | 5.3303E-03 (2003,038,0000) | RANK 4 | 24 | HOUR |
| 2041 | -298.557 | -304.194 | DISCRETE | 3.3630E-04 | RANK 1 | 8736 | HOUR |

# Appendix O
# VISCREEN Level 2 Joint Frequency Distribution and VISCREEN Results

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Arches NP

*** Level-1 Screening ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .00 | G | /S |

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

| | |
|---|---|
| Background Ozone: | .04 ppm |
| Background Visual Range: | 250.00 km |
| Source-Observer Distance: | 196.70 km |
| Min. Source-Class I Distance: | 196.70 km |
| Max. Source-Class I Distance: | 216.60 km |
| Plume-Source-Observer Angle: | 11.25 degrees |
| Stability: | 6 |
| Wind Speed: | 1.00 m/s |

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 84. | 196.7 | 84. | 2.00 | .319 | .05 | .006 |
| SKY | 140. | 84. | 196.7 | 84. | 2.00 | .050 | .05 | -.002 |
| TERRAIN | 10. | 84. | 196.7 | 84. | 2.00 | .269 | .05 | .003 |
| TERRAIN | 140. | 84. | 196.7 | 84. | 2.00 | .026 | .05 | .001 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 5. | 61.3 | 164. | 2.00 | 1.451 | .05 | .017 |
| SKY | 140. | 5. | 61.3 | 164. | 2.00 | .245 | .05 | -.005 |
| TERRAIN | 10. | 5. | 61.3 | 164. | 2.00 | .593 | .05 | .005 |
| TERRAIN | 140. | 5. | 61.3 | 164. | 2.00 | .195 | .05 | .003 |

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Bryce Canyon NP

*** Level-1 Screening ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .00 | G | /S |

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

Background Ozone: .04 ppm
Background Visual Range: 250.00 km
Source-Observer Distance: 127.30 km
Min. Source-Class I Distance: 127.30 km
Max. Source-Class I Distance: 155.30 km
Plume-Source-Observer Angle: 11.25 degrees
Stability: 6
Wind Speed: 1.00 m/s

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 130. | 155.3 | 39. | 2.00 | .649 | .05 | .012 |
| SKY | 140. | 130. | 155.3 | 39. | 2.00 | .103 | .05 | -.003 |
| TERRAIN | 10. | 84. | 127.3 | 84. | 2.00 | .807 | .05 | .008 |
| TERRAIN | 140. | 84. | 127.3 | 84. | 2.00 | .053 | .05 | .001 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 5. | 39.6 | 164. | 2.00 | 4.048* | .05 | .058* |
| SKY | 140. | 5. | 39.6 | 164. | 2.00 | .669 | .05 | -.016 |
| TERRAIN | 10. | 5. | 39.6 | 164. | 2.00 | 2.445* | .05 | .025 |
| TERRAIN | 140. | 5. | 39.6 | 164. | 2.00 | .592 | .05 | .012 |

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Canyonlands NP

*** Level-1 Screening ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .00 | G | /S |

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

| | |
|---|---|
| Background Ozone: | .04 ppm |
| Background Visual Range: | 250.00 km |
| Source-Observer Distance: | 158.00 km |
| Min. Source-Class I Distance: | 158.00 km |
| Max. Source-Class I Distance: | 223.00 km |
| Plume-Source-Observer Angle: | 11.25 degrees |
| Stability: | 6 |
| Wind Speed: | 1.00 m/s |

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 140. | 211.1 | 29. | 2.00 | .479 | .05 | .008 |
| SKY | 140. | 140. | 211.1 | 29. | 2.00 | .074 | .05 | -.002 |
| TERRAIN | 10. | 84. | 158.0 | 84. | 2.00 | .477 | .05 | .005 |
| TERRAIN | 140. | 84. | 158.0 | 84. | 2.00 | .037 | .05 | .001 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 5. | 49.2 | 164. | 2.00 | 2.638* | .05 | .035 |
| SKY | 140. | 5. | 49.2 | 164. | 2.00 | .441 | .05 | -.010 |
| TERRAIN | 10. | 5. | 49.2 | 164. | 2.00 | 1.300 | .05 | .012 |
| TERRAIN | 140. | 5. | 49.2 | 164. | 2.00 | .374 | .05 | .007 |

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Capitol Reef NP

*** Level-1 Screening ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .00 | G | /S |

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

| | |
|---|---|
| Background Ozone: | .04 ppm |
| Background Visual Range: | 250.00 km |
| Source-Observer Distance: | 61.60 km |
| Min. Source-Class I Distance: | 61.60 km |
| Max. Source-Class I Distance: | 166.00 km |
| Plume-Source-Observer Angle: | 11.25 degrees |
| Stability: | 6 |
| Wind Speed: | 1.00 m/s |

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 155. | 109.5 | 14. | 2.00 | 2.295* | .05 | .040 |
| SKY | 140. | 155. | 109.5 | 14. | 2.00 | .359 | .05 | -.011 |
| TERRAIN | 10. | 84. | 61.6 | 84. | 2.00 | 3.865* | .05 | .032 |
| TERRAIN | 140. | 84. | 61.6 | 84. | 2.00 | .182 | .05 | .003 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 0. | 1.0 | 169. | 2.45 | 28.798* | .05 | .563* |
| SKY | 140. | 0. | 1.0 | 169. | 2.00 | 5.632* | .05 | -.141* |
| TERRAIN | 10. | 0. | 1.0 | 169. | 2.08 | 21.816* | .05 | .245* |
| TERRAIN | 140. | 0. | 1.0 | 169. | 2.00 | 6.459* | .05 | .130* |

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Capitol Reef NP

*** User-selected Screening Scenario Results ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .06 | G | /S |

PARTICLE CHARACTERISTICS

| | Density | Diameter |
|---|---|---|
| Primary Part. | 2.5 | 6 |
| Soot | 2.0 | 1 |
| Sulfate | 1.5 | 4 |

Transport Scenario Specifications:

| | | |
|---|---|---|
| Background Ozone: | .04 | ppm |
| Background Visual Range: | 250.00 | km |
| Source-Observer Distance: | 61.60 | km |
| Min. Source-Class I Distance: | 61.60 | km |
| Max. Source-Class I Distance: | 166.00 | km |
| Plume-Source-Observer Angle: | 11.25 | degrees |

Stability: 4
Wind Speed: 7.00 m/s

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 155. | 109.5 | 14. | 2.00 | .174 | .05 | .003 |
| SKY | 140. | 155. | 109.5 | 14. | 2.00 | .028 | .05 | -.001 |
| TERRAIN | 10. | 84. | 61.6 | 84. | 2.00 | .206 | .05 | .002 |
| TERRAIN | 140. | 84. | 61.6 | 84. | 2.00 | .009 | .05 | .000 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE Exceeded

| Backgrnd | Theta | Azi | Distance | Alpha | Delta E Crit | Delta E Plume | Contrast Crit | Contrast Plume |
|---|---|---|---|---|---|---|---|---|
| SKY | 10. | 0. | 1.0 | 169. | 2.00 | 2.814* | .05 | .047 |
| SKY | 140. | 0. | 1.0 | 169. | 2.00 | .461 | .05 | -.013 |
| TERRAIN | 10. | 0. | 1.0 | 169. | 2.00 | 3.201* | .05 | .032 |
| TERRAIN | 140. | 0. | 1.0 | 169. | 2.00 | .501 | .05 | .011 |

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Grand Canyon NP

*** Level-1 Screening ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .00 | G | /S |

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

Background Ozone: .04 ppm
Background Visual Range: 250.00 km
Source-Observer Distance: 222.80 km
Min. Source-Class I Distance: 222.80 km
Max. Source-Class I Distance: 367.70 km
Plume-Source-Observer Angle: 11.25 degrees
Stability: 6
Wind Speed: 1.00 m/s

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 84. | 222.8 | 84. | 2.00 | .265 | .05 | .005 |
| SKY | 140. | 84. | 222.8 | 84. | 2.00 | .041 | .05 | -.001 |
| TERRAIN | 10. | 84. | 222.8 | 84. | 2.00 | .190 | .05 | .002 |
| TERRAIN | 140. | 84. | 222.8 | 84. | 2.00 | .021 | .05 | .000 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 5. | 69.4 | 164. | 2.00 | .992 | .05 | .011 |
| SKY | 140. | 5. | 69.4 | 164. | 2.00 | .168 | .05 | -.003 |
| TERRAIN | 10. | 5. | 69.4 | 164. | 2.00 | .368 | .05 | .003 |
| TERRAIN | 140. | 5. | 69.4 | 164. | 2.00 | .129 | .05 | .002 |

Visual Effects Screening Analysis for
Source: Sevier Power Company
Class I Area: Zion NP

*** Level-1 Screening ***

Input Emissions for

| | | | |
|---|---|---|---|
| Particulates | 3.53 | G | /S |
| NOx (as NO2) | 3.78 | G | /S |
| Primary NO2 | .00 | G | /S |
| Soot | .00 | G | /S |
| Primary SO4 | .00 | G | /S |

**** Default Particle Characteristics Assumed

Transport Scenario Specifications:

Background Ozone: .04 ppm
Background Visual Range: 250.00 km
Source-Observer Distance: 179.90 km
Min. Source-Class I Distance: 179.90 km
Max. Source-Class I Distance: 207.40 km
Plume-Source-Observer Angle: 11.25 degrees
Stability: 6
Wind Speed: 1.00 m/s

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 120. | 207.4 | 49. | 2.00 | .370 | .05 | .007 |
| SKY | 140. | 120. | 207.4 | 49. | 2.00 | .057 | .05 | -.002 |
| TERRAIN | 10. | 84. | 179.9 | 84. | 2.00 | .341 | .05 | .004 |
| TERRAIN | 140. | 84. | 179.9 | 84. | 2.00 | .030 | .05 | .001 |

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE NOT Exceeded

| | | | | | Delta E | | Contrast | |
|---|---|---|---|---|---|---|---|---|
| Backgrnd | Theta | Azi | Distance | Alpha | Crit | Plume | Crit | Plume |
| SKY | 10. | 5. | 56.0 | 164. | 2.00 | 1.871 | .05 | .023 |
| SKY | 140. | 5. | 56.0 | 164. | 2.00 | .315 | .05 | -.007 |
| TERRAIN | 10. | 5. | 56.0 | 164. | 2.00 | .823 | .05 | .007 |
| TERRAIN | 140. | 5. | 56.0 | 164. | 2.00 | .258 | .05 | .005 |

# Appendix P
# Soils and Vegetation Analysis

## Meteorological Solutions, Inc.

# Evaluation of Emissions Impacts on Soils, Vegetation, and Wildlife Resources for a Proposed Gas-Fired Power Plant, Sevier County, Utah

**AUGUST, 2011**

MWH®

MWH Americas, Inc.
10619 South Jordan Gateway, Suite 100
Salt Lake City, UT 84095

# Evaluation of Emissions Impacts on Soils, Vegetation, and Wildlife Resources for a Proposed Gas-Fired Power Plant, Sevier County, Utah

Meteorological Solutions, Inc.
Salt Lake City, Utah

**August, 2011**

PREPARED BY DATE 08 August 2011

Peter EerNisse
Environmental Scientist
MWH Americas, Inc.

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# 1.0 INTRODUCTION/PURPOSE AND NEED

## 1.1 Introduction

Sevier Power Company proposes to construct a gas-fired power plant (Project) located along the I-70 corridor, approximately 8 miles northeast of Richfield City in Sevier County, Utah. MWH Americas, Inc (MWH) was subcontracted by Meteorological Solutions, Inc. (MSI) to conduct impact analyses on soils, vegetation, and wildlife resources in support of the Prevention of Significant Deterioration (PSD) application for the project. A visit to the project site (Site) was conducted on 26 July 2011 by MWH staff to assess existing vegetation in the proposed Project vicinity as part of this effort. A Site visit photolog is contained in **Appendix A**.

This report was prepared in accordance with *A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals* (United States Environmental Protection Agency [USEPA,1980]) and guidance from *New Source Review Workshop Manual - Prevention of Significant Deterioration and Nonattainment Area Permitting* (USEPA,1990).

## 1.2 Existing Activities

The Project would occur on private land approximately 1.2 miles west of the town of Sigurd in Sevier County, Utah, near the intersection of I-70 and SR-118. The Richfield valley and I-70 corridor in the area near the Project site is composed of primarily private rural and agricultural land. Farming is a predominant land use in the area, while recreational opportunities exist on adjacent public lands. The project site is bounded on the southeast side by SR-118, on the south side by a large electrical substation, and on the west side by a large junkyard and gravel pit/borrow area.

## 1.3 Purpose and Need for Action

Pursuant to the Federal PSD regulations, an analysis of Air Quality Related Values including impairment to soils, vegetation and wildlife that would occur must be addressed for projects subject to PSD review. Industrial emissions produced by a gas-fired power plant have the potential to impact these resources. The objective of this analysis is to evaluate the potential impacts of emissions generated by the proposed facility on soil, vegetation, and wildlife resources.

# 2.0 SITE DESCRIPTION

## 2.1 Vegetation

PSD regulations require an analysis of air quality impacts on sensitive vegetation types, with significant commercial or recreational value. The Project is located in an area consisting primarily of private rural and agricultural land in the Sevier River valley. The surrounding hillside ecological environment is that of Pinyon-Juniper forest. Agricultural

profiles for Sevier County are provided in **Appendix B**. **Table 1** contains plant species encountered during a site visit on 26 July 2011 on and immediately adjacent to the proposed plant site. Due to the season of survey (July), most annual grass and forb species were present though in some cases beyond their flowering phase. Potentially affected vegetation in proximity to the proposed Project consists primarily of mixed forbs and grasses common to disturbed sites in the area, and a micro-riparian community associated with an irrigation canal that runs along the northeast margin of the property.

**Table 1.** Plant Species encountered during the 26 July 2011 site visit.

| Common Name | Scientific Name |
|---|---|
| Big sagebrush | Artemisia tridentata |
| Bindweed | Convolvulus arvensis |
| Blue wildrye | Elymus glaucus |
| Bluegrass | Poa sp. |
| Bottlebrush Sqirreltail | Elymus elymoides |
| Bud sagebrush | Picrothamnus desertorum |
| Cheatgrass | Bromus tectorum |
| Coyote willow | Salix exigua |
| Crested wheatgrass | Agropyron cristatum |
| Curly Dock | Rumex crispus |
| Curlycup Gumweed | Grindelia squarrosa |
| Devil's Thorn | Tribulus terrestris |
| Fremont cottonwood | Populus fremnoontii |
| Ground cherry | Physalis sp. |
| Indian ricegrass | Achnatherum hymenoides |
| Milkweed | Asclepias speciosa |
| Russian Thistle | Salsola kali |
| Scotch thistle | Onopordum acanthium |
| Sunflower | Helianthus annuus |
| Western wheatgrass | Pascopyrum smithii |
| Yellow rabbitbrush | Chrysothamnus viscidiflorus |

No Federally-listed or State-identified threatened or endangered plant species were observed during the site survey. Noxious weeds Scotch Thistle and Bindweed were observed in a few limited instances at the Site along with cheatgrass. No other noxious weeds were observed according to the officially designated and published noxious species for the State of Utah under Section 4-17-3, *Utah Noxious Weed Act* or listed as noxious by Sevier County.

## 2.2 Soils

An analysis of Air Quality Related Values including impairment to soils that would occur must be also be addressed for projects subject to PSD review. Soils in the immediate area of the proposed Project were mapped via United States Department of Agriculture (USDA) Web Soil Survey, and are presented below (**Figure 1**). Soil mapping units are described in **Table 2**. A complete soils report for this area is included in **Appendix C** of this report.

**Figure 1** Soils in the vicinity of the proposed project, Richfield Area, Utah.

**Table 2** Soil Map Unit Descriptions, Richfield Area, Utah.

| MAP UNIT | MAP UNIT NAME |
|---|---|
| 158 | Kapture loam, 0 to 4 percent slopes |
| 159 | Kapture-Sigurd-Stillman Complex, 2 to 5 percent slopes |
| 997 | Pits |

In general, soils in the vicinity of the plant are composed of gravelly to fine sand and loam sediments, which are well drained. Native soils in the area typically have relative high transmissibility, and range from non-saline to slightly saline. The soils on the Site itself have experienced obvious historical agricultural manipulation and homogenization and some compaction.

## 2.3 Wildlife

The Utah Comprehensive Wildlife Conservation Strategy (CWCS) prioritizes native animal species according to conservation need. At-risk and declining species in need of conservation were identified by examining species biology and life history, populations, distribution, and threats. **Table 3** lists species of greatest conservation concern in Sevier County (Utah Conservation Data Center, 2011a; Utah Conservation Data Center, 2011b; United States Fish and Wildlife Service, 2011). No at-risk species were observed during the site visit conducted on 26 July 2011, and very few at-risk species have the potential to occur near the project area based on habitat needs.

**Table 3** Species of Conservation Concern, Sevier County, Utah.

| AT-RISK SPECIES | | | |
|---|---|---|---|
| | **Common Name** | **Group** | **Primary Habitat** |
| **FEDERALLY-LISTED** | | | |
| Endangered | none | | |
| Threatened | Utah prairie dog | Mammal | Grassland |
| | Canada Lynx | Mammal | Mixed Conifer |
| Candidate | Greater sage-grouse | Bird | Shrubsteppe |
| | Yellow-billed cuckoo | Bird | Lowland Riparian |
| Proposed | none | | |
| **STATE SENSITIVE** | | | |
| Conservation Agreement Species | Bonneville Cutthroat Trout | Fish | Water - Lotic |
| | Northern Goshawk | Bird | Mixed Conifer |
| | Colorado River Cutthroat Trout | Fish | Water - Lotic |
| Species of Concern | American White Pelican | Bird | Lowland Riparian |
| | Bald Eagle | Bird | Riparian |
| | Big Free-Tailed Bat | Mammal | Rocky Scrub |
| | Black Swift | Bird | Mixed Conifer |
| | Burrowing Owl | Bird | Mixed Conifer |
| | Carinate Glenwood Pyrg | Mollusk | Wetland |
| | Ferruginous Hawk | Bird | Pinyon-Juniper |
| | Fringed Myotis | Mammal | Pinyon-Juniper |
| | Kit Fox | Mammal | Shrubsteppe |
| | Lewis's Woodpecker | Bird | Mixed Conifer |
| | Long-billed Curlew | Bird | Grassland |
| | Otter Creek Pyrg | Mollusk | Wetland |
| | Pygmy Rabbit | Mammal | Shrubsteppe |
| | Short-eared Owl | Bird | Wetland |
| | Smooth Glenwood Pyrg | Mollusk | Wetland |
| | Three-Toed Woodpecker | Bird | Sub-Alpine Conifer |
| | Townsend's Big-eared Bat | Mammal | Pinyon-Juniper |
| | Western Toad | Amphibian | Wetland |

# 3.0 IMPACTS ANALYSIS

## 3.1 Vegetation and Soils

The effects of gaseous air pollutants on vegetation may be classified into three broad categories: acute, chronic, and long-term. Acute effects are those that result from relatively short (less than 1 month) exposures to high concentrations of pollutants. Chronic effects occur when organisms are exposed for months or years to certain threshold levels of pollutants. Long-term effects include abnormal changes in ecosystems and subtle physiological alterations to organisms. Acute and chronic effects are caused by the gaseous pollutant acting directly on the organism; whereas long-term effects may be indirectly caused by secondary agents, such as changes in soil pH. Several scientific papers relating to the effects of emissions on vegetation and soils are included in **Appendix D**. The primary pathways by which air pollutants from a gas-fired power plant can affect vegetation is the direct exposure of a plant to a gaseous pollutant in the air. In the case of a gas-fired power plant, the potential for indirect exposure to trace elements through direct deposition of pollutants on the soil and later uptake by the plant are negligible. Therefore, the direct pathway is examined here.

The predicted direct ambient impact pollutants attributable to the proposed project are listed against the screening levels presented in *A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals* (USEPA 1980) and are shown in **Table 4**. The results show that for all pollutants of concern, at all modeled averaging times, predicted concentrations for the Project are less than Air Quality Related Value (AQRV) and National Ambient Air quality Standards (NAAQS) screening levels. The 24-hour averaging time value is less than 5% of the NAAQS screening concentration value for 10-micron particulate matter (PM10). For 2.5 micron particulates (PM2.5), the model-predicted value is less than 20% of the NAAQS screening concentration value. For nitrogen dioxide (NO2), the model-predicted annual averaging time value is less than 8% of the NAAQS and AQRV screening concentration values. Carbon monoxide predicted values are approximately one percent of the NAAQS screening value for both the 1-hour and 8-hour averaging times. Thus, no adverse impacts to plants would occur as a result of ambient air pollutants produced the proposed project.

**Table 4** Comparison of direct ambient impact pollutants: AERMOD predicted concentration values versus USEPA screening values.

| Pollutant | Averaging Time | AQRV Screening Levels (ug/m3) | NAAQS (ug/m3) | Model Predicted Concentrations (ug/m3) |
|---|---|---|---|---|
| NO2 | 1-hour | -- | 189 | 119.9 |
| | 4-hour | 3,760 | -- | -- |
| | 8-hour | 3,760 | -- | -- |
| | 1-month | 564 | -- | -- |
| | Annual | 100 | 100 | 7.8 |
| CO | 1-hour | -- | 40000 | 330.6 |
| | 8-hour | -- | 10000 | 82.8 |
| | Weekly | 1,800,000 | -- | -- |
| PM10 | 24-hour (High) | -- | 150 | 7.1 |
| | 24-Hour (HSH) | | 151 | 6.8 |
| PM2.5 | 24-hour | -- | 35 | 6.9 |
| | Annual | -- | 15 | 1.8 |

## 3.2 Wildlife

Impacts on wildlife species are caused indirectly, with effects being related to the ingestion of vegetation containing toxic elements taken-up from pollutants deposited on the soils. As vegetation and soils will not be adversely impacted by the proposed project, no adverse impacts to wildlife due to emissions from the proposed project will occur.

## 4.0 CONCLUSIONS

Emissions of airborne pollutants can have an impact on local flora, fauna and soils in addition to its impact on humans. For plants and soils, the greatest risk is related to deposited pollutants and long-term indirect exposure. For most species of plants and animals, as well as soils, the USEPA standards are designed to be protective from harmful effects of direct as well as deposited, indirect exposure pathways. Because the power plant is to be gas-fired, deposition of particulate pollutants is not expected and the primary pathway of concern is direct contact with airborne pollutants. EPA has established the exposure limits to protect animals, agronomic crops, and native vegetation against damage from direct and indirect exposure pathways. Although agricultural areas are located within close proximity to the proposed project, impacts analysis and modeling indicate potential pollutant concentrations in emissions from the proposed project are well below the significant impact levels for PM2.5, PM10, NO2, and CO. Therefore, no adverse impact to soils, vegetation, or wildlife is expected.

## 5.0 REFERENCES

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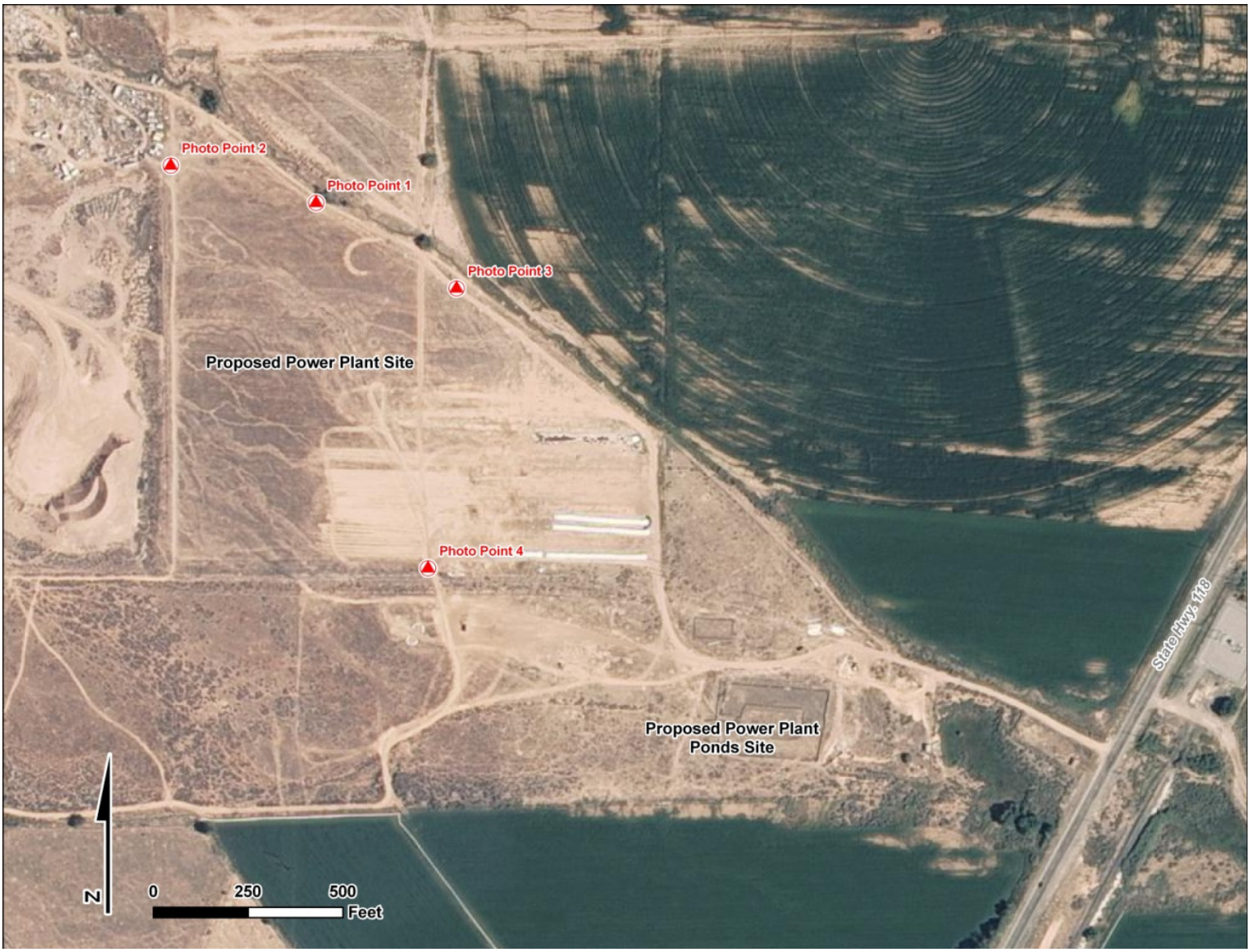
# APPENDIX A

## Photographic Log

**Figure A-1.** Photographic log picture locations at the Project Site, Sevier County, Utah.



| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name:** Meteorological Solutions, Inc. | **Site Location:** Sevier Power Company Proposed Power Plant | **Project No.** 1011504 |

| **Photo No.** | **Date:** |
|---|---|
| 1 | 07-26-2011 |

**Direction Photo Taken:**
West, from the east side of the property near the canal.

**Comments:**
Taken from Photo Point #1
Coordinates:
414342, 4300461
Existing power substation is visible.

| **Photo No.** | **Date:** |
|---|---|
| 2 | 07-26-2011 |

**Direction Photo Taken:**
North, from the east side of the property near the canal.

**Comments:**
Taken from Photo Point #1
Coordinates:
414342, 4300461

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name:** Meteorological Solutions, Inc. | **Site Location:** Sevier Power Company Proposed Power Plant | **Project No.** 1011504 |

| **Photo No.** | **Date:** |
|---|---|
| 3 | 07-26-2011 |

**Direction Photo Taken:**
South, from the east side of the property near the canal.

**Comments:**
Taken from Photo Point #1
Coordinates:
414342, 4300461

| **Photo No.** | **Date:** |
|---|---|
| 4 | 07-26-2011 |

**Direction Photo Taken:**
East, from the east side of the property near the canal.

**Comments:**
Taken from Photo Point #1
Coordinates:
414342, 4300461

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name:** Meteorological Solutions, Inc. | **Site Location:** Sevier Power Company Proposed Power Plant | **Project No.** 1011504 |

| **Photo No.** | **Date:** |
|---|---|
| 5 | 07-26-2011 |

**Direction Photo Taken:**

**Comments:**
General ground cover at site.

| **Photo No.** | **Date:** |
|---|---|
| 6 | 07-26-2011 |

**Direction Photo Taken:**
West

**Comments:**
Taken from Photo Point #2
Coordinates:
0414225, 4300491

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name:** Meteorological Solutions, Inc. | **Site Location:** Sevier Power Company Proposed Power Plant | **Project No.** 1011504 |

| **Photo No.** | **Date:** |
|---|---|
| 7 | 07-26-2011 |

**Direction Photo Taken:**
North

**Comments:**
Taken from Photo Point #2
Coordinates:
0414225, 4300491

| **Photo No.** | **Date:** |
|---|---|
| 8 | 07-26-2011 |

**Direction Photo Taken:**
South

**Comments:**
Taken from Photo Point #2
Coordinates:
0414225, 4300491

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name:** Meteorological Solutions, Inc. | **Site Location:** Sevier Power Company Proposed Power Plant | **Project No.** 1011504 |

| **Photo No.** | **Date:** |
|---|---|
| 9 | 07-26-2011 |

**Direction Photo Taken:**
West

**Comments:**
Taken from Photo Point #3
Coordinates:
0414455, 4300392

| **Photo No.** | **Date:** |
|---|---|
| 10 | 07-26-2011 |

**Direction Photo Taken:**
North

**Comments:**
Taken from Photo Point #3
Coordinates:
0414455, 4300392

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name:** Meteorological Solutions, Inc. | **Site Location:** Sevier Power Company Proposed Power Plant | **Project No.** 1011504 |

| **Photo No.** | **Date:** |
|---|---|
| 11 | 07-26-2011 |

**Direction Photo Taken:**
South

**Comments:**
Taken from Photo Point #3
Coordinates:
0414455, 4300392

| **Photo No.** | **Date:** |
|---|---|
| 12 | 07-26-2011 |

**Direction Photo Taken:**
West

**Comments:**
Taken from Photo Point #4
Coordinates:
0414432, 4300166

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name: Meteorological Solutions, Inc.** | **Site Location: Sevier Power Company Proposed Power Plant** | **Project No. 1011504** |

| **Photo No.** | **Date:** |
|---|---|
| 13 | 07-26-2011 |

**Direction Photo Taken:**
North

**Comments:**
Taken from Photo Point #4
Coordinates:
0414432, 4300166

| **Photo No.** | **Date:** |
|---|---|
| 14 | 07-26-2011 |

**Direction Photo Taken:**
East

**Comments:**
Taken from Photo Point #4
Coordinates:
0414432, 4300166

| PHOTOGRAPHIC LOG | | |
|---|---|---|
| **Client Name: Meteorological Solutions, Inc.** | **Site Location: Sevier Power Company Proposed Power Plant** | **Project No. 1011504** |

| **Photo No.** | **Date:** |
|---|---|
| 15 | 07-26-2011 |

**Direction Photo Taken:**
South

**Comments:**
Taken from Photo Point #4
Coordinates:
0414432, 4300166

# APPENDIX B

## Agricultural Profile for Sevier County

UtahStateUniversity
COOPERATIVE EXTENSION

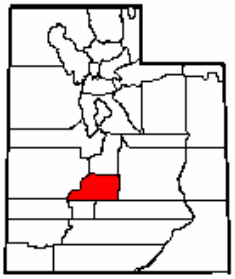
# Sevier County Agriculture Profile

**Economics Department**

## Sevier County

**AG/Econ/county-2005-24**

E. Bruce Godfrey, Extension Specialist
David Drake, Sevier County Agent
Dale Baker and Spencer Parkinson,
Research Assistants



Area: 1,910 square miles (1,222,400 acres)

Population: 19,103 (U.S. Census Bureau Estimate, 2003)

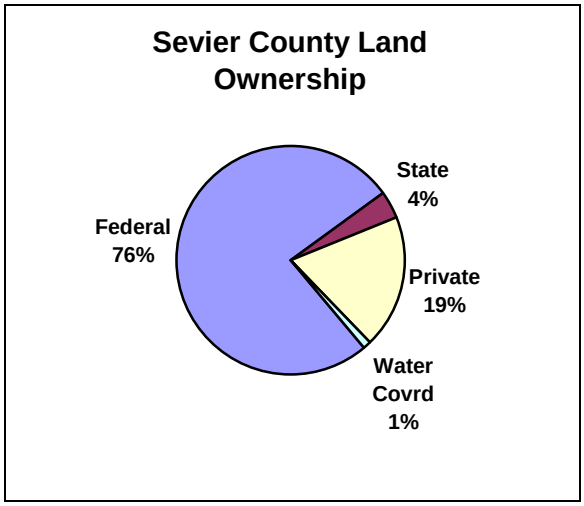
County seat: Richfield

## Location

Sevier County is located in the center of the state.

## Land Ownership

The land ownership within the county is divided as follows:




Source: (Utah County Fact Book, 2002)

The majority of the federally-owned ground is under the jurisdiction of the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM). The state owned ground is primarily under the jurisdiction of the Utah School and Institutional Trust Land Administration (SITLA). Portions of the state owned land are wildlife preserves. The private ground is primarily farm ground and grazing areas.

The 2002 Census of Agriculture indicated that there were 164,817 acres in farms or ranches in the county with an average size of 290 acres and an average value of $1,330 per acre. The county had 66,449 acres of cropland of which 45,140 were harvested and 58,620 were irrigated. The value of livestock and crops produced was listed at $52,300,000.

## Agricultural Snapshot

The major crops grown in Sevier County with 2004 yields and total acres harvested were:

| 2004 Primary Crops | Yields | Total harvested acres | Average yield/acre |
|---|---|---|---|
| All alfalfa hay | 109,000 tons | 31,000 | 3.5 tons |
| Other hay | 7,000 tons | 3,000 | 2.3 tons |
| Corn silage | 49,500 tons | 2,600 | 19 tons |
| Corn grain | 67,500 bu | 500 | 135 bu |
| Oats | 16,800 bu | 200 | 84 bu |
| Barley | 102,000 bu | 1,100 | 93 bu |

Typical ground preparation for planting alfalfa is begun by spraying Roundup in the fall or early spring to kill the quack grass prior to disking. The ground is then harrowed and planted. The procedure is the same for planting small grains except Roundup is typically not used prior to planting grains. About 98% of all grain is planted in the spring of the year.

The most prevalent crop rotation that producers practice is to leave alfalfa in for seven years, plant oats for two years, then replant alfalfa. Producers typically get two to three cuttings of alfalfa each year. About 25% of all inputs (e.g., seed, fertilizer, pesticides, etc.) are purchased locally while the remaining 75% is bought in a neighboring county.

Sources of irrigation water include the Sevier River and its tributaries.

## Growing Season

The growing season in Sevier County averages four months. Following are some of the details on climatology in two areas of Sevier County.

| Sevier | Climate Characteristics | | | |
|---|---|---|---|---|
| County locations | Annual Precip. | Last spring freeze | First fall freeze | Freeze-free period |
| Richfield Radio KSVC | 8.11 in | May 26 | Sept. 20 | 118 days |
| Salina 24 E | 13.78 in | June 3 | Sept. 25 | 115 days |

The major classes of livestock produced in the county along with their associated inventories as of January 2004 were:

| Livestock Type | Number of Head |
|---|---|
| All Cattle & Calves | 41,000 |
| Beef Cows | 12,000 |
| Milk Cows | 4,400 |
| Sheep & Lambs | 5,000 |

There is a significant trout production enterprise located in Sevier County.

For more information visit these Web sites:

http://utahreach.org/sevier/visitor/about.htm

http://www.wrcc.dri.edu/htmlfiles/ut/ut.ppt.html

http://climate.usu.edu/utahclim/freeze/default.htm

http://www.wrcc.dri.edu/summary/listut.html

http://www.utahweather.org/UWC/utahs_climate/climate_of_utah.html

http://biology.usgs.gov/s+t/SNT/noframe/gb150.htm

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This publication is issued in furtherance of Cooperative Extension work. Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jack M. Payne, Vice President and Director, Cooperative Extension Service, Utah State University.

# APPENDIX C

## NRCS Soils Report, Sevier County, Utah

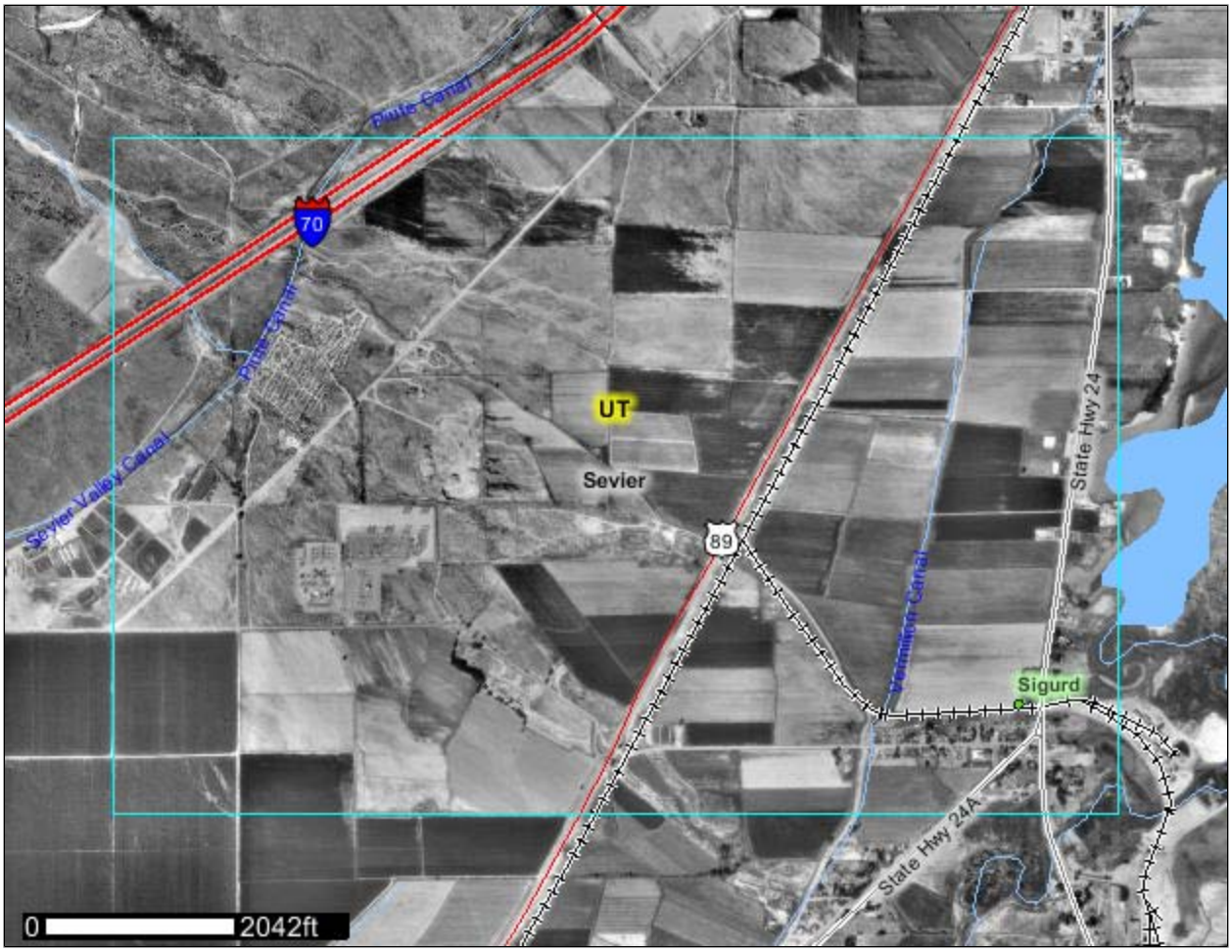
United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for

# Sevier County Area, Utah




July 26, 2011

# Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

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# How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

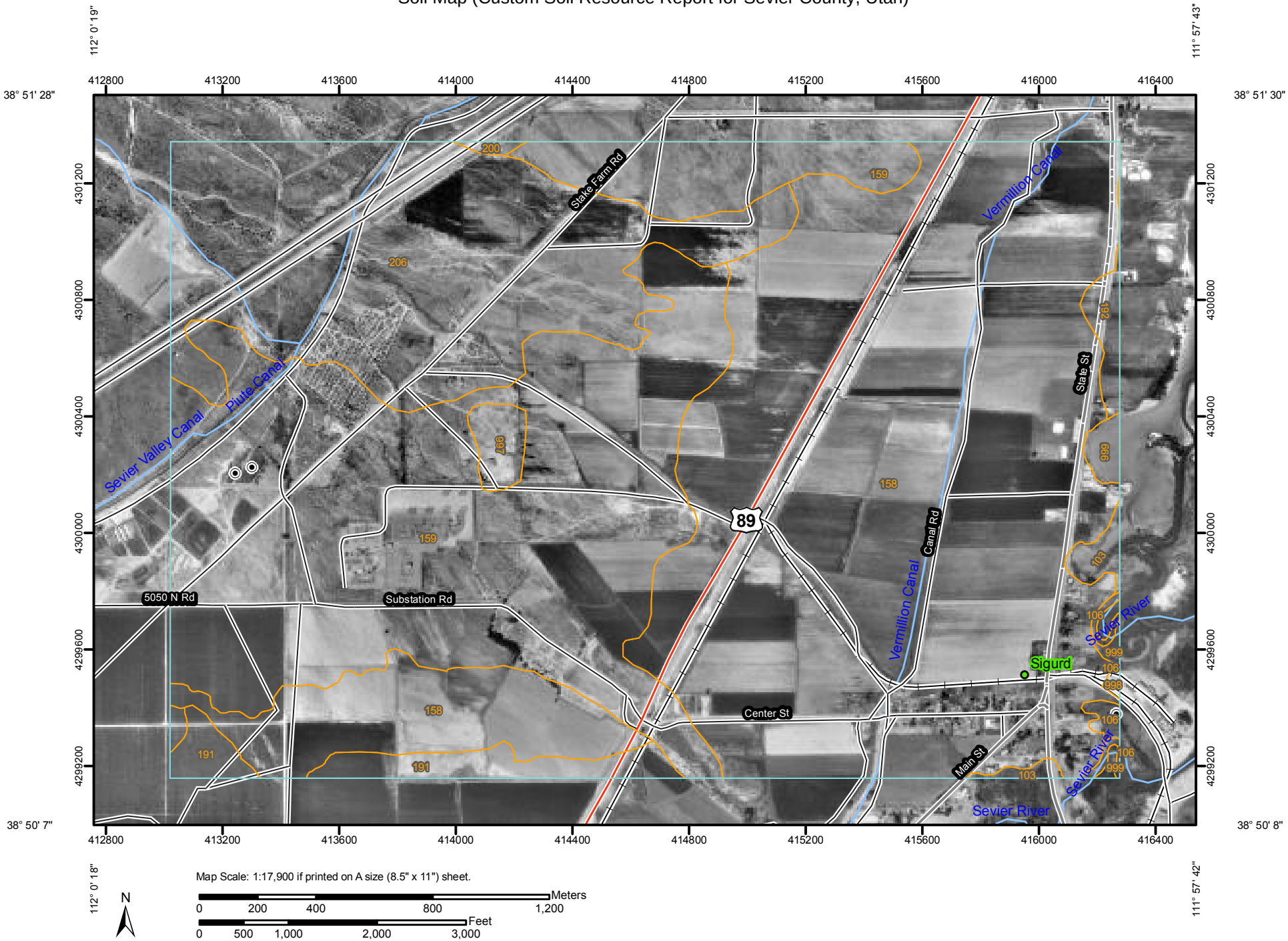
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report
## Soil Map (Custom Soil Resource Report for Sevier County, Utah)



## MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

- Soil Map Units

**Special Point Features**

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

**Special Line Features**

- Gully
- Short Steep Slope
- Other

**Political Features**

- Cities

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

## MAP INFORMATION

Map Scale: 1:17,900 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 12N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sevier County Area, Utah
Survey Area Data: Version 2, May 24, 2011

Date(s) aerial images were photographed: 9/9/1993; 8/17/1993

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend (Custom Soil Resource Report for Sevier County, Utah)

| Sevier County Area, Utah (UT628) | | | |
|---|---|---|---|
| **Map Unit Symbol** | **Map Unit Name** | **Acres in AOI** | **Percent of AOI** |
| 103 | Anco-Green River-Poganeab complex, 0 to 4 percent slopes | 9.6 | 0.5% |
| 106 | Anco-Poganeab-Job complex, 0 to 2 percent slopes | 6.8 | 0.4% |
| 158 | Kapture loam, 0 to 4 percent slopes | 807.5 | 45.9% |
| 159 | Kapture-Sigurd-Stillman complex, 2 to 5 percent slopes | 553.8 | 31.5% |
| 191 | Redfield silt loam, 1 to 3 percent slopes | 36.7 | 2.1% |
| 192 | Redview silty clay loams, 0 to 1 percent slopes | 10.2 | 0.6% |
| 200 | Sanpete-Lisade association, 2 to 15 percent slopes | 1.8 | 0.1% |
| 206 | Stillman-Sigurd complex, 2 to 8 percent slopes | 312.2 | 17.7% |
| 997 | Pits | 11.7 | 0.7% |
| 998 | Urban land | 0.9 | 0.1% |
| 999 | Water | 8.8 | 0.5% |
| **Totals for Area of Interest** | | **1,760.0** | **100.0%** |

# Map Unit Descriptions (Custom Soil Resource Report for Sevier County, Utah)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a

particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Sevier County Area, Utah

## 103—Anco-Green River-Poganeab complex, 0 to 4 percent slopes

### Map Unit Setting

*Elevation:* 5,180 to 5,430 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

### Map Unit Composition

*Anco and similar soils:* 30 percent
*Green river and similar soils:* 30 percent
*Poganeab and similar soils:* 25 percent
*Minor components:* 15 percent

### Description of Green River

#### Setting

*Landform:* Flood-plain steps, levees
*Down-slope shape:* Linear, convex
*Across-slope shape:* Concave, linear
*Parent material:* Mixed alluvium

#### Properties and qualities

*Slope:* 0 to 4 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Moderately well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* About 40 to 60 inches
*Frequency of flooding:* Rare
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 40 percent
*Gypsum, maximum content:* 2 percent
*Maximum salinity:* Nonsaline to moderately saline (0.0 to 16.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 13.0
*Available water capacity:* Low (about 6.0 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 4e
*Land capability (nonirrigated):* 6e
*Ecological site:* Alkali Bottom (Alkali Sacaton) (R028AY001UT)

#### Typical profile

*0 to 6 inches:* Sandy loam
*6 to 60 inches:* Stratified loamy sand to silt loam

### Description of Anco

#### Setting

*Landform:* Flood plains
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Mixed alluvium

**Properties and qualities**

*Slope:* 0 to 1 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
*Depth to water table:* About 20 to 40 inches
*Frequency of flooding:* Rare
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 25 percent
*Maximum salinity:* Moderately saline to strongly saline (16.0 to 32.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 60.0
*Available water capacity:* Very low (about 2.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 8s
*Land capability (nonirrigated):* 8s
*Ecological site:* Semiwet Saline Meadow (R028AY010UT)

**Typical profile**

*0 to 9 inches:* Loam
*9 to 62 inches:* Stratified very fine sandy loam to silty clay

## Description of Poganeab

**Setting**

*Landform:* Flood plains
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Parent material:* Mixed alluvium

**Properties and qualities**

*Slope:* 0 to 1 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.60 in/hr)
*Depth to water table:* About 0 to 12 inches
*Frequency of flooding:* Occasional
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 15 percent
*Gypsum, maximum content:* 1 percent
*Maximum salinity:* Very slightly saline to moderately saline (4.0 to 16.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 13.0
*Available water capacity:* Moderate (about 8.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 7w
*Land capability (nonirrigated):* 7w
*Ecological site:* Wet Saline Meadow (R028AY024UT)

**Typical profile**

*0 to 4 inches:* Silty clay loam
*4 to 9 inches:* Loam
*9 to 48 inches:* Silty clay loam
*48 to 60 inches:* Sandy loam

### Minor Components

#### Provo

*Percent of map unit:* 5 percent
*Landform:* Flood plains
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Ecological site:* Semiwet Fresh Streambank (R028AY014UT)

#### Genola

*Percent of map unit:* 5 percent
*Landform:* Stream terraces
*Landform position (three-dimensional):* Tread
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* Semidesert Silt Loam (Winterfat) (R028AY218UT)

#### Riverwash

*Percent of map unit:* 3 percent
*Landform:* Flood plains
*Down-slope shape:* Concave
*Across-slope shape:* Convex

#### Water

*Percent of map unit:* 2 percent
*Landform:* Oxbow lakes
*Landform position (three-dimensional):* Dip

## 106—Anco-Poganeab-Job complex, 0 to 2 percent slopes

### Map Unit Setting

*Elevation:* 5,000 to 5,310 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

### Map Unit Composition

*Anco and similar soils:* 40 percent
*Poganeab and similar soils:* 30 percent
*Job and similar soils:* 15 percent
*Minor components:* 15 percent

### Description of Anco

#### Setting

*Landform:* Flood plains
*Down-slope shape:* Linear
*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat poorly drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
*Depth to water table:* About 20 to 40 inches
*Frequency of flooding:* Rare
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 25 percent
*Maximum salinity:* Moderately saline to strongly saline (16.0 to 32.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 60.0
*Available water capacity:* Very low (about 2.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 8s
*Land capability (nonirrigated):* 8s
*Ecological site:* Semiwet Saline Meadow (R028AY010UT)

**Typical profile**

*0 to 9 inches:* Clay loam
*9 to 62 inches:* Stratified very fine sandy loam to silty clay

## Description of Poganeab

**Setting**

*Landform:* Flood plains
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Parent material:* Mixed alluvium

**Properties and qualities**

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.60 in/hr)
*Depth to water table:* About 0 to 12 inches
*Frequency of flooding:* Occasional
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 15 percent
*Gypsum, maximum content:* 1 percent
*Maximum salinity:* Very slightly saline to moderately saline (4.0 to 16.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 13.0
*Available water capacity:* Moderate (about 8.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 7w
*Land capability (nonirrigated):* 7w
*Ecological site:* Wet Saline Meadow (R028AY024UT)

**Typical profile**

*0 to 4 inches:* Silty clay loam
*4 to 9 inches:* Loam
*9 to 48 inches:* Silty clay loam
*48 to 60 inches:* Sandy loam

### Description of Job

#### Setting

*Landform:* Flood-plain steps
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Mixed alluvium

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Moderately well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
*Depth to water table:* About 40 to 60 inches
*Frequency of flooding:* Very rare
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 10 percent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 12.0
*Available water capacity:* High (about 9.5 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2c
*Land capability (nonirrigated):* 6c
*Ecological site:* Alkali Bottom (Alkali Sacaton) (R028AY001UT)

#### Typical profile

*0 to 2 inches:* Sandy loam
*2 to 60 inches:* Stratified very fine sandy loam to clay loam

### Minor Components

#### Duggins

*Percent of map unit:* 5 percent
*Landform:* Alluvial flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* Alkali Flat (Black Greasewood) (R028AY004UT)

#### Green river

*Percent of map unit:* 5 percent
*Landform:* Flood-plain steps, levees
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Convex
*Across-slope shape:* Convex, linear
*Ecological site:* Alkali Bottom (Alkali Sacaton) (R028AY001UT)

#### Riverwash

*Percent of map unit:* 3 percent
*Landform:* Flood plains
*Down-slope shape:* Concave
*Across-slope shape:* Convex

#### Water

*Percent of map unit:* 2 percent

## 158—Kapture loam, 0 to 4 percent slopes

### Map Unit Setting

*Elevation:* 5,200 to 5,440 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

### Map Unit Composition

*Kapture and similar soils:* 85 percent
*Minor components:* 15 percent

### Description of Kapture

#### Setting

*Landform:* Fan skirts
*Down-slope shape:* Concave
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from limestone and sandstone

#### Properties and qualities

*Slope:* 0 to 4 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 55 percent
*Gypsum, maximum content:* 2 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Available water capacity:* Moderate (about 8.3 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2e
*Land capability (nonirrigated):* 6e
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

#### Typical profile

*0 to 8 inches:* Loam
*8 to 18 inches:* Loam
*18 to 60 inches:* Fine sandy loam

### Minor Components

#### Mayfield

*Percent of map unit:* 10 percent
*Landform:* Fan skirts

*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

**Sigurd**
*Percent of map unit:* 5 percent
*Landform:* Fan skirts
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Ecological site:* Semidesert Gravelly Loam (Wyoming Big Sagebrush) North (R028AY215UT)

## 159—Kapture-Sigurd-Stillman complex, 2 to 5 percent slopes

**Map Unit Setting**
*Elevation:* 5,210 to 5,500 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

**Map Unit Composition**
*Kapture and similar soils:* 50 percent
*Stillman and similar soils:* 25 percent
*Sigurd and similar soils:* 25 percent

**Description of Kapture**

**Setting**
*Landform:* Fan skirts
*Down-slope shape:* Concave
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from limestone and sandstone

**Properties and qualities**
*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 55 percent
*Gypsum, maximum content:* 2 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Available water capacity:* Moderate (about 7.9 inches)

**Interpretive groups**
*Land capability classification (irrigated):* 2e
*Land capability (nonirrigated):* 6e
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

**Typical profile**

*0 to 8 inches:* Gravelly fine sandy loam
*8 to 18 inches:* Loam
*18 to 60 inches:* Fine sandy loam

## Description of Sigurd

**Setting**

*Landform:* Fan skirts
*Down-slope shape:* Concave
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from limestone and sandstone

**Properties and qualities**

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat excessively drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Gypsum, maximum content:* 1 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 10.0
*Available water capacity:* Low (about 3.8 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 3s
*Land capability (nonirrigated):* 7s
*Ecological site:* Semidesert Gravelly Loam (Wyoming Big Sagebrush) North (R028AY215UT)

**Typical profile**

*0 to 12 inches:* Fine sandy loam
*12 to 49 inches:* Very gravelly fine sandy loam

## Description of Stillman

**Setting**

*Landform:* Fan skirts
*Down-slope shape:* Concave
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from limestone and sandstone

**Properties and qualities**

*Slope:* 2 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat excessively drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 5.0
*Available water capacity:* Very low (about 2.2 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 6s
*Land capability (nonirrigated):* 7s
*Ecological site:* Semidesert Sandy Loam (Winterfat) (R028AY224UT)

**Typical profile**

*0 to 3 inches:* Gravelly fine sandy loam
*3 to 15 inches:* Very gravelly fine sandy loam
*15 to 60 inches:* Extremely gravelly sand

## 191—Redfield silt loam, 1 to 3 percent slopes

**Map Unit Setting**

*Elevation:* 5,150 to 5,410 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

**Map Unit Composition**

*Redfield and similar soils:* 95 percent
*Minor components:* 5 percent

**Description of Redfield**

**Setting**

*Landform:* Alluvial flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from limestone, sandstone, and shale

**Properties and qualities**

*Slope:* 1 to 3 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Gypsum, maximum content:* 2 percent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 5.0
*Available water capacity:* Moderate (about 9.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 3e
*Land capability (nonirrigated):* 6e
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

**Typical profile**

*0 to 6 inches:* Silt loam
*6 to 60 inches:* Silt loam

**Minor Components**

**Kapture**

*Percent of map unit:* 5 percent
*Landform:* Fan skirts
*Down-slope shape:* Concave
*Across-slope shape:* Convex
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

## 192—Redview silty clay loams, 0 to 1 percent slopes

**Map Unit Setting**

*Elevation:* 5,110 to 5,340 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

**Map Unit Composition**

*Redview, moderately well drained, and similar soils:* 60 percent
*Redview and similar soils:* 30 percent
*Minor components:* 10 percent

**Description of Redview, Moderately Well Drained**

**Setting**

*Landform:* Basin floors
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Red alluvium derived from limestone, sandstone, and shale

**Properties and qualities**

*Slope:* 0 to 1 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Moderately well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
*Depth to water table:* About 40 to 60 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Gypsum, maximum content:* 1 percent
*Maximum salinity:* Nonsaline to slightly saline (2.0 to 6.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 10.0
*Available water capacity:* High (about 10.8 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2c
*Land capability (nonirrigated):* 6c
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

**Typical profile**

*0 to 8 inches:* Silty clay loam
*8 to 60 inches:* Silty clay loam

## Description of Redview

**Setting**

*Landform:* Basin floors
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Red alluvium derived from limestone, sandstone, and shale

**Properties and qualities**

*Slope:* 0 to 1 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Gypsum, maximum content:* 1 percent
*Maximum salinity:* Nonsaline to slightly saline (2.0 to 6.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 10.0
*Available water capacity:* High (about 10.8 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2c
*Land capability (nonirrigated):* 6c
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

**Typical profile**

*0 to 8 inches:* Silty clay loam
*8 to 60 inches:* Silty clay loam

## Minor Components

**Redfield**

*Percent of map unit:* 8 percent
*Landform:* Alluvial flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

**Vanajo**

*Percent of map unit:* 2 percent
*Landform:* Basin floors
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* Semiwet Saline Meadow (R028AY010UT)

## 200—Sanpete-Lisade association, 2 to 15 percent slopes

### Map Unit Setting

*Elevation:* 5,090 to 6,490 feet
*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

### Map Unit Composition

*Sanpete and similar soils:* 75 percent
*Lisade and similar soils:* 15 percent
*Minor components:* 10 percent

### Description of Sanpete

#### Setting

*Landform:* Fan remnants
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Parent material:* Alluvium derived from limestone, sandstone, and shale

#### Properties and qualities

*Slope:* 2 to 15 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 70 percent
*Gypsum, maximum content:* 2 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 5.0
*Available water capacity:* Low (about 3.0 inches)

#### Interpretive groups

*Land capability (nonirrigated):* 7s
*Ecological site:* Semidesert Stony Loam (Black Sagebrush) (R028AY252UT)

#### Typical profile

*0 to 11 inches:* Gravelly sandy loam
*11 to 47 inches:* Extremely gravelly sandy loam
*47 to 59 inches:* Very gravelly sandy loam

### Description of Lisade

#### Setting

*Landform:* Fan skirts

*Down-slope shape:* Concave
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from limestone, sandstone, and shale

**Properties and qualities**

*Slope:* 2 to 12 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat excessively drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Gypsum, maximum content:* 2 percent
*Maximum salinity:* Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 20.0
*Available water capacity:* Moderate (about 6.1 inches)

**Interpretive groups**

*Land capability (nonirrigated):* 6e
*Ecological site:* Semidesert Loam (Wyoming Big Sagebrush) (R028AY220UT)

**Typical profile**

*0 to 5 inches:* Loam
*5 to 22 inches:* Coarse sandy loam
*22 to 34 inches:* Gravelly coarse sandy loam
*34 to 66 inches:* Gravelly fine sandy loam

**Minor Components**

**Sigurd**

*Percent of map unit:* 7 percent
*Landform:* Inset fans
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Ecological site:* Semidesert Gravelly Loam (Wyoming Big Sagebrush) North (R028AY215UT)

**Denmark**

*Percent of map unit:* 3 percent
*Landform:* Fan remnants
*Landform position (three-dimensional):* Interfluve
*Down-slope shape:* Linear
*Across-slope shape:* Convex
*Ecological site:* Semidesert Shallow Hardpan (10 -14 Ppt) (R028AY230UT)

## 206—Stillman-Sigurd complex, 2 to 8 percent slopes

**Map Unit Setting**

*Elevation:* 5,220 to 5,810 feet

*Mean annual precipitation:* 8 to 12 inches
*Mean annual air temperature:* 46 to 51 degrees F
*Frost-free period:* 100 to 140 days

**Map Unit Composition**

*Stillman, stony, and similar soils:* 50 percent
*Sigurd and similar soils:* 45 percent
*Minor components:* 5 percent

**Description of Stillman, Stony**

**Setting**

*Landform:* Inset fans
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Parent material:* Alluvium derived from limestone and sandstone

**Properties and qualities**

*Slope:* 2 to 8 percent
*Surface area covered with cobbles, stones or boulders:* 0.1 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat excessively drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* Occasional
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 5.0
*Available water capacity:* Very low (about 2.2 inches)

**Interpretive groups**

*Land capability (nonirrigated):* 7s
*Ecological site:* Semidesert Sandy Loam (Winterfat) (R028AY224UT)

**Typical profile**

*0 to 3 inches:* Cobbly fine sandy loam
*3 to 15 inches:* Very gravelly fine sandy loam
*15 to 60 inches:* Extremely gravelly sand

**Description of Sigurd**

**Setting**

*Landform:* Inset fans
*Down-slope shape:* Linear
*Across-slope shape:* Concave
*Parent material:* Alluvium derived from limestone and sandstone

**Properties and qualities**

*Slope:* 2 to 8 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Somewhat excessively drained
*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* Very rare
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 60 percent

*Gypsum, maximum content:* 1 percent
*Maximum salinity:* Nonsaline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 10.0
*Available water capacity:* Low (about 3.8 inches)

**Interpretive groups**
*Land capability (nonirrigated):* 7e
*Ecological site:* Semidesert Gravelly Loam (Wyoming Big Sagebrush) North (R028AY215UT)

**Typical profile**
*0 to 12 inches:* Gravelly loam
*12 to 49 inches:* Very gravelly fine sandy loam

**Minor Components**

**Kapture**
*Percent of map unit:* 5 percent
*Landform:* Fan skirts
*Down-slope shape:* Concave
*Across-slope shape:* Linear
*Ecological site:* Semidesert Loam (Basin Big Sagebrush) (R028AY221UT)

## 997—Pits

**Map Unit Setting**
*Elevation:* 5,110 to 5,540 feet

**Map Unit Composition**
*Pits:* 100 percent

**Description of Pits**

**Interpretive groups**
*Land capability (nonirrigated):* 8e

## 998—Urban land

**Map Unit Setting**
*Elevation:* 5,130 to 5,420 feet

**Map Unit Composition**
*Urban land:* 100 percent

### Description of Urban Land

#### Interpretive groups

*Land capability (nonirrigated):* 8s

## 999—Water

### Map Unit Composition

*Water:* 100 percent

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# APPENDIX D

## Pertinent Scientific Literature

The following articles examine the effects of airborne pollution on soils and vegetation resources:

Adaros, G., H. J. Weigel, and H. J. Jager. 1991. Concurrent Exposure to So2 and/or No2 Alters Growth and Yield Responses of Wheat and Barley to Low Concentrations of O-3. New Phytologist 118:581-591.

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# Concurrent exposure to $SO_2$ and/or $NO_2$ alters growth and yield responses of wheat and barley to low concentrations of $O_3$

BY G. ADAROS, H. J. WEIGEL AND H. J. JÄGER

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SUMMARY

During 1988 and 1989, single and interactive effects of low concentrations of $O_3$, $SO_2$ and $NO_2$ (6–44, 9–63 and 10–43 $\mu g\ m^{-3}$ as 24 h daily means) on two varieties of spring barley (*Hordeum vulgare* L., 'Arena' and 'Alexis') and spring wheat (*Triticum aestivum* L., 'Turbo' and 'Star') were investigated in factorial experiments using open-top chambers. Potted plants were exposed during the whole growing season to either charcoal-filtered air (CF; control) or CF supplemented with one ($SO_2$, $NO_2$) or two ($O_3$) concentrations of the pollutants. While $SO_2$ was applied continuously, fumigation with $O_3$ and $NO_2$ occurred every day sequentially from 8.00 to 16.00 and from 16.00 to 8.00 h, respectively. Analysis of variance indicated that from the main treatments $O_3$ caused the most detrimental effects on growth and yield parameters. Depending on season and on variety, yield of wheat was reduced by $O_3$ between 20 % and 40 % compared with the control treatment; a significant reduction of yield of barley (−15 %) was only registered for 'Arena' (1988), while 'Alexis' appeared to be insensitive towards this gas. $SO_2$ did not affect yield of barley significantly, while yield of wheat was either decreased (−7 % for 'Turbo' in 1988) or increased (+11 % for 'Star'). $NO_2$ did not alter yield of wheat significantly but it increased yield of barley ('Arena') by 15 % in 1988. Significant interactive effects between the pollutants were observed only for a few parameters. Among these the most sensitive ones were the length of ears, the 1000-grain weight and the weight of straw. The interaction between the pollutants was mostly antagonistic, i.e. positive or negative effects of a single gas were cancelled or mitigated by the presence of other pollutants. However, a clear tendency towards a synergism was found for wheat in 1988: detrimental effects of $O_3$ on yield (e.g. −26 %; 'Turbo') were aggravated by the addition of either $SO_2$ (−38 %) or, partially, $NO_2$ (−31 %) or both pollutants together (−44 %). Before the plants were fully mature, visible symptoms were only observed on wheat after exposure to the highest $O_3$ concentrations. The results showed that although effects of $O_3$ dominated, these responses were strongly modified by the presence of one or both of the other gases. It is evident that yield losses of $O_3$-sensitive crop species may be enhanced under certain circumstances by low concentrations of other pollutants. Therefore, estimations of yield losses from open-top chamber experiments should consider interactive effects between those pollutants which are relevant to ambient air.

Key words: $O_3$, $SO_2$, $NO_2$, interactive effects, growth and yield, barley, wheat, air pollution.

## INTRODUCTION

Research into the impact of gaseous air pollutants on agricultural crops in Europe has currently focused on ozone ($O_3$), which appears to be the most important pollutant affecting crops during the growing season (Roberts, 1984; Krupa & Manning, 1988; Bonte *et al.*, 1989; Fuhrer *et al.*, 1989; Pleijel *et al.*, 1989; Adaros, Weigel & Jäger, 1990, 1991 *a*, *b*). However, realistic assessments of air pollutant effects have to consider that in the lower atmosphere phytotoxic concentrations of other trace gases, particularly of sulphur dioxide ($SO_2$) and nitrogen dioxide ($NO_2$), do frequently occur, which have been shown to interfere with $O_3$ in affecting plant growth (Ormrod, 1982; EPA, 1984; Reinert, 1984; Goodyear & Ormrod, 1988; Mansfield & McCune, 1988). With respect to agriculturally important crop species there is still insufficient knowledge about the joint action of these gases (Roberts, 1984; Mansfield & McCune, 1988).

While there have been some studies on the interaction of $SO_2$ and $O_3$ (e.g. Heagle *et al.*, 1983; Reich & Amundson, 1984; Deveau *et al.*, 1987) and $SO_2$ and $NO_2$ (e.g. Ashenden & Williams, 1980; Irving, Miller & Xerikos 1982; Hogsett *et al.*, 1984;

Pande & Mansfield, 1985), the combined action of $NO_2$ and $O_3$ as well as the three-pollutant interaction of $NO_2$, $O_3$ and $SO_2$ have hardly been investigated (Elkiey & Ormrod, 1980; Reinert & Nelson, 1980; Reinert & Gray, 1981; Reinert, Shriner & Rawlings, 1982; Fravel, Benson & Reinert, 1984; Goodyear & Ormrod, 1988). In most of these interaction studies, plants were exposed to pollutant concentrations which were considerably higher than those expected even in heavily polluted environments, or investigations were restricted to short-term exposures under artificial growth conditions (e.g. Reinert & Nelson, 1980; Reinert & Gray, 1981; Ito *et al.*, 1985).

The present report summarizes results of the interactive effects of $O_3$, $SO_2$ and $NO_2$ on two spring sown varieties of both wheat and barley. Experiments were conducted in open-top chambers during two growing seasons in which the plants were exposed to low concentrations of these pollutants alone or in all possible combinations. As there is evidence that the co-occurrence of $O_3$ and $NO_2$ at phytotoxic levels in ambient air is sequential rather than simultaneous (Lefohn *et al.*, 1987), which is also true for our site, sequential exposure of the plants to $O_3$ and $NO_2$ was carried out. A detailed description of the dose-response relationships of the single pollutants $O_3$ and $SO_2$ and their effects on growth and yield of these crop species has been given by Adaros *et al.* (1991 *a*, *b*) and Weigel, Adaros & Jäger (1990), respectively.

## MATERIAL AND METHODS

### *Plant material*

In the growing seasons 1988 and 1989, two cultivars of spring barley (*Hordeum vulgare* L., cvs 'Arena' and 'Alexis') and spring wheat (*Triticum aestivum* L., cvs 'Turbo' and 'Star') were sown in a greenhouse into 3·6 litre pots (42 cm height, 10·5 cm diameter) which were filled with a standard fertilized substrate of soil and peat (ED 73). To acclimatize plants to conditions within the open-top chambers, pots were removed two weeks after germination from the greenhouse into open air where they were protected from natural rain. Fumigation was begun when the plants had developed their third leaf. Dates and other details related to plant culture are given in Table 1. According to their demand plants were automatically supplied with water by means of a drip irrigation system. The infestation with rust (*Puccinia graminis*) and mildew (*Erysiphe graminis*) or appearance of aphids required repeated applications of fungicides or insecticides, respectively (Table 1).

### *Exposure conditions and pollutant treatments*

Exposure of plants was carried out in open-top chambers which consisted of cylindrical aluminium frames (3·15 m diameter and 3·5 m height) covered with polyethylene, and which were protected from natural rain by means of a cap at the top (Hogsett, Tingey & Holman, 1985). A blower and filtering system for ambient air was connected to each chamber to provide continuously charcoal-filtered air at a rate of approximately 2300 $m^3 h^{-1}$. Each chamber was equipped with a dispensing and a monitoring system for $O_3$, $SO_2$ and $NO_2$ (Weigel & Jäger, 1988). While $SO_2$ was applied continuously during the experiments, $O_3$ and $NO_2$ were supplied every day sequentially from 8.00 to 16.00 and from 16.00 to 8.00 h local time, respectively. $O_3$ was produced from pure oxygen by an electrical discharge generator. Gaseous air pollutants ($O_3$, $SO_2$, $NO_2$ and NO) were monitored in the centre of each chamber and in ambient air for 6 min hourly by means of a time-share system connected to appropriate monitors (Weigel & Jäger, 1988).

Treatments consisted of charcoal-filtered air (CF, control or 'low level') and CF supplemented with one or two concentrations of each gas or their mixtures. According to the factorial design with two

**Table 1.** *Timetable of events for the culture of barley and wheat during two growing seasons*

| Species... | *Hordeum vulgare* L. | | *Triticum aestivum* L. | |
|---|---|---|---|---|
| Season... | 1988 | 1989 | 1988 | 1989 |
| Date of sowing | *6·4* | *5·4* | *5·4* | *6·4* |
| Plants per pot | 1 | 1 | 1 | 3 |
| Pots per chamber | 10 | 8 | 10 | 8 |
| $O_3$ fumigation | | | | |
| Date of start | *29·4* | *8·5* | *28·4* | *9·5* |
| Plant age at start [d] | 23 | 33 | 23 | 31 |
| Date of harvest | *15·8* | *15·8* | *14·8* | *15·8* |
| Total time of exposure [d] | 108 | 99 | 108 | 98 |
| Total plant age [d] | 131 | 132 | 131 | 131 |
| Date of application of | | | | |
| insecticide | *27·6* | *6·6/23·6/18·7* | *27·6* | *6·6/23·6/18·7* |
| fungicide | *9·5/14·6/27·6* | *8·5/14·6/27·6* | *9·5/14·6/27·6* | *8·5/14·6/27·6* |
| fertilizer (NPK) | *30·5* | *16·5/8·6* | *22·7* | *16·5/8·6* |

**Table 2.** *Factorial fumigation experiments in open-top chambers with the main treatments with $O_3$, $SO_2$ and $NO_2$ during two growing seasons*

| Season... | | 1988 | | | 1989 | |
|---|---|---|---|---|---|---|
| $O_3$ level | | *1* | *2* | *3* | *1* | *2* |
| 24-h | Mean | 6 | 17 | 32 | 11 | 44 |
| | Max | 20 | 33 | 59 | 40 | 77 |
| 8-h | Mean | 10 | 47 | 95 | 22 | 121 |
| | Max | 30 | 85 | 174 | 55 | 202 |
| $SO_2$ level | | *1* | *2* | | *1* | *2* |
| 24-h | Mean | 9 | 56 | | 10 | 63 |
| | Max | 22 | 91 | | 31 | 100 |
| $NO_2$ level | | *1* | *2* | | *1* | *2* |
| 24-h | Mean | 10 | 39 | | 10 | 43 |
| | Max | 33 | 93 | | 25 | 62 |
| 16-h | Mean | 11 | 55 | | 12 | 60 |
| | Max | 33 | 108 | | 25 | 85 |

Daily means and maximum daily means of the pollutant concentrations [$\mu g\ m^{-3}$] as averages of all chambers with the same pollutant addition including the replications are shown. Daily means are also given for the time of pollutant application (8.00–16.00 h for $O_3$, 16.00–8.00 h for $NO_2$). Pollutant level 1 corresponds to the control treatment with charcoal-filtered air only.

replications of each treatment, a $3 \times 2 \times 2$ (24 chambers; 3 concentrations of $O_3$, 2 concentrations of $SO_2$ and $NO_2$) or a $2 \times 2 \times 2$ (16 chambers; 2 levels of each gas) design was used in 1988 or 1989, respectively. Table 2 summarizes the actual concentrations of $O_3$, $SO_2$ and $NO_2$ as averages of all chambers with a specific pollutant level. In the following text all growth and yield data are related to 24-h daily means. For comparison Table 3 gives the pollutant concentrations measured in ambient air at the experimental site together with the photosynthetically active radiation (PAR), air temperature and relative humidity which were continuously monitored in three chambers and in ambient air during the experiments. Daily deviations of the open-top chamber climate from ambient conditions were in a similar range as described in detail by Adaros, Weigel & Jäger (1989).

### *Measurement of effects and statistical analysis*

All growth and yield parameters which are specified in the following tables and figures were measured on mature plants at harvest time. With the exception of seeds, which were dried at 35 °C in a ventilated oven for two days to mimic the natural state at harvest seeds, dry weights of the other plant parts were measured after drying at 95 °C for 24 h at least. All growth and yield data, which are related to one pot, were evaluated using analysis of variance (MANOVA: SPSS 9).

## RESULTS

### *Single pollutant effects on barley*

Before plant senescence no visible symptoms were observed due to the single or combined action of the pollutants on barley. However, as shown in Table 4*a*, remarkable negative effects of $O_3$ on growth and yield were found in 1988 for 'Arena', when the highest $O_3$ concentration (95 $\mu g\ m^{-3}$ as 8-h daily mean) was considered. On the other hand, in the same season both cultivars showed a positive effect of this pollutant on the length of ears. Although in 1989 a tendentiously negative action of $O_3$ on all other parameters of 'Arena' was registered, only its effect in reducing straw weight was significant (Table 4*a*). In contrast to this, 'Alexis' appeared to be insensitive to $O_3$ in both growing seasons. Thus, in spite of a higher $O_3$ concentration in 1989 compared with 1988 (120 and 95 $\mu g\ m^{-3}$ as 8-h daily means, respectively), the negative effects of $O_3$ were clearly observed only during the season 1988.

In comparison to $O_3$ the reaction of barley to $SO_2$ was less apparent. A generally negative response to

**Table 3.** *Daily mean values of gaseous air pollutant concentrations [$\mu g\ m^{-3}$] and climatic conditions in ambient air (A) and within open-top chambers (C) during fumigation experiments in two growing seasons*

| Season... | 1988 | | 1989 | |
|---|---|---|---|---|
| Plot... | A | C | A | C |
| $O_3$ (24-h) | 55 (108) | — | 75 (128) | — |
| $O_3$ (8-h) | 73 (150) | — | 99 (197) | — |
| $SO_2$ (24-h) | 19 (99) | — | 14 (98) | — |
| $NO_2$ (24-h) | 22 (49) | — | 17 (50) | — |
| NO (24-h) | 8 (32) | 8 (27) | 5 (14) | 8 (15) |
| PAR [mole $m^{-2}\ d^{-1}$] | 28·5 | 23·2 | 32·8 | 21·9 |
| Temperature [°C] | 17·8 | 18·6 | 18·0 | 18·7 |
| Relative humidity [%] | 73·5 | 73·0 | 65·4 | 67·6 |

Values in parentheses are the highest daily means registered during the season. Data are means of three (climatic variables) or all (pollutant concentrations) treatment chambers.

**Table 4a.** *The main effects of $O_3$, $SO_2$ and $NO_2$ on growth and yield parameters of two cultivars of spring barley during two seasons*

| Cultivar... | 'Arena' | | | | | | | 'Alexis' | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Season... | 1988 | | | | 1989 | | | 1988 | | | | 1989 | | |
| $O_3$ [$\mu g\ m^{-3}$]... | 6 | 17 | 32 | | 11 | 44 | | 6 | 17 | 32 | | 11 | 44 | |
| D. wt straw | 22·2 | 22·1 | 20·0 | *** | 23·4 | 21·9 | * | 23·3 | 23·1 | 22·6 | n.s. | 23·7 | 23·4 | n.s. |
| D. wt ears | 25·3 | 24·9 | 21·8 | * | 24·6 | 22·9 | n.s. | 35·1 | 35·6 | 35·2 | n.s. | 25·0 | 25·2 | n.s. |
| D. wt plant | 47·7 | 47·1 | 41·8 | *** | 48·0 | 44·8 | n.s. | 58·3 | 58·6 | 57·9 | n.s. | 48·7 | 47·9 | n.s. |
| Ears/pot | 32·2 | 30·7 | 29·7 | n.s. | 28·3 | 25·5 | n.s. | 34·8 | 34·0 | 34·3 | n.s. | 28·9 | 28·4 | n.s. |
| Grains/ear | 22·1 | 22·0 | 21·7 | n.s. | 19·3 | 19·7 | n.s. | 21·7 | 22·1 | 22·0 | n.s. | 17·2 | 18·2 | n.s. |
| Ear length | 7·47 | 8·12 | 7·45 | *** | 8·61 | 8·77 | n.s. | 7·84 | 8·08 | 8·09 | * | 8·75 | 8·72 | n.s. |
| D. wt 1000 grains | 47·2 | 46·5 | 44·0 | ** | 43·0 | 41·3 | n.s. | 54·5 | 55·6 | 55·1 | n.s. | 45·5 | 45·2 | n.s. |
| Yield | 22·0 | 21·8 | 19·0 | * | 20·2 | 18·6 | n.s. | 30·5 | 30·4 | 30·6 | n.s. | 20·7 | 21·5 | n.s. |
| $SO_2$ [$\mu g\ m^{-3}$]... | 9 | 56 | | | 10 | 63 | | 9 | 56 | | | 10 | 63 | |
| D. wt straw | 21·1 | 21·8 | | n.s. | 22·6 | 22·8 | n.s. | 23·1 | 22·9 | | n.s. | 23·6 | 23·5 | n.s. |
| D. wt ears | 24·1 | 23·9 | | n.s. | 24·5 | 23·0 | n.s. | 35·3 | 35·3 | | n.s. | 26·3 | 24·0 | n.s. |
| D. wt plant | 45·3 | 45·8 | | n.s. | 47·0 | 45·8 | n.s. | 58·3 | 58·2 | | n.s. | 49·9 | 46·7 | n.s. |
| Ears/pot | 30·4 | 31·3 | | n.s. | 27·6 | 26·1 | n.s. | 34·1 | 34·7 | | n.s. | 28·5 | 28·9 | n.s. |
| Grains/ear | 22·2 | 21·6 | | n.s. | 19·3 | 19·7 | n.s. | 21·8 | 22·2 | | n.s. | 18·0 | 17·4 | n.s. |
| Ear length | 7·68 | 7·70 | | n.s. | 8·55 | 8·84 | * | 8·02 | 7·99 | | n.s. | 8·65 | 8·82 | n.s. |
| D. wt 1000 grains | 47·0 | 44·8 | | ** | 43·5 | 40·8 | ** | 55·5 | 54·5 | | n.s. | 47·1 | 43·2 | * |
| Yield | 20·9 | 20·9 | | n.s. | 20·0 | 18·7 | n.s. | 30·4 | 30·6 | | n.s. | 21·6 | 20·6 | n.s. |
| $NO_2$ [$\mu g\ m^{-3}$]... | 10 | 39 | | | 11 | 43 | | 10 | 39 | | | 10 | 43 | |
| D. wt straw | 21·3 | 21·6 | | n.s. | 22·3 | 23·1 | n.s. | 22·9 | 23·1 | | n.s. | 23·6 | 23·6 | n.s. |
| D. wt ears | 22·9 | 25·2 | | * | 23·8 | 23·7 | n.s. | 34·7 | 35·9 | | n.s. | 26·1 | 24·1 | n.s. |
| D. wt plant | 44·2 | 46·9 | | n.s. | 46·1 | 46·8 | n.s. | 57·5 | 59·0 | | n.s. | 49·0 | 47·5 | n.s. |
| Ears/pot | 30·4 | 31·3 | | n.s. | 26·8 | 28·9 | n.s. | 33·0 | 35·8 | | * | 29·3 | 28·1 | n.s. |
| Grains/ear | 22·3 | 21·5 | | n.s. | 20·0 | 19·0 | n.s. | 22·5 | 21·4 | | *** | 18·0 | 17·5 | n.s. |
| Ear length | 7·68 | 7·66 | | n.s. | 8·73 | 8·65 | n.s. | 8·11 | 7·90 | | ** | 8·71 | 8·76 | n.s. |
| D. wt 1000 grains | 44·9 | 47·0 | | ** | 42·2 | 42·1 | n.s. | 55·6 | 54·5 | | n.s. | 44·9 | 45·5 | n.s. |
| Yield | 20·0 | 21·8 | | * | 19·8 | 19·0 | n.s. | 30·1 | 30·9 | | n.s. | 22·2 | 20·1 | n.s. |

Results are related to one pot. Abbreviations: d. wt = dry weight [g]; n.s. = non-significant, $*P \leqslant 0{\cdot}05$, $**P \leqslant 0{\cdot}01$, $***P \leqslant 0{\cdot}001$; length [cm]; yield = grain d. wt per pot.

this pollutant was only observed for the weight of 1000 seeds. As also observed with $O_3$, $SO_2$ affected the length of ears of 'Arena' positively. However, yield was not significantly impaired by this pollutant.

A reaction of barley to $NO_2$ was only found in 1988. Although most of the parameters tended to react positively, only four of them were significantly affected, e.g. yield of 'Arena'. In contrast to this, the number of seeds and the length of ears of 'Alexis' were negatively influenced by $NO_2$.

### *Single pollutant effects on wheat*

$O_3$ effects on wheat have been described in detail in a previous paper (Adaros *et al.*, 1991 *a*) and are only briefly recalled here. Visible symptoms due to $O_3$ at the highest level were not altered when other gases were also present. $O_3$ concentrations higher than 30 $\mu g\ m^{-3}$ (approximately 90 $\mu g\ m^{-3}$ as 8-h daily mean) affected growth and yield of wheat drastically (Table 4*b*). With the exception of the number of ears per plant of 'Star', which were significantly increased in 1988, all growth and yield parameters were depressed. $O_3$ affected wheat more intensively in 1988 than in 1989, although the mean $O_3$ concentration was lower in the former season (Table 2). However, the detrimental effects of $O_3$ on both cultivars were different, e.g. the yield reduction was higher for 'Turbo' than for 'Star'.

Effects of $SO_2$ on growth and yield of wheat were clearly less evident than those of $O_3$. Similar to barley, the negative responses of both cultivars to this pollutant were mostly observed for the weight of 1000 seeds. Although yield and other parameters of 'Turbo' reacted negatively to $SO_2$ in 1988, such a tendency was not confirmed in the following season. On the other hand, while in 1988 yield of 'Star' did not react significantly to $SO_2$, this parameter was positively influenced in 1989, which is tendentiously confirmed by the reaction of other parameters.

As with $SO_2$ the reaction of wheat to $NO_2$ was small and inconsistent, and in no case did the pollutant affect yield significantly. As established for $SO_2$, the most sensitive parameter to $NO_2$ was the weight of 1000 seeds, the reaction of which, however, was mostly positive.

**Table 4*b*.** *The main effects of $O_3$, $SO_2$ and $NO_2$ on growth and yield parameters of two cultivars of spring wheat during two seasons*

| Cultivar... | 'Turbo' | | | | | | | 'Star' | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Season... | 1988 | | | | 1989 | | | 1988 | | | | 1989 | | |
| $O_3$ [$\mu g\ m^{-3}$]... | 6 | 17 | 32 | | 11 | 44 | | 6 | 17 | 32 | | 11 | 44 | |
| D. wt straw | 23·6 | 23·5 | 19·4 | *** | 22·1 | 19·2 | *** | 17·1 | 16·3 | 14·6 | *** | 21·8 | 19·5 | *** |
| D. wt ears | 30·4 | 30·1 | 21·3 | *** | 24·7 | 20·5 | *** | 28·1 | 26·1 | 21·7 | *** | 29·8 | 25·6 | *** |
| D. wt plant | 53·4 | 53·5 | 40·7 | *** | 46·9 | 39·7 | *** | 45·1 | 42·4 | 36·3 | *** | 51·6 | 45·1 | *** |
| Ears/pot | 15·8 | 15·9 | 14·9 | n.s. | 14·8 | 15·2 | n.s. | 11·9 | 10·8 | 13·3 | *** | 16·5 | 16·8 | n.s. |
| Grains/ear | 37·8 | 37·6 | 34·3 | *** | 33·2 | 29·2 | ** | 43·9 | 45·5 | 38·3 | *** | 35·4 | 32·8 | ** |
| Ear length | 8·79 | 8·86 | 8·41 | *** | 8·68 | 7·95 | *** | 10·5 | 10·2 | 9·7 | *** | 9·88 | 9·40 | *** |
| D. wt 1000 grains | 52·7 | 52·1 | 42·5 | *** | 47·6 | 39·4 | *** | 48·4 | 48·9 | 36·9 | *** | 46·9 | 41·3 | *** |
| Yield | 25·5 | 24·7 | 16·8 | *** | 20·7 | 16·0 | *** | 21·2 | 20·5 | 15·6 | *** | 24·7 | 20·7 | *** |
| $SO_2$ [$\mu g\ m^{-3}$]... | 9 | 56 | | | 10 | 63 | | 9 | 56 | | | 10 | 63 | |
| D. wt straw | 22·6 | 21·7 | | n.s. | 20·7 | 20·7 | n.s. | 15·8 | 16·2 | | n.s. | 21·1 | 20·2 | n.s. |
| D. wt ears | 28·4 | 26·1 | | ** | 22·6 | 22·8 | n.s. | 24·8 | 25·7 | | n.s. | 26·4 | 29·1 | * |
| D. wt plant | 51·0 | 47·4 | | ** | 43·3 | 43·4 | n.s. | 40·5 | 41·9 | | n.s. | 47·5 | 49·3 | n.s. |
| Ears/pot | 15·7 | 15·4 | | n.s. | 14·9 | 15·1 | n.s. | 11·5 | 12·5 | | ** | 16·0 | 17·3 | * |
| Grains/ear | 37·4 | 35·8 | | * | 30·8 | 31·6 | n.s. | 44·1 | 42·1 | | n.s. | 33·6 | 34·6 | n.s. |
| Ear length | 8·74 | 8·63 | | n.s. | 8·18 | 8·45 | * | 10·2 | 10·0 | | n.s. | 9·59 | 9·70 | n.s. |
| D. wt 1000 grains | 50·1 | 48·1 | | ** | 44·7 | 42·4 | * | 45·9 | 43·7 | | ** | 44·7 | 43·5 | n.s. |
| Yield | 23·4 | 21·2 | | *** | 18·3 | 18·4 | n.s. | 19·0 | 19·2 | | n.s. | 21·6 | 23·7 | * |
| $NO_2$ [$\mu g\ m^{-3}$]... | 10 | 40 | | | 10 | 43 | | 10 | 40 | | | 10 | 43 | |
| D. wt straw | 22·4 | 21·8 | | n.s. | 20·4 | 20·9 | n.s. | 15·7 | 16·3 | | n.s. | 20·9 | 20·4 | n.s. |
| D. wt ears | 27·4 | 27·2 | | n.s. | 22·0 | 23·3 | n.s. | 24·6 | 25·9 | | n.s. | 27·2 | 28·3 | n.s. |
| D. wt plant | 49·4 | 49·0 | | n.s. | 42·5 | 44·2 | n.s. | 40·9 | 41·9 | | n.s. | 48·1 | 48·7 | n.s. |
| Ears/pot | 15·8 | 15·3 | | n.s. | 15·1 | 14·9 | n.s. | 11·7 | 12·3 | | n.s. | 16·8 | 16·5 | n.s. |
| Grains/ear | 36·6 | 36·6 | | n.s. | 30·1 | 32·3 | n.s. | 44·5 | 42·1 | | n.s. | 34·0 | 34·1 | n.s. |
| Ear length | 8·71 | 8·66 | | n.s. | 8·23 | 8·40 | n.s. | 10·3 | 10·0 | | * | 9·42 | 9·87 | *** |
| D. wt 1000 grains | 48·2 | 50·0 | | * | 42·5 | 44·6 | * | 45·3 | 44·1 | | * | 42·7 | 45·5 | ** |
| Yield | 22·4 | 22·3 | | n.s. | 17·7 | 19·0 | n.s. | 18·7 | 19·5 | | n.s. | 22·2 | 23·1 | n.s. |

Results are related to one pot. Abbreviations: d. wt = dry weight [g]; n.s. = non-significant, $*P \leqslant 0{\cdot}05$, $**P \leqslant 0{\cdot}01$, $***P \leqslant 0{\cdot}001$; length [cm]; yield = grain d. wt per pot.

*Interactive effects*

Table 5 summarizes the levels of significance of the combined action of the pollutants as obtained by analysis of variance. Only 22% of all possible cases of interactions were statistically significant. For barley significant interactions were mostly displayed by 'Arena' in 1988, which is similar to the reaction to $O_3$ alone. Similarly, 'Alexis' showed the lowest sensitivity with respect to interactive pollutant effects. In general, wheat seemed to react to such interactions more sensitively than barley, which is especially true for 'Star'. Similar to the main effects (Table 4*a*, *b*), the significant interactive effects of the pollutants were more frequent in 1988. The most sensitive parameters to such interactions proved to be the weight of 1000 seeds and the length of ears. Within the barley experiments consistent significant interactions could barely be established. A noticeable exception was the joint action of $SO_2$ and $NO_2$ in 1988 on almost all the parameters of 'Arena'. Similarly, the cultivars of wheat showed no consistent sensitivity to a defined pollutant combination. However, in 1989 both wheat cultivars were predominantly affected by the combination of $O_3$ and $NO_2$. In 1988 the growth and yield parameters of barley 'Arena' and wheat 'Turbo' were more affected by the joint action of $SO_2$ and $NO_2$ than by any other pollutant combination.

*Mode and magnitude of the interactions*

*Presentation of data.* Table 6 shows the relative deviation of growth and yield parameters respective to the controls (CF, charcoal-filtered air = 0%) including all possible combinations of the three pollutants. Although not analysed statistically (e.g. by calculating least significant differences), this kind of presentation of all growth and yield data should summarize the information about the mode of interaction effects of the pollutants rather than define statistically significant differences between individual treatments.

*Barley.* With respect to the effects of the single pollutants the results of Table 6 confirm those already shown in Table 4*a*, i.e. the relative insensitivity of both barley cultivars to $O_3$ and their mostly positive reaction towards both $SO_2$ and $NO_2$. For 'Arena' in 1988 the combination of $O_3$ with

**Table 5.** *Levels of significance for interactive effects between $O_3$, $SO_2$ and $NO_2$ on growth and yield parameters of two cultivars of spring barley and spring wheat during two growing seasons*

| Species... | *Hordeum vulgare* L. | | | | | | | | *Triticum aestivum* L. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cultivar... | 'Arena' | | | | 'Alexis' | | | | 'Turbo' | | | | 'Star' | | | |
| Interaction... | $O_3$/ $SO_2$ | $O_3$/ $NO_2$ | $SO_2$/ $NO_2$ | $O_3$/ $SO_2$/ $NO_2$ | $O_3$/ $SO_2$ | $O_3$/ $NO_2$ | $SO_2$/ $NO_2$ | $O_3$/ $SO_2$/ $NO_2$ | $O_3$/ $SO_2$ | $O_3$/ $NO_2$ | $SO_2$/ $NO_2$ | $O_3$/ $SO_2$/ $NO_2$ | $O_3$/ $SO_2$ | $O_3$/ $NO_2$ | $SO_2$/ $NO_2$ | $O_3$/ $SO_2$/ $NO_2$ |
| | | | | | | | | Season 1988 | | | | | | | | |
| D. wt straw | * | n.s. | * | n.s. | n.s. | n.s. | n.s. | * | n.s. | n.s. | n.s. | n.s. | * | n.s. | n.s. | n.s. |
| D. wt ears | n.s. | n.s. | ** | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | n.s. | ** | n.s. | n.s. | n.s. |
| D. wt plant | n.s. | n.s. | ** | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | n.s. | ** | n.s. | n.s. | n.s. |
| Ears/pot | n.s. | n.s. | ** | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | ** | n.s. | n.s. | n.s. | n.s. | * |
| Grains/ear | n.s. | * | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | n.s. |
| Ear length | * | ** | * | *** | *** | n.s. | n.s. | n.s. | n.s. | n.s. | * | *** | *** | n.s. | n.s. | n.s. |
| D. wt 1000 grains | n.s. | n.s. | *** | n.s. | n.s. | * | * | n.s. | *** | * | n.s. | * | *** | ** | n.s. | * |
| Yield | n.s. | n.s. | * | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | n.s. | * | n.s. | n.s. | n.s. |
| | | | | | | | | Season 1989 | | | | | | | | |
| D. wt straw | n.s. | n.s. | n.s. | * | n.s. | n.s. | n.s. | n.s. | n.s. | ** | n.s. | n.s. | n.s. | *** | n.s. | n.s. |
| D. wt ears | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | ** | n.s. | n.s. | n.s. | * | n.s. | n.s. |
| D. wt plant | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | *** | n.s. | n.s. | n.s. | ** | n.s. | n.s. |
| Ears/pot | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | * | n.s. | n.s. |
| Grains/ear | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| Ear length | ** | n.s. | n.s. | n.s. | n.s. | * | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | * | n.s. | * | *** |
| D. wt 1000 grains | n.s. | *** | n.s. | n.s. | n.s. | n.s. | * | * | n.s. | *** | n.s. | n.s. | n.s. | n.s. | * | n.s. |
| Yield | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | *** | n.s. | n.s. | n.s. | * | n.s. | n.s. |

Details and abbreviations: see legend to Table 4.

**Table 6.** *Single and combined effects of $O_3$, $SO_2$ and $NO_2$ on growth yield parameters of two cultivars of spring barley and spring wheat during two growing seasons.*

| Interaction... | $O_3$ | $SO_2$ | $NO_2$ | $O_3$/ $SO_2$ | $O_3$/ $NO_2$ | $SO_2$/ $NO_2$ | $O_3$/ $SO_2$/ $NO_2$ | $O_3$ | $SO_2$ | $NO_2$ | $O_3$/ $SO_2$ | $O_3$/ $NO_2$ | $SO_2$/ $NO_2$ | $O_3$/ $SO_2$/ $NO_2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species... | *Hordeum vulgare* L. | | | | | | | | | | | | | |
| Cultivar... | 'Arena' | | | | | | | 'Alexis' | | | | | | |
| | | | | | | | Season 1988 | | | | | | | |
| D. wt straw | −4 | +20 | +13 | +5 | −1 | +14 | +3 | +2 | −1 | +7 | −7 | −7 | −2 | +2 |
| D. wt ears | −14 | +15 | +22 | −2 | +9 | +18 | −3 | 0 | −7 | +3 | −6 | 0 | −1 | +3 |
| D. wt plant | −9 | +19 | +18 | +1 | +5 | +16 | −1 | +2 | −4 | +5 | −5 | −1 | 0 | +4 |
| Ears/pot | −8 | +23 | +12 | +8 | +11 | +17 | +5 | −1 | −11 | +8 | −11 | −2 | +5 | +9 |
| Grains/ear | +6 | −1 | +3 | +1 | −4 | +3 | −7 | +3 | +4 | −2 | +6 | −2 | −2 | −1 |
| Ear length | +7 | +1 | −3 | 0 | −6 | +5 | +2 | +1 | +1 | +1 | +7 | −2 | −3 | +5 |
| D. wt 1000 grains | −9 | +1 | +9 | −8 | +3 | −2 | −7 | +1 | +2 | −4 | −1 | +2 | −7 | −7 |
| Yield | −15 | +11 | +15 | −5 | +6 | +16 | −5 | +2 | −5 | +1 | −6 | −1 | 0 | +2 |
| | | | | | | | Season 1989 | | | | | | | |
| D. wt straw | −7 | 0 | +7 | −7 | −10 | −3 | +6 | +6 | +4 | +7 | +2 | 0 | +4 | 0 |
| D. wt ears | −2 | −4 | +9 | −9 | −11 | −7 | −9 | +20 | +5 | +15 | +10 | +3 | −3 | −13 |
| D. wt plant | −4 | −2 | +8 | −8 | −10 | −5 | −2 | +13 | +5 | +11 | 0 | +2 | 0 | −7 |
| Ears/pot | +3 | +11 | +19 | −6 | −3 | −2 | −7 | +13 | +11 | +12 | +5 | −8 | +1 | +6 |
| Grains/ear | −9 | −10 | −20 | −6 | −9 | −9 | −6 | +8 | −5 | −1 | +3 | +1 | −5 | 0 |
| Ear length | −4 | −4 | −4 | +5 | −4 | −1 | +2 | −5 | −3 | −5 | −3 | −4 | −2 | +1 |
| D. wt 1000 grains | +1 | −7 | +7 | −1 | −3 | +1 | −12 | −3 | −6 | +2 | +1 | +12 | −1 | −15 |
| Yield | −6 | −8 | +3 | −8 | −14 | −8 | −17 | +4 | −1 | −4 | +3 | −3 | −14 | −11 |
| Species... | *Triticum aestivum* L. | | | | | | | | | | | | | |
| Cultivar... | 'Turbo' | | | | | | | 'Star' | | | | | | |
| | | | | | | | Season 1988 | | | | | | | |
| D. wt straw | −12 | +10 | −2 | −22 | −15 | −3 | −19 | −15 | −2 | −6 | −16 | −8 | +7 | −19 |
| D. wt ears | −22 | −8 | −3 | −34 | −28 | +5 | −38 | −18 | −1 | −10 | −25 | −15 | +13 | −32 |
| D. wt plant | −18 | −5 | −2 | −29 | −22 | +2 | −30 | −17 | −2 | −8 | −21 | −12 | +11 | −27 |
| Ears/pot | −11 | −13 | −16 | −11 | −16 | −6 | −16 | +15 | +1 | −7 | +25 | +16 | +25 | +11 |
| Grains/ear | −8 | −8 | +2 | −14 | −11 | −4 | −12 | −3 | +1 | −11 | −18 | −10 | −5 | −21 |
| Ear length | −2 | +1 | +1 | −8 | −7 | −3 | −2 | −3 | +2 | −4 | −9 | −2 | +4 | −11 |
| D. wt 1000 grains | −15 | −1 | +7 | −18 | −10 | +5 | −26 | −16 | +1 | −4 | −25 | −19 | −2 | −38 |
| Yield | −26 | −7 | −1 | −38 | −31 | +4 | −44 | −20 | +2 | −2 | −27 | −18 | +7 | −36 |
| | | | | | | | Season 1989 | | | | | | | |
| D. wt straw | −31 | −13 | −15 | −25 | −19 | −12 | −14 | −20 | −6 | −10 | −22 | −15 | −17 | −14 |
| D. wt ears | −31 | +3 | −17 | −31 | −2 | 0 | −18 | −29 | +8 | −7 | −11 | −7 | +3 | −6 |
| D. wt plant | −31 | −5 | −16 | −28 | −10 | −6 | −17 | −25 | +1 | −8 | −15 | −11 | −6 | −10 |
| Ears/pot | −3 | +2 | −15 | −7 | +5 | −1 | −2 | −15 | +2 | −9 | +2 | −6 | −11 | +8 |
| Grains/ear | −21 | +1 | +3 | −11 | −3 | +3 | −6 | −8 | +5 | −3 | −5 | −3 | +4 | −6 |
| Ear length | −11 | 0 | −1 | −8 | −10 | +2 | −3 | +4 | +12 | +14 | 0 | +5 | +10 | +6 |
| D. wt 1000 grains | −25 | −3 | −2 | −26 | −9 | −7 | −19 | −10 | +3 | +10 | −10 | +2 | +9 | −11 |
| Yield | −40 | 0 | −20 | −38 | −7 | −5 | −23 | −29 | +11 | −4 | −10 | −5 | +6 | −10 |

Values represent the relative deviations [%] of the different pollutant treatments related to the control (CF). In 1988 only the highest $O_3$ level (level 3, see Table 2) was considered. Abbreviations and details: see legend to Table 4.

either $SO_2$ or $NO_2$ mitigated the negative effects of $O_3$ or converted them into positive ones. The combination of $SO_2$ with $NO_2$ often resulted in effects that ranged within the reaction to the single pollutants. Compared with the control treatment the combination of all three pollutants caused negative responses, but the reductions were smaller than those caused by $O_3$ alone. Contrarily, in 1989 similar negative reactions of 'Arena' to the single pollutants were occasionally intensified by the pollutant combinations, e.g., the combined action of $O_3$ and $NO_2$ reduced yield by 14%, and adding $SO_2$ to this mixture yield was reduced more, by 17%.

Reactions of 'Alexis' to the pollutants were also

quite different between the two years (see also Table 4*a*) and generally lower in 1988 than in 1989. In 1989 a tendency of positive effects of all single pollutants on the growth parameters of 'Alexis' was observed, e.g. the weight of ears was increased by 20 %, 15 %, or 5 % by $O_3$, $NO_2$ or $SO_2$, respectively. However, the combination of all pollutants resulted in a reduction of this parameter by 13 %. Although effects of the single pollutants on both the weight of 1000 seeds and yield were small, the pollutant combination reduced these parameters by 15 % and 11 %, respectively.

*Wheat*. Table 6 again demonstrates the substantial reactions of both cultivars of wheat to $O_3$, e.g. by the extreme reductions of yield (40 % or 29 %) and of the weight of straw (31 % or 20 %) in 1989 for 'Turbo' or 'Star', respectively. As shown in Table 4*b*, such a clear tendency could not be found for the single action of the pollutants $SO_2$ and $NO_2$. Remarkable negative effects were caused by $NO_2$, e.g. as the weight of straw and yield of 'Turbo' in 1989 were reduced by 15 % and 20 %, respectively.

In all cases the combination of $O_3$ and $SO_2$ caused a negative effect on plant weight and yield. While in 1988 both cultivars showed a more negative reaction to this gas mixture than to $O_3$ alone, this interaction in 1989 affected wheat mostly less than $O_3$ alone. With only few exceptions, the reaction of wheat to a mixture of $O_3$ and $NO_2$ was also of negative character. However, the magnitude of this reaction was lower than that to $O_3/SO_2$ and (partially) to $O_3$ alone. The mixture of $SO_2$ and $NO_2$ influenced wheat differently, e.g., while in 1988 only the weight and number of ears of 'Star' were increased (25 % and 13 %, respectively), the weight of ears was not affected in 1989 but its quantity decreased (11 %). However, due to this treatment the weight of straw of both cultivars decreased in 1989 (12 % and 17 %, for 'Turbo' and 'Star', respectively).

The combination of all three pollutants had a negative effect on most growth and yield parameters of wheat, the magnitude of which was dependent on year and on cultivar. Excepting 'Star' in 1989, this pollutant combination affected the weight of ears and yield more than the weight of straw. In 1988, the highest yield reductions (44 % or 36 % for 'Turbo' or 'Star', respectively) were caused by this gas mixture, while in the following season the negative effects of $O_3$ alone on this parameter were highest.

## DISCUSSION

Although in the present investigation the repeated diurnal application of $O_3$ does not fully reflect the episodicity of $O_3$ events in ambient air, the concentration ranges applied to the plants did not differ markedly from those found in ambient air (Logan 1985; see also Table 3) which is partly also true for $SO_2$ and $NO_2$. In spite of such relatively low pollutant levels the most obvious results of the present investigation were (i) the higher sensitivity of both wheat cultivars to $O_3$ and partly also to the pollutant mixtures in comparison to the reaction of barley, (ii) the strong modifications by $SO_2$ and/or $NO_2$ of the growth and yield responses of both species to $O_3$ and (iii) the high variability of the plant responses to the different pollutant treatments between different growing seasons.

The high sensitivity of wheat to $O_3$ was comprehensively described in a previous report (Adaros *et al.*, 1991 *a*) and is in accordance with other recent findings of $O_3$ effects on this cereal species (Fuhrer *et al.*, 1989; Pleijel *et al.*, 1989). In contrast to this, barley barely showed any significant reaction to the pollutants. Recently, it has been shown that the reaction of barley 'Arena' to $O_3$ was determined by the season and by the conditions of cultivation (Adaros *et al.*, 1991 *b*).

The generally low sensitivity of both species to the single gases $SO_2$ and $NO_2$ (Table 4a, b) is in accordance with results of other studies where either no effects or positive ones of near-ambient levels of these pollutants were observed (Elkiey & Ormrod, 1980; Paul, 1986; Guderian & Tingey, 1987; Adaros, Weigel & Jäger, 1988; Taylor & Bell, 1988). Nevertheless, the continuous daily exposure to $SO_2$ sometimes seemed to have resulted in a stress situation, e.g. as registered for the 1000 grains weight of both species (Table 4a, b). Weigel *et al.* (1990) found a decline of yield of barley 'Arena' at $SO_2$ concentrations of about 80 $\mu g\ m^{-3}$, i.e. at higher concentrations than in the present study.

From the levels of significance for the pollutant interactions (Table 5), a high degree of variability between the two growth periods was observed as no consistent effect of a specific pollutant combination on any of the plant parameters of both cereal species could be detected. The reaction of barley to a mixture of $O_3/SO_2$ or $O_3/NO_2$ can be classified as weak, although the pollutants applied alone either stimulated ($SO_2$, but mostly $NO_2$) or depressed ($O_3$, in some cases also $SO_2$) some growth and yield parameters considerably (Table 6). Thus, $SO_2$ and $NO_2$ seemed to act antagonistically to $O_3$, although in one case ('Arena', 1989) the presence of $NO_2$ tended to intensify the negative action of $O_3$ (synergistic effect).

Wheat also reacted very negatively to mixtures of either $O_3/SO_2$ or $O_3/NO_2$, although $SO_2$ or $NO_2$ alone induced only small growth and yield reductions. However, the magnitude of this reaction to the gas mixture again clearly differed between seasons and cultivars. The differences between seasons may partly be the result of slightly higher $O_3$ concentrations applied to the plants during 1989 (Table 2).

Based on leaf injury observations on six cultivars

of barley, Ashmore & Önal (1984) found antagonistic effects of $SO_2$ towards $O_3$, while Ito *et al.* (1985) reported on synergistic negative effects of the mixture $O_3/NO_2$ compared with the single pollutants. Similarly, other authors have reported on antagonistic effects of the combination of these pollutants with an attenuation of negative effects (e.g. Reinert *et al.*, 1982; Dueck *et al.*, 1986).

Summarizing most of the recent reports on the effects of mixtures of $O_3$ and $SO_2$ on plants, the US Environmental Protection Agency (EPA, 1986) emphasized that effects varied considerably with the concentration of the pollutants, the plant response measured and the species and cultivar under investigation. However, as a general concept it was proposed that when concentrations of $O_3$ or $SO_2$ were below a threshold for visible injury, which is mostly true for the present study, synergistic interaction between the pollutants may occur. With respect to the present results this can only partly be confirmed. Due to the lack of appropriate investigations such a general assumption cannot be made for mixtures of $O_3$ with $NO_2$ (Guderian & Tingey, 1987).

The mixture of $SO_2/NO_2$ affected barley and wheat only to a low extent especially when also the reaction to the pollutants alone was observed. As established for $SO_2$ or $NO_2$ in combination with $O_3$, the reaction to the mixture $SO_2/NO_2$ was mostly of antagonistic character, while an intensification of negative effects of the single pollutants due to their mixture appeared to be the exception. In the literature some authors report on synergistic effects of this pollutant mixture: in experiments with five different species, Elkiey, Ormrod & Marie (1988) found that 150 or 100 nl $l^{-1}$ $SO_2$ or $NO_2$, respectively, caused positive effects on vegetative growth, but the mixture of both pollutants reduced growth. Therefore, if compared to the present report with much lower gas concentrations, the concentration of the individual pollutants appears to determine whether a mixture of them causes synergistic or antagonistic effects. Thus, the repeatedly found synergistic effects of a mixture of $SO_2$ and $NO_2$ at near ambient levels on various grass species compared with the single pollutants (for review see Mansfield & McCune, 1988) could only partly be observed here. From the reaction of yield parameters to long-term fumigation with $SO_2$ and/or $NO_2$ (at weekly concentration means of 62 nl $l^{-1}$ of each gas), Pande & Mansfield (1985) concluded that grain production of winter barley is not adversely affected by this kind of pollution.

According to Guderian & Tingey (1987), in most investigations significant growth changes as a result of exposure of plants to mixtures of $SO_2/NO_2$ only occurred if the concentrations of the gases were about 100 nl $l^{-1}$ and there is presently no evidence that adding $O_3$ to this mixture will increase the negative effects of the $SO_2/NO_2$ combination. The present results partly contradict this assumption: The magnitude of the effect of the mixture $SO_2/NO_2$ turned into a more negative one in the presence of $O_3$ (interaction $O_3/SO_2/NO_2$), so confirming the dominance of this pollutant. However, this mode of interaction also was not consistent over the growing seasons (Table 6).

The currently available information of yield responses to three pollutant mixtures is hardly applicable to ambient conditions, e.g. due to unrealistic exposure regimes (e.g. Reinert & Nelson, 1980; Reinert & Gray, 1981; Ito *et al.*, 1985). Unfortunately, the present results also do not point to a clear trend of the combined action of these three pollutants. In a multi-laboratory experiment under the auspices of the CEC, several crop species (barley, peas, bush beans) were exposed in different kinds of chambers at different locations to $SO_2$, $O_3$ and $NO_2$ (*ca.* 50 nl $l^{-1}$ of each gas), separately or in mixtures. Despite this standardized exposure protocol highly variable results were obtained with respect to the magnitude of the pollutant effects and their mode of interaction, pointing to interactions between pollutants and climatic variables (Bell & Posthumus, 1988). Emphasizing the fact that in many studies high concentrations were applied to the plants, Guderian & Tingey (1987) concluded that effects of these gas mixtures are similar to those of two gases or even slightly smaller.

The substantial differences in the response of the plants particularly to the air pollutant mixtures between the two growing seasons are difficult to explain in the present case. Different pollutant concentrations applied to the plants (Table 2), different ages of the plants at the start of exposure to the pollutants (Table 3) as well as differences in the climatic conditions (Table 3) might have contributed to this high variability. However, all these differences were relatively small and even the climatic differences did not result in consistent growth trends, e.g. if individual growth parameters of both years of only those plants are compared which were grown in the control chambers without addition of the gases (Table 4*a*, *b*). Similarly, Fowler *et al.* (1988) have emphasized that large differences in plant responses from one year to another are particularly true, if low i.e. realistic pollutant levels are used.

In consequence, investigations of effects of pollutant mixtures on plants will make heavy demands on the methods of experimentation which must include an exact control of all the factors mentioned above (Allen, Marie & Ormrod, 1987). If low concentrations of $SO_2$ and/or $NO_2$ alter the reaction of plants to $O_3$, as demonstrated in the present study, experiments in open-top chambers including comparisons of plant growth in filtered (CF) and non-filtered ambient air (NF) may be unsuitable for attributing effects to a specific pollutant or to

quantify effects because of the difficulty of partitioning the effects to the individual pollutants and their interaction. For example, Olszyk, Bytnerowicz & Takemoto (1989) compared the effects of charcoal-filtered (CF) and non-filtered (NF) air each with a similar $O_3$ burden on the growth of alfalfa and found significant growth differences between the treatments. However, they found no difference between CF and NF, when CF was not supplemented with $O_3$. The present results highlight the need for a more careful extrapolation of yield loss estimations derived from single pollutant effect studies to the situation in the field.

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# Crop Growth Along a Gradient of Ambient Air Pollution

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*ABSTRACT*

*An experiment, designed to elucidate the relative importance of $SO_2$, $NO_2$, $O_3$, and other environmental factors in influencing the performance of four cultivars of* Trifolium pratense *L. and* Hordeum vulgare *L., was performed by growing plants* in situ *along a transect from central London into the surrounding countryside. A multiple regression analysis provided evidence of significant effects of $SO_2$, $NO_2$, and, to a lesser extent, $O_3$, on vegetative and reproductive growth parameters, although these differed according to pollutant, cultivar, species, and the parameter concerned. The significance of these findings for the impact of ambient air pollution on the growth of crops in the more polluted rural areas of western Europe is suggested by the fact that mean $SO_2$, $NO_2$, and $O_3$ concentrations in the experimental area are less than 0·020 (39·2 μg/m³), 0·025 (47·75 μg/m³), and 0·030 ppm (58·8 μg/m³), respectively. The value of the technique is discussed with respect to other studies on the effects of low levels of air pollution on crops.*

## INTRODUCTION

Recent developments in the design and operation of various types of chambers for studies on the impact of air pollution on vegetation have tended to supersede more empirical field-based approaches. In particular, the exposure of standard cultures of plants at locations with different pollutant concentrations, followed by analysis of their growth and yield, is potentially valuable for determining the impact of air quality under field conditions, unmodified by enclosure within a chamber. However, the results of such gradient studies clearly must be interpreted with caution in view of the existence of climatic and other differences between experimental sites. It is probably this difficulty, together with the invariable attraction for



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scientists of the technologically complex, rather than simple, approach, that has led to the rejection of gradient studies for most air pollution research.

Despite current neglect of gradient studies, they have been used successfully in the past in investigations that have generated a wealth of information on the impacts of highly polluted urban air on plant life. The first such study was reported by Cohen & Ruston (1925) in the years immediately prior to World War I. A range of plant species was grown to maturity in standard soils at sites in and around the city of Leeds, at which variation in deposition of particulates and sulphur compounds differed by factors of up to 20 and 10, respectively. This study consistently demonstrated large reductions in growth and yield of all species examined as the pollutant levels increased. A similar study by Bleasdale (1952) along transects into the countryside from central Manchester again showed a negative correlation between the ambient air pollution burden and the growth of agricultural and amenity species. Interestingly, in both studies, decreased overwinter survival of plants was observed in the more polluted locations, thereby foreshadowing the recent development of research in pollutant/cold stress interactions.

Since these pioneering investigations, gradient studies have largely been confined to point sources or to roadsides. The latter case represents a very specialised situation, while in the former case, the experimental plants will be exposed to extremely variable pollutant concentrations, depending on wind direction. The classic point-source study was reported by Guderian & Stratmann (1962) who exposed a range of crop species along a 1·9-km transect away from an iron-ore roasting works at Biersdorf in the Federal Republic of Germany. This study produced a considerable body of information that was used to generate dose–response relationships between $SO_2$ concentrations and plant growth; however, the applicability of these findings on a regional scale must be questioned in view of the very episodic behaviour of $SO_2$ pollution at Biersdorf. On the other hand, point-source studies do have the advantage of providing a steep gradient of pollutant levels over a short distance, in which the confounding effects of climatic factors will be minimised.

Few regional-scale gradient studies have been reported in the literature. Oshima *et al.* (1976, 1977) determined the yield of alfalfa (*Medicago sativa* L.) and tomato (*Lycopersicon esculentum* Mill.) at different sites around the California South Coast Air Basin and showed a close relationship between yield and the number of hours of exposure to $O_3$ concentrations above 0·10 ppm (200 $\mu g\, m^{-3}$). More recently, Young & Matthews (1981) reported the results of an investigation in and around Newcastle upon Tyne in northeast England, in which pea (*Pisum sativum* L.) growth and visible injury were related to ambient $SO_2$ and fluoride levels. Using a canonical

correlation analysis, they found evidence of a relationship between leaf injury and a combination of $SO_2$ concentration and cold stress. At around the same time, another regional-scale study was performed by Colvill *et al.* (1985), who exposed ryegrass (*Lolium perenne*) at eight sites with varying $SO_2$ concentrations in northwest England. This study initially showed a negative relationship between yield and $SO_2$ concentration, particularly following winter means $>0{\cdot}053$ ppm ($140\ \mu g\ m^{-3}$), but when concentrations declined below 0·038 ppm, this became more difficult to identify with certainty.

So far, no gradient studies reported in the literature have considered all three ubiquitous pollutants, $SO_2$, $NO_2$, and $O_3$, which are likely to influence plant growth in and around urban areas. The investigation described in this paper uses the gradient technique in the form of a transect to assess the relative impact of these three pollutants on the growth and yield of major agricultural crops. The transect used ran west from central London into the surrounding countryside.

Observations of plant growth and performance along a gradient of ambient air pollution can never provide any conclusive proof of relationships between air pollutants and plant response because of the existence of other confounding environmental variables. For this reason, the study described here was designed as part of an integrated research programme into the effects of ambient air pollution in the London region; the programme also involved fumigation experiments, using realistic concentrations of $SO_2$ and $NO_2$, and filtration experiments at two points along the transect. By carrying out these experiments simultaneously in a coordinated fashion, it was hoped to increase understanding of the importance of $SO_2$, $NO_2$, and $O_3$ for plant performance and crop yield under ambient conditions. The results obtained with pea (*P. sativum*) using these different experimental approaches have recently been reported elsewhere (Ashmore *et al.*, 1988).

In this paper, we will describe results obtained using the transect approach with red clover (*T. pratense*) and spring barley (*H. vulgare*) during the summer of 1986. The paper focuses in particular on the use of a simple multiple regression analysis to identify relationships between different pollutants and different plant responses.

## MATERIALS AND METHODS

### General

The experimental transect from Ascot to central London, first established in 1983, was used through to the autumn of 1986. A total of 21 sites were used

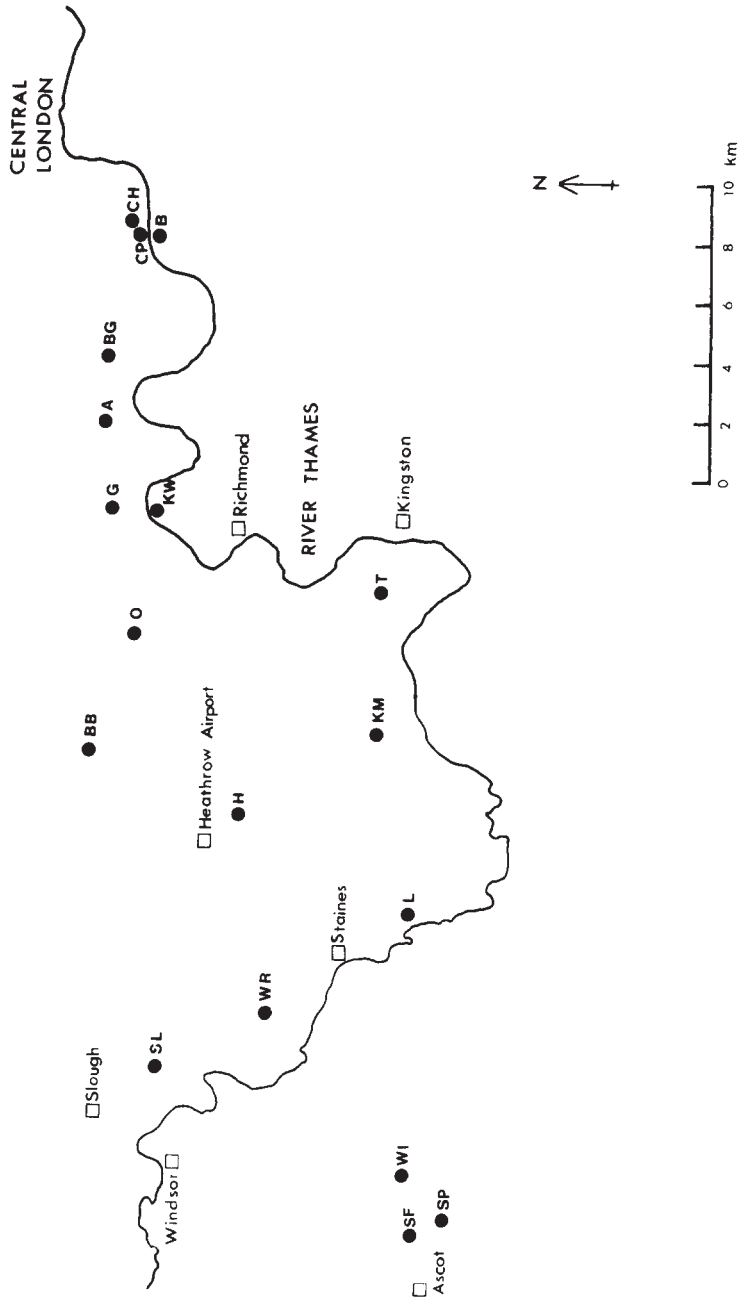


**Fig. 1.** Location of experimental sites. A key to the individual sites is given in Table 1.

during this period, with a maximum of 18 for any one experiment; some sites proved to be unsuitable early and were abandoned, while additional sites were added in critical areas as the study progressed. Sites were selected for suitability according to the following criteria: security, relatively even spacing along the transect, absence of local pollution sources, and degree of shade and shelter. Very few problems were encountered from vandalism; the major problem in maintaining sites was damage caused by animals. The location of the sites and a brief description of their characteristics are given in Fig. 1 and Table 1.

At each site, the maximum and minimum temperatures and the volume of rainfall were recorded at weekly intervals. The mean concentration of $NO_2$ was determined over 4-week periods using diffusion tubes (Atkins *et al.*, 1978). The deposition rate of $SO_2$ was determined over the same 4-week periods using filter papers impregnated with potassium hydroxide attached to inverted plastic Petri dishes (Parfitt, 1982). The amount of $O_3$ was

**TABLE 1**
Location of Experimental Sites

| *Key* | *Location* | *Character of site* | *Distance from central London (km)* |
|---|---|---|---|
| CH | Royal Hospital, Chelsea | Small urban park | 3·1 |
| CP | Chelsea Physic Garden | Small urban park | 3·7 |
| B | Battersea Park | Urban park | 4·0 |
| BG | St Paul's Girls School, Brook Green | Urban | 6·8 |
| A | Thames Water, Acton | Light industrial | 9·0 |
| G | Gunnersbury Park | Suburban park | 11·4 |
| KW | Royal Botanic Garden, Kew | Large suburban park | 12·1 |
| O | Osterley Park | Large suburban park | 15·7 |
| T | National Physical Laboratory, Teddington | Suburban | 17·5 |
| BB | Bulls Bridge Generating Station | Light industrial | 19·6 |
| H | Hounslow Council Nursery, Hatton | Light industrial | 20·7 |
| KM | Thames Water, Kempton Park | Light industrial | 21·1 |
| L | Thames Water, Laleham | Suburban | 27·4 |
| WR | Thames Water, Wraysbury | Rural | 29·1 |
| SL | Calor Gas Ltd, Slough | Suburban park | 31·0 |
| WI | Windsor Great Park | Rural | 35·5 |
| SP | Silwood Park, Ascot | Rural | 37·0 |
| SF | Silwood Farm, Ascot | Rural | 37·5 |

The eighteen sites listed above were used for experiments during 1985 and 1986. Their location is indicated on Figure 1.

estimated using indicator plants of *Nicotiana tabacum* L. cv Bel-W3 and cv Bel-B. Five plants of each cultivar were exposed under shade at each site, and the weekly change in leaf injury was assessed as described by Ashmore *et al.* (1980). Comparison of injury indices with weekly $O_3$ records at Ascot, Teddington, and central London during 1983 showed a close relationship between leaf injury and accumulated hours of $O_3$ exposure above 0·04 ppm for cv Bel-W3 and accumulated hours of $O_3$ exposure above 0·08 ppm for cv Bel-B.

During this experimental programme, the following crop species were used: peas (*Pisum sativum* L.), May to August 1983 and May to August 1984; spinach (*Spinacia oleracea* L.), September to December 1984; spring barley (*Hordeum vulgare* L.), April to August 1985 and April to August 1986; and red clover (*Trifolium pratense* L.), November 1985 to April 1986 and April to September 1986. The plants were grown in 8-litre bags containing 15 kg of a standard sandy loam soil. For each species, four different cultivars differing in sensitivity to $SO_2$, $NO_2$, and $O_3$ were grown. The cultivars were selected after assessing the sensitivity of a range of cultivars of each species to these pollutants. Sensitivities were assessed on the basis of effects on growth of continuous exposure to 0·15 ppm $SO_2$, 0·21 ppm $NO_2$, or a combination of these two exposures, for 3 weeks, and on the amount of visible injury caused by exposure to 0·25 ppm $O_3$ for 4 h.

### 1986 experiments

Seeds of spring barley (*H. vulgare*) were sown at a density of 285 plants $m^{-2}$ on site during the week of 28 April 1986. Four bags of each of four cultivars (Aramir, Claret, Dram, and Golden Promise) were sown at each site. Of the four cultivars, Aramir and Golden Promise were selected as being less sensitive to all of the three pollutants, Claret as being sensitive to $O_3$, and Dram as being sensitive to $SO_2$. After the seedlings emerged, the number of leaves was recorded for use as a covariate in subsequent statistical analysis. At this time, it was noted that in approximately 25% of the plants, the main stem had died; this was attributed to the late sowing date and the waterlogging of the soil during seedling establishment. Plants were harvested at maturity during the week of 4 August 1986. The numbers of live and dead tillers and the growth stage of individual tillers were recorded. The main stem material was separated from tillers; both main stem and tiller material was divided into ear and straw before drying and weighing.

Seedlings of red clover (*T. pratense*) were transplanted at a density of 500 plants $m^{-2}$ on site during the week of 11 March 1986. Four bags of each of four cultivars (Astra, Altaswede, Deben, and S123) were sown at each site. Of the four cultivars, Deben was selected as being least sensitive to the three

pollutants, S123 as being sensitive to $O_3$ and $NO_2$ but not to $SO_2$, Altaswede as being sensitive to $SO_2$ but not to $O_3$, and Astra as being moderately sensitive to all three pollutants. After the seedlings were established, the number of leaves was recorded for use as a covariate in subsequent statistical analysis. On the week starting 30 June 1986, the sward was cut at a height of 5 cm and subsequently allowed to regrow and proceed to flowering before a final harvest on the week starting 9 September 1986. Dry weights were obtained separately for leaves, stubble, and flowers. For one bag of each cultivar at each site, the roots were extracted, dried, and weighed.

The data obtained from these two experiments were examined using a multiple regression technique. The following independent variables were used in this analysis: mean $NO_2$ concentration during the experiment (*NO*2); mean $SO_2$ deposition rate during the experiment (*SO*2); mean leaf injury to *N. tabacum* cv Bel-W3 during the experiment (*OZW*); mean leaf injury to *N. tabacum* cv Bel-B during the experiment (*OZB*); total rainfall during the experiment (*RAIN*); maximum temperature during the experiment (*MAX*); minimum temperature during the experiment (*MIN*); the degree of exposure of each site (*EXP*); and the degree of shading of each site (*LIGHT*). These last two parameters were quantified on a scale of 0 to 5 from observations of the distance, height and direction of buildings, trees and other objects from the experimental plants (*EXP*), and from tests using light-sensitive paint. For *H. vulgare*, an additional term was the proportion of plants in which the main stem had survived (*MAIN*). The dependent variables were the mean values at the final harvest of the following parameters at each site: total above-ground dry weight, root dry weight, and number of flowering apices for *T. pratense*; and ear dry weight, straw dry weight, and number of live tillers for *H. vulgare*. Parameters were subjected to transformation when necessary to provide approximately normal distributions.

The multiple regression was carried out using the interactive statistical package *GENSTAT* (Alvey *et al.*, 1982). The analysis was based on a step-up procedure, adding one variable at a time. The computer package initially selected the variable giving the smallest value of residual mean square (RMS) and continued by adding or subtracting the variable that gave the smallest value of RMS at the next step. The criterion used to determine the variables included in the equation of best fit was that the change in sum of squares due to the regression equation resulting from the addition of a variable was at least twice the value of RMS. When two independent variables were themselves significantly correlated (at $p = 0{\cdot}05$), only one of the pair was allowed to enter the final regression equation; in such cases, the above procedure was followed twice, including only one of the two variables in turn, and the variable giving the smallest value of RMS was selected for inclusion in the final regression.

## RESULTS

### Pollutant concentrations

The three pollutants that were routinely measured during this research programme showed rather different geographical distributions. Their mean levels along the transect during the 1986 experiment, which are shown in Fig. 2, are typical of those found in previous years.

The mean concentration of $NO_2$ showed a steady decrease with increasing distance from London (Figure 2a), which was highly significant statistically. The greatest local variation was found at 15 to 25 km from London, where sites in industrial areas tended to have higher values than those at neighbouring suburban or park sites. In contrast, rates of $SO_2$ deposition did not show such a close relationship with distance from London (Fig. 2b). Indeed, the highest deposition rate was not found in central London but in an area of light industry close to Heathrow Airport. Thus, any trend of decreasing $SO_2$ deposition rates further from London was masked by the relatively large local variation. The levels of phytotoxic $O_3$, as estimated by the amount of injury to the two cultivars of *N. tabacum* (Figs 2c and 2d), showed a tendency to increase with increasing distance from London, although this trend was not statistically significant.

These geographical distributions in pollutant levels were not fixed; they varied over different periods of measurement in characteristic ways according to the pollutant concerned. Patterns of $NO_2$ are generally consistent; for example, significant negative correlations between $NO_2$ concentration and distance from London were found for every 4-week measurement period during 1985 and 1986. In contrast, the pattern for $SO_2$ was more seasonal: during summer months, the relationship between deposition rate and distance from London was variable, but in winter, significant negative correlations between these parameters were found on most occasions. Phytotoxic $O_3$ levels based on *N. tabacum* injury were highly variable, reflecting the episodic nature of $O_3$ exposure in this area, and showed little consistent relationship with distance from London.

### Correlations between variables

Correlation matrices for the independent variables for *T. pratense* and for *H. vulgare* are shown in Table 2. The two matrices show broad similarities, but differ in detail because of the different dates of sowing and harvesting. The matrix for one *T. pratense* cultivar, Astra, was slightly different from that shown in Table 2 because of missing data for one site. The most important correlation found was the positive relationship between $NO_2$ concentration

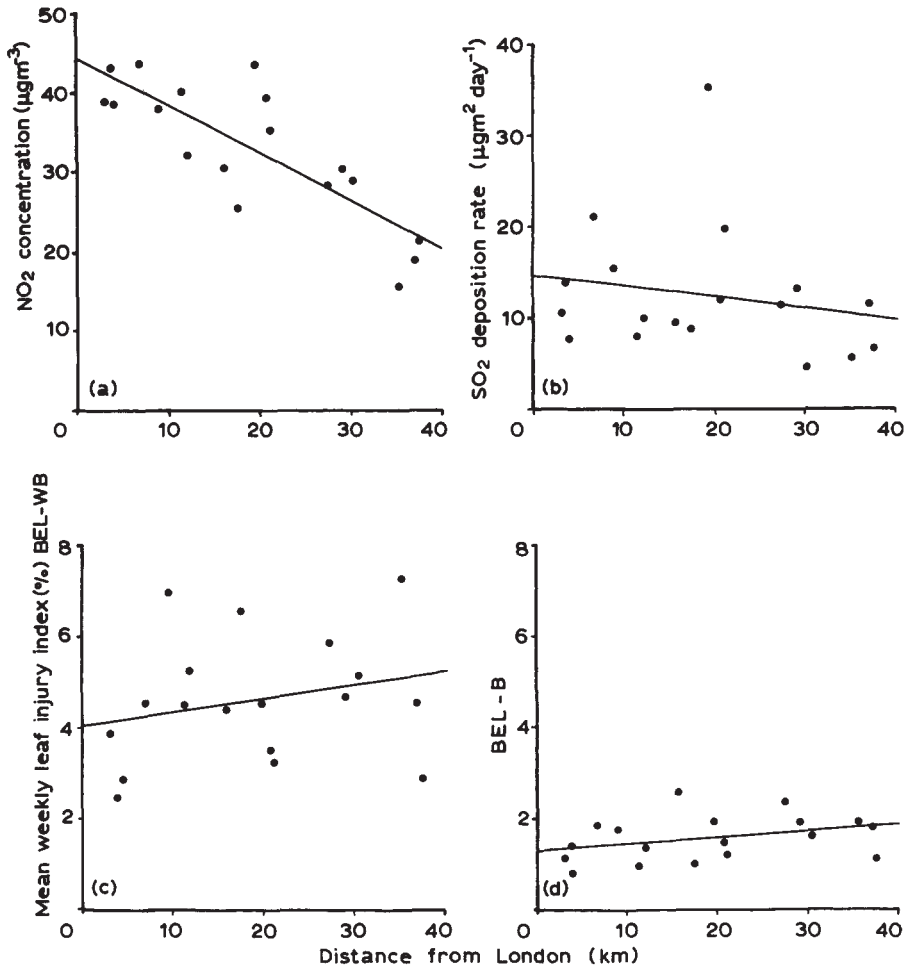


**Fig. 2.** Pollution levels along the experimental transect, April–August 1986.

Equations of the fitted lines are:

(a) $y = 23{\cdot}18 - 0{\cdot}314x$ ($r = -0{\cdot}812$; $p < 0{\cdot}001$)
(b) $y = 1{\cdot}476 - 0{\cdot}0125x$ ($r = -0{\cdot}204$; $p > 0{\cdot}05$)
(c) $y = 1{\cdot}319 + 0{\cdot}0129x$ ($r = 0{\cdot}293$; $p > 0{\cdot}05$)
(d) $y = 4{\cdot}066 + 0{\cdot}0281x$ ($r = 0{\cdot}223$; $p > 0{\cdot}05$).

and minimum temperature; this correlation reflects the fact that both are closely related to proximity to central London. *OZW* was significantly negatively correlated with *RAIN* for *H. vulgare*, but no other significant correlation was found between pollutant levels and the other variables describing climatic conditions and site characteristics. *SO2* and *NO2* were significantly positively correlated for three cultivars of *T. pratense*, but not for cv Astra or for *H. vulgare*. There was a significant positive relationship

**TABLE 2**
Correlation Matrix of Independent Variables[a]

(a) *Trifolium pratense*

| | *MAX* | *MIN* | *LIGHT* | *EXP* | *RAIN* | *NO2* | *SO2* | *OZW* | *OZB* |
|---|---|---|---|---|---|---|---|---|---|
| *MAX* | — | | | | | | | | |
| *MIN* | 0·166 | — | | | | | | | |
| *LIGHT* | −0·133 | −0·399 | — | | | | | | |
| *EXP* | −0·518 | −0·261 | 0·330 | — | | | | | |
| *RAIN* | 0·219 | 0·644* | −0·319 | −0·229 | — | | | | |
| *NO2* | 0·044 | 0·590* | −0·332 | −0·067 | 0·135 | — | | | |
| *SO2* | −0·185 | 0·140 | 0·329 | 0·260 | −0·159 | 0·580* | — | | |
| *OZW* | −0·241 | −0·218 | 0·065 | −0·260 | −0·292 | −0·337 | −0·105 | — | |
| *OZB* | −0·272 | −0·085 | 0·378 | 0·144 | −0·507 | −0·257 | 0·167 | 0·466 | — |

(b) *Hordeum vulgare*

| | *MAX* | *MIN* | *LIGHT* | *EXP* | *RAIN* | *NO2* | *SO2* | *OZW* | *OZB* |
|---|---|---|---|---|---|---|---|---|---|
| *MAX* | — | | | | | | | | |
| *MIN* | 0·086 | — | | | | | | | |
| *LIGHT* | −0·127 | −0·548* | — | | | | | | |
| *EXP* | −0·529 | −0·129 | 0·302 | — | | | | | |
| *RAIN* | 0·200 | 0·382 | −0·404 | −0·172 | — | | | | |
| *NO2* | 0·018 | 0·861* | −0·340 | −0·030 | 0·329 | — | | | |
| *SO2* | −0·113 | 0·313 | 0·501 | 0·349 | −0·342 | 0·385 | — | | |
| *OZW* | −0·300 | −0·300 | 0·384 | −0·216 | −0·533* | −0·191 | 0·259 | — | |
| *OZB* | −0·193 | −0·197 | 0·079 | 0·309 | −0·327 | −0·384 | 0·144 | 0·358 | — |

[a] The tabulated values are correlation coefficients between pairs of variables; * indicates a coefficient that is significant at $p = 0{\cdot}05$. Definitions of the variables are given in the text.

between rainfall and minimum temperature for *T. pratense*, reflecting a tendency for higher rainfall and higher minimum temperatures closer to the centre of London, while for *H. vulgare LIGHT* and *MIN* were negatively correlated, probably because of the difficulty of finding unshaded sites close to London.

The results of the multiple regression analysis for *T. pratense* are shown in Table 3, which indicates the statistical significance of both the overall equation and of the individual regression coefficients. For each of the three growth parameters, the multiple regression equation explained a significant proportion of the total variation in the case of three of the four cultivars, and for each parameter, the different cultivars showed a rather consistent pattern. However, the significance of different variables was very different for each of the three growth parameters. For total above-ground dry weight, *RAIN* was the most important independent variable for three cultivars. For the fourth, Altaswede, *MIN* was significant rather than *RAIN*, although these two variables are themselves significantly intercorrelated. In addition, two of the four cultivars showed a significant negative relationship with *SO*2.

Root dry weight showed a totally different pattern. In this case, climatic variables were of little significance, and pollutant exposure became of greater importance. In particular, all three cultivars for which a significant multiple regression equation was fitted showed a significant negative relationship with *NO*2. In addition, in the one cultivar (Astra) for which *NO*2 and *SO*2 were not significantly intercorrelated, a significant negative regression coefficient was found with both *NO*2 and *SO*2. For the other cultivars, it is impossible to evaluate the combined effects of *SO*2 and *NO*2. Although *NO*2 was significantly correlated with *MIN* (*cf.* Table 2), the inclusion of *NO*2 always gave a better fit to the data than the inclusion of *MIN*.

The pattern shown for number of flowers was more variable. This may be because the extent of flowering and the timing of flower development differed greatly between the cultivars. Significant negative regression coefficients were found for *SO*2 for one cultivar and for *OZB* for two cultivars.

Thus, the results of this analysis indicate that ambient $NO_2$ concentrations significantly influenced root dry weight, but not above-ground development; that $O_3$ levels significantly influenced flower development, but not vegetative growth; and that ambient $SO_2$ levels significantly influenced all growth parameters, but primarily for cultivars Astra and Altaswede. This difference in cultivar response for $SO_2$ is consistent with the nominal sensitivity of the cultivars, since cultivars Deben and S123 were identified as being less sensitive to $SO_2$ than cultivars Astra and Altaswede. However,

**TABLE 3**
Summary of Multiple Regression Analysis for *Trifolium pratense*[a]

*Above-ground dry weight*

| *Cultivar* | *Parameter* | | | | | | | | | | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *K* | *NO2* | *SO2* | *OZW* | *OZB* | *RAIN* | *MIN* | *EXP* | *LIGHT* | *MAX* | |
| Astra | −25·9 | 0·575 | −75·4* | | | 0·012 3** | | | | | 68·6** |
| Altaswede | 61·35 | | −73·0* | | | | −2·601** | | | | 49·5** |
| Deben | −10·74 | | | | | 0·010 3*** | | | −3·29* | | 84·8*** |
| S123 | −33·2 | | | | | 0·015 6 | | | | | 19·1 |

*Root dry weight*

| *Cultivar* | *Parameter* | | | | | | | | | | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *K* | *NO2* | *SO2* | *OZW* | *OZB* | *RAIN* | *MIN* | *EXP* | *LIGHT* | *MAX* | |
| Astra | 0·23 | −0·190* | −19·02* | | | | | | | 0·496* | 74·8** |
| Altaswede | 15·03 | | −20·30 | | | | | | | | 13·3 |
| Deben | 14·65 | −0·290* | | | | | | 1·174 | | | 46·6** |
| S123 | 6·81 | −0·156* | | | | 0·001 13 | | | | | 39·2* |

*Number of flowers*

| *Cultivar* | *Parameter* | | | | | | | | | | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *K* | *NO2* | *SO2* | *OZW* | *OZB* | *RAIN* | *MIN* | *EXP* | *LIGHT* | *MAX* | |
| Astra | −27·0 | | | | −0·307* | | | | 4·90** | 1·052* | 58·6** |
| Altaswede | 23·9 | | −85·9* | | | | | | | | 34·8* |
| Deben | 35·1 | | | | −0·246* | 0·002 86 | | −1·29 | | −0·874* | 63·00** |
| S123 | 75·6 | | −157·7 | | | | −1·95 | | | | 20·0 |

[a] The tabulated values are the values of the multiple regression coefficients for the variables defined in the text and the constant term (*K*). The significance of the individual multiple regression coefficients is indicated as: *, $p < 0{\cdot}05$; **, $p < 0{\cdot}01$; ***, $p < 0{\cdot}001$. The coefficient of determination ($R^2$) of the equation and its statistical significance are given in the last column. An absence of data indicates that the parameters concerned did not contribute to the multiple regression equations.

**TABLE 4**[a]

Summary of Multiple Regression Analysis for *Hordeum vulgare*

*Ear dry weight*

| *Cultivar* | *NO2* | *SO2* | *OZW* | *RAIN* | *MIN* | *MAX* | *EXP* | *LIGHT* | *MAIN* | *K* | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aramir | −0·015 3 | | | 0·237 | | | | | 0·575** | −0·37 | 55·5* |
| Claret | | −0·098 4 | −0·044 1 | | | | | 0·225* | 0·314 | 2·08 | 55·7* |
| Dram | | | −0·098 2* | | | | −0·213 | | 0·947* | 2·91 | 42·1* |
| Golden Promise | | | | | | | | | 1·690** | −0·57 | 53·6** |

*Straw dry weight*

| *Cultivar* | *NO2* | *SO2* | *OZW* | *RAIN* | *MIN* | *MAX* | *EXP* | *LIGHT* | *MAIN* | *K* | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aramir | 0·018 6* | −0·154 | | 0·163 | | | | | 0·190 | −0·020 | 57·0* |
| Claret | 0·037 2** | −0·220 | | | | | | 0·332 | | 0·295 | 48·2* |
| Dram | | | | 0·418** | | | | | 0·541 | −0·879 | 44·6* |
| Golden Promise | 0·014 8 | | 0·023 1 | 0·263* | | | | 0·162* | | −0·958 | 45·7* |

*Number of live tillers*

| *Cultivar* | *NO2* | *SO2* | *OZW* | *RAIN* | *MIN* | *MAX* | *EXP* | *LIGHT* | *MAIN* | *K* | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aramir | 0·067 5 | | | 0·927 | | −0·155 | −0·507 | | 0·067 5 | 4·11 | 47·4* |
| Claret | 0·103 2 | | | | | | | | | 0·45 | 13·7 |
| Dram | | | | 2·148** | | | | | 1·861 | −5·80 | 50·4** |
| Golden Promise | 0·117 4** | | 0·281** | 2·133** | | | | 0·442 | | −9·02 | 67·5** |

[a] For explanation, refer to Table 3.

there is less agreement between the results of the multiple regression analysis and the nominal sensitivity of the cultivars in the case of $O_3$ and $NO_2$.

The results of the multiple regression analysis for *H. vulgare* are shown in Table 4. As for *T. pratense*, there is evidence of different growth parameters being influenced by different independent variables. For ear dry weight, the multiple regression equation always included *MAIN*, indicating the importance of main stem survival in determining final yield. There was little consistent pattern in the effects of the other variables. Only one significant multiple regression coefficient was found with the three pollutants and this was for Dram, which showed a significant negative coefficient for *OZW*.

For straw dry weight, two cultivars showed a negative multiple regression coefficient with *SO*2, although in neither case was the individual coefficient significant. In contrast, significant positive multiple regression coefficients were found for *NO*2 for two cultivars. There was also evidence of a stimulation in live tiller numbers at higher concentrations of $NO_2$. As for *T. pratense*, *NO*2 always gave a better fit to the data than did *MIN*, with which it was significantly correlated. Both straw dry weight and tiller number were positively related to *RAIN* in three of the cultivars; this pattern of higher above-ground vegetative growth at sites with higher rainfall is similar to that found for *T. pratense*.

Thus the results of this analysis indicate that ambient $NO_2$ concentrations significantly increased tiller production and straw weight. There were few consistent significant effects of $O_3$ and $SO_2$ levels, but some evidence of $O_3$ decreasing ear weight and $SO_2$ decreasing ear and straw weights was found. There was some consistency between the nominal sensitivity of the cultivars and the effects observed on ear weight, because cultivars Aramir and Golden Promise were identified as being less sensitive to air pollutants than cultivars Claret and Dram. However, there is less agreement between the results of the multiple regression analysis of effects on vegetative growth and the nominal sensitivity of these cultivars.

## DISCUSSION

It is apparent that the characteristics of air pollution along the transect differ to some extent from those anticipated when the programme was established. In particular, the marked decline in $SO_2$ concentrations in recent years has apparently resulted in the partial disappearance of the gradient formerly observed between central and outer areas of London. This is confirmed in a recent study by Laxen & Thompson (1987) who reported a fall from an annual mean of 0·079 ppm $SO_2$ in central London in 1969 and 1970 to 0·022 ppm in 1983 and 1984, while the decline in outer areas (5–20 km from

the centre) was proportionately less, being from 0·051 ppm to 0·018 ppm. In the case of $NO_2$, however, a pronounced gradient was detected along the transect. This is in reasonable agreement with the findings of a diffusion tube survey carried out in 1984 and 1985 at 100 sites in London, which showed a progressive decline from the centre (0·035–0·042 ppm) to the boundary (0·015–0·025 ppm) of Greater London (Anonymous, 1986). However, no data are available to compare with the results reported here for the last 20 km or so of the transect between the Greater London boundary and Ascot. The general lack of a marked gradient in the degree of injury measured for *N. tabacum*, but with indications of a fall in central London, is consistent with data from physicochemical monitoring surveys. Although similar concentrations of $O_3$ can be found over wide areas, there is evidence that the frequency of $O_3$ episodes with concentrations above 0·06 ppm is lower in central London than at Kew and Teddington, in the south-western suburbs, because of local scavenging by NO (UK PORG, 1987; Ball, 1987).

It must be recognised that this type of experimental approach can never provide conclusive proof of a causal link between pollutants and plant response: there are real possibilities of obtaining statistical artifacts or of not identifying important environmental variables. Nevertheless, three features of the results described in this paper strongly support the hypothesis that the growth and development of *T. pratense* and *H. vulgare* were significantly influenced by ambient air quality in and around London:

1. For the great majority of variables and cultivars examined, a statistically significant equation could be fitted to the data, thus indicating that the measured variables influenced plant growth.
2. The nature of the relationships found with climatic variables is generally biologically meaningful. Thus growth, especially of vegetative parts, always increased with increased rainfall, while growth was generally greater at sites with less shade and with less exposure. For maximum and minimum temperatures, both positive and negative relationships were found with growth parameters.
3. The relative sensitivity of the different cultivars to pollutants, as indicated by the regression analysis, was consistent with their sensitivity as determined by short-term screening experiments. It would be unreasonable to expect total consistency, because the concentrations of $NO_2$ and $SO_2$ used in the screening experiments were an order of magnitude higher than those in the field; it is known that relative sensitivity of plant material to $SO_2$ and $SO_2/NO_2$ mixtures varies according to the concentration used (Ayazloo & Bell, 1981; Taylor, 1986).

Other workers (e.g., Guderian & Stratmann, 1962, Oshima *et al.*, 1976,

1977) have used data obtained from transect studies to derive dose–response relationships for individual pollutants. Our results, however, cannot reasonably be used for the same purpose for three major reasons:

1. In the studies referred to above, one pollutant ($SO_2$ or $O_3$) was assumed to play a predominant role in causing the observed plant responses. In contrast, the present study was based on the premise that the current effects of ambient London air are due to a complex mixture of air pollutants. It is implicit in the form of the multiple regression analysis that $SO_2$, $O_3$, and $NO_2$ act individually and additively on the experimental plants; in reality, it is likely that interactive effects between the pollutants were at least partly responsible for the observed effects. However, the addition of further terms to the regression analysis to account for interactive effects could not be justified with the number of replicate sites available. It should also be noted that, in reality, the equations of Guderian & Stratmann (1962) and Oshima *et al.* (1976) express the effects of an individual pollutant in the presence of certain concentrations of other pollutants and cannot necessarily be extrapolated to other situations with different background concentrations.
2. It was not possible to measure the concentrations of all potential pollutants in the urban atmosphere; therefore, the possibility that concentrations of other pollutants were correlated with those of the measured pollutants cannot be discounted. For example, $NO_2$ levels are primarily influenced by motor vehicle emissions, which are the major source of nitrogen oxides within London (Anonymous, 1986). Areas with higher vehicle densities are likely to have higher concentrations of NO and ethylene as well as $NO_2$, and thus it is impossible to exclude the possibility that these pollutants contributed to the observed effects of $NO_2$.

   Another factor that was not determined, but which may vary significantly across the study area, is the chemistry of wet deposition. Usher (1984) determined concentrations of $H^+$, $SO_4^{2-}$, and $NO_3^-$ in rainfall at Ascot and at South Kensington (3 km from the centre of London) from April to June 1981; she found that $H^+$ concentrations were higher at Ascot (110 $\mu$eq litre$^{-1}$ compared with 44 $\mu$eq litre$^{-1}$), but that both $SO_4^{2-}$ and $NO_3^-$ were about twice as high close to central London (100 $\mu$eq litre$^{-1}$ and 196 $\mu$eq litre$^{-1}$ for $SO_4^{2-}$, and 31 $\mu$eq litre$^{-1}$ and 68 $\mu$eq litre for $NO_3^-$). Although these data indicate that substantial differences in wet deposited acidity may exist between sites, results from experiments with a wide range of

crop species have shown no significant effect of $H^+$ deposition on crop growth and yield at these concentrations (Irving, 1987).

3. The financial resources were not available to continuously record all major pollutants at every site and so it was necessary to rely on passive monitors and bioindicators. The diffusion tubes used to measure $NO_2$ concentrations have been shown to provide values comparable to those determined by continuous monitors (Atkins *et al.*, 1985). The relationship between $SO_2$ concentration and deposition rate to sulphation plates is known to be influenced by ambient humidity and windspeed (Sickles & Michie, 1987). However, inclusion of a term combining values of *SO2* and *EXP*, instead of *SO2* alone, in the regression analysis was found to make little difference to the results obtained. In the case of the relationship between *N. tabacum* injury and $O_3$ concentration, it is known that the sensitivity of these bioindicators is influenced by environmental conditions. Thus, for both $SO_2$ and $O_3$, the measurements cannot be converted to ambient concentrations using calibration factors obtained at other times and other places. The use of long-term mean concentrations of $NO_2$ and deposition rates of $SO_2$ in our statistical analysis implies that plant response is not significantly influenced by episodic pollutant exposure; there is experimental evidence that, for $SO_2$ at least, this is the case (Garsed & Rutter, 1984). Our use of bioindicators for $O_3$, in contrast, provides a measure that integrates exposure to peak concentrations.

Despite these limitations, the experimental results indicate some very important conclusions. They clearly show that ambient air quality in London does affect the growth of two important agricultural species when grown in natural conditions without any chamber enclosure. Mean concentrations of $NO_2$ over the experimental period ranged from 0·09 to 0·23 ppm at the different sites, while mean deposition rates of $SO_2$ showed a seven-fold range. The measured deposition rates of $SO_2$ cannot be readily converted to concentrations, but Laxen & Thompson (1987) recently reported that mean annual $SO_2$ concentrations in London are now typically 0·015 ppm. Ozone levels during the summer of 1986 were relatively low; the mean concentration at Ascot was 0·025 ppm, with a level of 0·06 ppm only being exceeded on 1·8% of hours.

Although this work was carried out in and around a major city, the results may have important implications for crop growth in the more polluted rural areas of the UK. There is good evidence that $O_3$ concentrations in London are generally lower than those in rural areas of southern and central Britain (UK PORG, 1987), while the number of hours with $O_3$ concentrations above

0·06 ppm at Ascot was lower in 1986 than in all but two of the summers in the period 1977 to 1985. Fowler & Cape (1982) estimated that an area of $2{\cdot}6 \times 10^5$ km$^2$ in western Europe experienced $SO_2$ and $NO_2$ concentrations above 0·011 and 0·013 ppm, respectively, based on 1974 emission data; current values may be somewhat lower. Within this area are locations experiencing higher concentrations; at Bottesford in the East Midlands of the UK, for example, annual mean $SO_2$ concentration averaged 0·012 ppm over the period 1978 to 1982 (Martin & Barber, 1984), while Baker *et al.* (1986) reported an annual mean $SO_2$ concentration of 0·017 ppm at Sutton Bonnington, in the same area of the UK. Laxen & Thompson (1987) state that current $SO_2$ concentrations in the London area are about 0·015 ppm, a concentration that is thus similar to concentrations in one of the most polluted rural areas of the UK. For $NO_2$, however, the concentrations at our suburban sites were similar to those in such rural areas, whereas at sites in the centre of London, concentrations were 1·5 to 2 times higher.

The results also demonstrate the sensitivity of different growth parameters to the three major pollutants. The major impact of $NO_2$ was to reduce root growth of *T. pratense* and to stimulate tiller production and increase straw weight in *H. vulgare*. Although both $SO_2$ as well as $SO_2$ and $NO_2$ in combination, are well known to cause a diversion of dry matter away from the roots, there appears to be a general belief that this does not occur in the case of $NO_2$ alone (Freer-Smith, 1985; Kasana & Mansfield, 1986). However, no experiments have been performed to determine the effects on plants of varying concentrations of $NO_2$ in the presence of different background concentrations of $SO_2$ and $O_3$. Thus, in the present work, a possible synergistic interaction between low levels of $SO_2$ and $NO_2$ in reducing the root growth of *T. pratense* cannot be discounted, particularly in view of the negative regression coefficients obtained for $SO_2$ in the case of two cultivars. Nitrogen oxides are known to contribute in some circumstances to plant nutrition, and increased nitrogen levels in the soil have been reported to decrease the root/shoot ratio of *Trifolium repens* L., although this was highly dependent on complex interactions with other nutrients (Davidson, 1969). The increase in straw weight of *H. vulgare* caused by $NO_2$ is consistent with the stimulation observed in the number of live tillers. However, this phenomenon did not benefit the plant, as the extra tillers were mainly produced late in the growing season and were thus likely to divert assimilate away from grain-filling. These effects are in direct contrast to those of Pande & Mansfield (1985) who found a stimulation of ear dry weight in *H. vulgare*, but a general reduction in tiller numbers as a result of fumigation with 0·066 ppm $NO_2$ alone. This discrepancy may be the result of exposure to substantially different concentrations of $NO_2$ or of the presence of other pollutants.

Relatively little attention has been paid in most fumigation experiments to effects on flower production. In the present investigation, $SO_2$ reduced the number of flowers on two of the *T. pratense* cultivars. Although there are no other published reports of $SO_2$ effects on clover flower production, Lane & Bell (1984) demonstrated a 24% reduction in the number of flowering shoots on *L. perenne* after fumigation with 0·032 ppm $SO_2$, a concentration that was chosen as representative of central London in the early 1980s. Overall, $SO_2$ had a negative effect on growth; in all cases, the multiple regression coefficient for $SO_2$ was negative. This occurred at concentrations below those generally believed to reduce higher plant growth (Roberts *et al.*, 1983), although there are few reports from the literature of $SO_2$ concentrations within the range found along the transect having an adverse effect on plant performance (e.g., Bell *et al.*, 1979). However, it is very likely that the presence of other pollutants was important in the present work. Support for this view is provided by the results of an earlier experiment in the same programme in which the yield of *P. sativum* was reduced markedly when 0·010 ppm $SO_2$ was added to unfiltered Ascot air, but was minimally affected when the same concentration of $SO_2$ was added to charcoal-filtered air (Ashmore *et al.*, 1988).

Relatively few effects of $O_3$ were observed along the transect, the exception being negative relationships to flower production and ear dry weight in one cultivar of *T. pratense* and *H. vulgare*, respectively, and a positive relationship to tiller number for one cultivar of *H. vulgare*. This lack of response is not unexpected in view of the low $O_3$ concentrations during the summer of 1986. The results suggest that flowering and fruiting processes may be more sensitive to $O_3$ than vegetative growth. There are few data from controlled fumigation studies to support this view, although there is evidence from an experiment carried out using *Triticum aestivum* L. in New York State that seed weight is more sensitive to $O_3$ exposure than straw weight (Kohut *et al.*, 1987). Again, it seems likely that interactions between $O_3$ and the other pollutants may have been taking place in the transect study.

In conclusion, this study has provided strong evidence that air pollutants are a major factor influencing plant growth in and around London. Three of the nine environmental variables tested clearly had a greater influence on plant growth (in terms of the number of multiple regression coefficients) than the others; these were rainfall, $SO_2$ deposition rate, and $NO_2$ concentration. Vegetative growth was consistently higher at sites with greater rainfall; above-ground vegetative growth was consistently higher at sites with higher $NO_2$ concentrations, but root growth of *T. pratense* was lower at such sites. At sites with higher rates of $SO_2$ deposition, growth of the two cultivars of *T. pratense* identified as being more sensitive to $SO_2$ was consistently reduced, but there was less evidence of an effect of $SO_2$ on *H. vulgare*. Levels of $O_3$

were of less significance, although there was some evidence of a negative effect on flower production in *T. pratense* and ear weight in *H. vulgare*. Although the study has produced important information on the relative importance of different pollutants in affecting different plant growth parameters, it is not possible to quantify this because of the difficulty of partitioning the effects of the individual pollutants and their interactions. Since the variables were uncontrolled, it is impossible to attribute any of the observed effects to a particular environmental factor with absolute certainty. Nevertheless, the results of this analysis identify $SO_2$ and $NO_2$, at concentrations similar to or slightly higher than those in the more polluted areas of the UK, as major factors influencing the growth of two important crop species. The results emphasise the need for carefully controlled fumigation experiments with different combinations of $SO_2$, $NO_2$, and $O_3$ at concentrations characteristic of rural areas in order to identify plant responses to individual pollutants or pollutant combinations in the presence of realistic concentrations of other major pollutants.

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# The effect of exposure to $NO_2$ and $SO_2$ on frost hardiness in *Calluna vulgaris*

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**Abstract**

Heather (*Calluna vulgaris*) was grown in pots in a natural heathland soil and exposed in outdoor fumigation chambers ('solardomes') to 40 nl $l^{-1}$ of both nitrogen dioxide ($NO_2$) and sulphur dioxide ($SO_2$) simultaneously. Plants exposed to $NO_2$ and $SO_2$ for 8 months over a growing season (February–November) showed increases in the growth of shoots (+37%) and the whole plant (+15%) and a raised ratio of root to shoot dry matter in comparison with control (charcoal-filtered air) plants. Fumigation raised the average foliar concentrations of nitrogen (+34%) and sulphur (+173%). The improvements in growth due to pollutant exposure were countered by reductions in tolerance to experimental acute frost. Cellular damage of heather shoots was assessed using measurements of electrolyte leakage from cut shoots following controlled over-night frosts. The rates of leakage were consistently increased in those plants that had been exposed to $NO_2$ and $SO_2$ for 5 months or more in comparison with non-fumigated controls. In some cases a greater leakage rate was recorded in fumigated plants than in controls even in the absence of freezing temperatures. The pollutants caused a similar reduction in frost tolerance whether exposure was given during the hardening period (August–January) or the de-hardening stage (November–April). These results support the hypothesis that low concentrations of air pollutants can reduce the tolerance of plants to freezing stress.
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*Keywords:* Air pollution; *Calluna vulgaris*; frost tolerance; heathlands; $NO_2$ and $SO_2$ pollution; semi-natural vegetation

## 1. Introduction

Experimental studies suggest that some of the major gaseous pollutants may cause changes in vegetation by altering tolerance to natural stress conditions such as frost (Barnes and Davison, 1988), drought (Neighbour et al., 1988) and pests (Dohmen et al., 1985). These effects may be evident at lower concentrations of pollutants than are required to cause direct injury by inhibition of net photosynthesis, growth reduction or result in acute visible damage to tissues (reviewed by Dar-

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rall (1989)). In recent years research on pollution-induced changes in cold sensitivity has focused mainly on conifer trees, notably *Picea sitchensis* (Lucas et al., 1988), *Picea rubra* (De Hayes et al., 1989; Sheppard et al., 1993), *Pinus sylvestris* (Dueck et al., 1990) or the agricultural grass *Lolium perenne* (Davison and Bailey, 1982; Davison et al., 1988) while less is known of responses of other semi-natural vegetation. An example of this type of vegetation which forms a large part of non-agricultural land in Britain is *Calluna vulgaris* (heather) — dominated heathland. *C. vulgaris* and related species in the Ericaceae and Empetraceae are the principal dwarf shrub species of the small, highly valued areas of lowland heath in north-western Europe. These species also cover extensive tracts of the upland regions of Europe. In some areas, for example parts of upland Britain, *C. vulgaris* is an important food source for grazers including sheep and game birds such as the red grouse (*Lagopus lagopus scoticus*). The predominantly maritime distribution of *C. vulgaris* (Gimingham, 1972) suggests that low temperature is one important determinant of its distribution.

Increased incidence of frost damage, as a result of atmospheric pollutant nitrogen deposition to *C. vulgaris*, may be one cause of the recent decline in the abundance and health of this species in the Netherlands (Van der Eerden et al., 1991; Power et al., 1998), and could be of widespread significance in natural vegetation (INDITE, 1994). The aim of this study was to examine the hypothesis that the frost tolerance of *C. vulgaris* is reduced after long-term exposure to a combination of two of the most important gaseous pollutants, sulphur dioxide and nitrogen dioxide. The experiments were designed to answer the following specific questions regarding possible changes to frost tolerance as a result of exposure to $NO_2$ and $SO_2$. Firstly, how does the duration of exposure to $NO_2$ and $SO_2$ affect the degree of frost tolerance? Secondly, are plants only affected if exposure to the pollutants is during the growing season or could they also be damaged if exposure is in the winter months? Experimental research using both gases simultaneously is justified because these pollutants often occur together in rural and suburban atmospheres and many studies have shown that $NO_2$ and $SO_2$ often exert greater-than-additive effects on various plant growth and physiological processes (Ashenden and Mansfield, 1978). The concentrations used in these experiments (40 nl $l^{-1}$) are higher than rural levels and were used in order to address the hypothesis. Concentrations of $NO_2$ and $SO_2$ similar to those used in the experiments may be measured in some urban and suburban regions of Britain (Broughton et al., 1997). While these are not the main locations of Calluna there do exist important pockets of lowland heath close to built-up areas in many parts of western Europe. The experiments reported here form part of a programme of research into environmental influences on the cold hardiness of *C. vulgaris* (Caporn et al., 1994; Foot et al., 1996, 1997; Lee and Caporn, 1998; Carroll et al., 1999).

## 2. Materials and methods

### 2.1. Plant material

Cuttings (30 mm length) of *C. vulgaris* (L.) Hull, sampled from an extensive moorland near Ruabon, Clwyd in North Wales (altitude 475 m) were rooted in a peat and perlite mixture under mist and transferred into 7 cm square pots containing a mixture of peat soil from the field and a commercial peat compost without added nutrients. The plants were raised in an unheated glasshouse before transfer to fumigation chambers at the Institute of Terrestrial Ecology, Bangor, North Wales. Continuous exposure to a combination of $NO_2$ plus $SO_2$, both maintained at a concentration of 40 nl $l^{-1}$, or to charcoal filtered air during the day and night took place in hemispherical glasshouses ('Solardomes'). The winter over which the frost hardiness was measured was characterised by mild climate. Minimum monthly air temperatures at a local meteorological station (Valley, Anglesey) during the test period were: October +5.8; November +1.2; December −1.9; January −3.0; February −4.5; March −0.2; April +1.0°C. The plants in the glasshouse chambers experienced the same daily and seasonal changes in photo-period, light and thermal envi-

ronment as outdoors but the absolute chamber air temperature was elevated by 1–5°C (mainly during the day) and the irradiance was reduced by around 13–25%. A full description of the fumigation system is provided by Rafarel and Ashenden (1991). A single chamber only was available for each gaseous treatment, but the experiments were repeated on six occasions, each time with a different set of plants, over 15 months between February and April of the following year (Table 1). To remove specific chamber effects, the gaseous treatments and plants were switched between chambers at 14-day intervals. After switching of chambers the gas concentrations in the chambers took $\approx 2$ h to stabilise.

### 2.2. Harvest and frost testing

Batches of *C. vulgaris*, aged 6–9 months from rooting, were fumigated over different dates (Table 1). Frost hardiness of *C. vulgaris* was tested following various fumigation periods. These were designed to permit comparison of (i) pre-winter and post-winter exposures and (ii) fumigation of varying duration. In addition to studies of frost tolerance other measurements were made of growth and nutrient contents in order to assess general physiological responses of the whole plant to the pollutants. The effect on the growth of *C. vulgaris* of exposure to $NO_2$ and $SO_2$ for 8 months was examined in October. At harvest, measurements were made of the dry mass of shoots and roots and the foliar concentrations of nitrogen, sulphur and potassium. Growth and nutrient data were analysed using a 2-tailed *t*-test.

For the assay of frost hardiness, intact plants were transferred to the laboratory for immediate harvest and frost hardiness tests. The freezing treatments were given on the same night and following night after transfer from the exposure chambers (i.e. after $\approx 6$ and 30 h). Those plants frosted on the second night were stored for 24 h outside. Full details of the methods of frost testing are given by Caporn et al. (1994); these were based on similar methods described by Murray et al. (1989) and Cape et al. (1991). A brief description only is provided below. The distal ca. 40 mm of the recent seasons shoot growth were excised. Ten replicate shoots per treatment were used at each test temperature. These were mounted horizontally on clipboards in dark, fan-ventilated freezing cabinets. Freezing cycles started at 10°C, and the temperature was then lowered at 5°C per hour to the minimum test temperature. This was held for 3 h after which the temperature was raised at 10°C per hour to 5°C; the shoots were then removed. Two cabinets were used on successive nights, while other shoots, stored overnight in a cold room (5°C), were used as un-frozen controls. Cabinet air temperatures were recorded with thermistors linked to a data logger (Delta T, Cambridge, England). The frost test temperatures used on different dates were altered to match the likely range of frost tolerance at different times of

Table 1
Details of pollutant exposures, frost test temperatures and overall results of two-way analysis of variance of ion leakage results from each series of experiments (series 1–6)[a]

| Exposure series | Duration (months) | Freezing test temperature (°C) | Effect of temperature | Effect of $NO_2$/$SO_2$ | Temp × treatment nteraction |
|---|---|---|---|---|---|
| (1) Feb–Oct | 8 | +4, −5, −10, −15 | *** | *** | *** |
| (2) Feb–Nov | 9 | +4, −10, −5, −20 | *** | *** | *** |
| (3) Feb–Jan | 11 | +4, −15, −20, −25 | *** | *** | *** |
| (4) Aug–Jan | 5 | +4, −15, −20, −25 | *** | *** | *** |
| (5) Nov–April | 5 | +4, −10, −15, −20 | *** | *** | * |
| (6) Nov–Jan | 2 | +4, −15, −20, −25 | *** | 0.198 (n.s.) | 0.837 (n.s.) |

[a] *Calluna vulgaris* was fumigated for different periods with charcoal-filtered air with or without the addition of 40 nl $l^{-1}$ of both $NO_2$ plus $SO_2$. Excised shoots were then exposed to controlled frost tests. The significance of effects of test temperature and pollution on ion leakage is indicated in the right-hand columns (*** $P<0.001$; * $P<0.05$).

Table 2
Effect of an 8 month exposure to 40 nl $l^{-1}$ $NO_2+SO_2$ on the mean value of (a) dry mass (g) of plant parts and (b) the concentrations of nutrients (mg $g^{-1}$) in shoots[a]

| *(a)* Treatment | Shoot mass | Root mass | Total mass | Ratio (root/shoot) |
|---|---|---|---|---|
| Control | 0.451 | 0.801 | 1.252 | 1.815 |
| 40 nl $l^{-1}$ $NO_2+SO_2$ | 0.618 | 0.820 | 1.434 | 1.359 |
| *t*-value, after 2-tailed *t*-test | 3.71 | 0.23 | 1.84 | 2.51 |
| Probability (*P*) | 0.002 | 0.823 | 0.083 | 0.02 |
| *(b)* Treatment | Nitrogen | Sulphur | Potassium | |
| Control | 6.54 | 0.30 | 3.47 | |
| 40 nl $l^{-1}$ $NO_2+SO_2$ | 8.76 | 0.81 | 7.53 | |
| *t*-value, after 2-tailed *t*-test | 7.48 | 4.65 | 7.23 | |
| Probability (*P*) | <0.0001 | 0.0009 | <0.0001 | |

[a] Plants were harvested in October after 8 months treatment.

the year. For example the test temperatures in January were −15, −20 and −25°C, while in October they were −5, −10 and −15°C.

### 2.3. Assessment of frost injury

After the overnight freezing cycle, the electrolyte leakage from the shoots was determined from the increase in conductivity ($C$) of the bathing solution measured using a platinum electrode at 20°C, after briefly shaking the vial by hand. The first measurement ($C_0$) was ≈1 h after the shoots were placed in the vial while the next was after a 5 h interval ($C_5$) during which vials remained static at 20°C. Finally, the vials were autoclaved at 105°C for 4 min, and after cooling, measured again. This final value, $C_\infty$ (i.e. $C$ at 'infinity'), was an estimate of total electrolyte content. Using the three conductivity measurements $C_0$, $C_5$ and $C_\infty$ the electrolyte leakage coefficients ($k$, units $h^{-1}$) were calculated for each shoot using the following equation:

$$k = \ln((C_\infty - C_0)/(C_\infty - C_t))/t \quad \text{where } t = 5 \text{ h.}$$

The electrolyte leakage coefficient ($k$) was shown previously to be a sensitive and reliable method of assessment of frost injury in this species (Caporn et al., 1994). The electrolyte leakage results are shown in the tables as ($k \times 1000$). Statistical one and two-way analysis of variance (with frost temperature and pollution treatment as main effects in the latter) was performed on logarithmically-transformed values i.e. $\ln(k \times 1000)$. Transformation was required to normalise the distribution of the data. All the data was analysed using the SPSS Statistical Package.

## 3. Results

### 3.1. Growth and nutrition

Fumigation of *C. vulgaris* with 40 nl $l^{-1}$ $NO_2+SO_2$ for 8 months, between February and October, significantly increased ($P=0.002$) the shoot dry mass by 37%, produced a 15% increase in whole plant dry mass (not statistically significant $P=0.82$), but had negligible effect (+2%) on the size of the roots (Table 2). The ratio of root/shoot dry mass was, therefore, significantly lowered by the pollutant exposure ($P=0.02$). A similar change in growth was also recorded in plants sampled 1 month later in November after 9 months exposure (data not shown). In October, associated with the promotion of shoot growth in fumigated plants, there was a large increase in the concentrations of nitrogen (+34%), potassium (+117%) and, most markedly, sulphur (+173%) in the green shoots. Despite an increase in growth during the summer there were no visible signs that

the pollution treatment extended the length of the growing season, either into the autumn or through starting growth earlier in the spring. There were no other changes in plant appearance caused by the gaseous treatment.

### 3.2. Frost tolerance

The rate of electrolyte leakage from the tissue provided a rapid indication of cellular damage following exposure of excised shoot pieces to a single overnight frost. Shoots with poor frost tolerance showed increased damage and a higher leakage coefficient ($k$). The first series of experiments studied the effect of exposure to the pollutants $NO_2 + SO_2$, given to three different sets of plants, on the frost tolerance measured between autumn and mid winter (see series 1–3 in Table 1). Electrolyte leakage measurements revealed that plants grown in filtered air showed a small increase in cellular damage as the test temperatures were lowered from +5 to −25°C. In the shoots from the pollution treatments, however, leakage was greatly increased with the severity of frosts. This was apparent during the period of hardening (October and November) and in mid-winter (January). At each sampling time there was a highly significant treatment × temperature interaction term in the analysis of variance. At all but one of the sub-zero test temperatures (−5°C in October) ion leakage was significantly increased in the polluted plants compared with filtered controls (Table 3). In November, after 9 months fumigation, a significantly increased leakage was detected from shoots of polluted plants even in the absence of frosting. Indeed, at all other sampling times the leakage was also increased in polluted, non-frosted shoots, but only in November were the changes statistically significant.

A comparison was made of the effects of applying the $NO_2 + SO_2$ treatments for 5 months either during the pre-winter hardening period (August–January) or the post-winter de-hardening period (November–April, see series 4–5 in Table 1). Cellular freezing damage was significantly increased at all sub-zero temperatures by the $NO_2 + SO_2$ treatments over both periods (Table 4).

A third comparison was made of the influence of duration of the pollution treatment on frost hardiness measured in January. This was achieved by combining data from two of the above experi-

Table 3
Electrolyte leakage coefficient ($k \times 1000$, units: $h^{-1}$) of excised shoots of *Calluna vulgaris* following frost tests at different temperatures[a]

| Experiment date and treatment | Frost temperature (°C) | | | | | |
|---|---|---|---|---|---|---|
| | +5 | −5 | −10 | −15 | −20 | −25 |
| Feb–Oct (8 months) | | | | | | |
| Filtered | 12.1 | 23 | 18.8 | 23.9 | – | – |
| Polluted | 16.9 | 24.7 | 50.7 | 102.5 | – | – |
| *P* | 0.12 | 0.73 | 0.01 | <0.0001 | – | – |
| Feb–Nov (9 months) | | | | | | |
| Filtered | 11 | – | 11.4 | 16.6 | 20.3 | – |
| Polluted | 21.3 | – | 27.8 | 71.2 | 120.8 | – |
| *P* | 0.04 | – | <0.01 | <0.0001 | <0.0001 | – |
| Feb–Jan (11 months) | | | | | | |
| Filtered | 11.23 | – | – | 12.16 | 12.43 | 14.68 |
| Polluted | 21.15 | – | – | 45.53 | 57.32 | 85.66 |
| *P* | 0.12 | – | – | <0.0001 | <0.0001 | <0.0001 |

[a] Plants were grown in filtered air containing 40 nl $l^{-1}$ ($NO_2 + SO_2$) commencing February for different durations. In each case the probability of a significant difference between filtered and polluted air at each temperature is shown following a one-way analysis of variance. The over-all effects of temperature and treatment are shown in Table 1.

Table 4
Electrolyte leakage coefficient ($k \times 1000$, units; $h^{-1}$) of excised shoots of *Calluna vulgaris* following frost tests at different temperatures[a]

| Experiment date and treatment | Frost temperature (°C) | | | | |
|---|---|---|---|---|---|
| | +5 | −10 | −15 | −20 | −25 |
| *Aug–Jan* | | | | | |
| Filtered | 6.38 | – | 7.91 | 10.05 | 12.9 |
| Polluted | 8.26 | – | 17.07 | 34.80 | 48.34 |
| *P* | 0.288 | – | <0.001 | <0.001 | <0.001 |
| *Nov–April* | | | | | |
| Filtered | 13.3 | 10.2 | 11.9 | 18.9 | – |
| Polluted | 13.5 | 20.1 | 29.6 | 36.2 | – |
| *P* | 0.673 | 0.028 | <0.001 | <0.001 | – |

[a] Plants were grown in filtered air or 40 nl $l^{-1}$ ($NO_2+SO_2$) during either a 5 month hardening period (August–January) or a de-hardening period (November–April). In each case the probability of a significant difference between filtered and polluted air at each temperature is shown following a one-way analysis of variance. The over-all effect of temperature and treatment are shown in Table 1.

ments (February–January; August–January) with a shorter fumigation of 2 months given between November and January (series six in Table 1). Frost tolerance was measured on all the material at the same time in January. The leakage data indicate that while fumigation of the plants for periods of 5 or 11 months caused significant reductions in frost tolerance an exposure to the pollutants for just 2 months was without significant effect (Table 1).

## 4. Discussion

Continuous exposure of *C. vulgaris* to 40 nl $l^{-1}$ $NO_2+SO_2$ over an 8 month period from February to October produced an increase in shoot growth but substantial reductions in tolerance of shoots to frost treatments. Further frost tests showed adverse effects of fumigation at all times of the year. The only period where pollution had no effect occurred when the duration was just 2 months, between November and January. This may have resulted from insufficient uptake of the gases over this short period in mid-winter due to low stomatal conductance. However, no measurements of stomatal performance were made during the experiments. A 5 month exposure between early winter and spring (April) did cause a drop in frost tolerance. Further studies using fumigations of short duration at other times in the year, combined with estimates of stomatal conductance may resolve the extent of foliar uptake in different seasons. The pollution treatment had comparable effects on frost tolerance when applied either during the hardening (August–January) or de-hardening (November–April) phase.

It is proposed that the main effect of $NO_2$ plus $SO_2$ was directly on some component of frost tolerance at the biochemical level as opposed to causing alteration in development through stimulating growth. This idea is supported by the observation in November 1990 of a significant increase in ion leakage from shoots of polluted plants that were not frosted. An increase in gross leakage of electrolytic solutes from shoots is indicative of damage to the plasmalemma membrane but the immediate cause of this injury in polluted heather is not known. The marked rise in sulphur concentration in heather in this work suggests a significant assimilation of $SO_2$. There was also a large increase in the nitrogen content, probably through $NO_2$ uptake. The assimilation of both these gases can generate toxic ionic species (Wellburn, 1994). For example, under winter conditions, Wolfenden et al. (1991) found that exposure of *Picea rubens* to 40 nl $l^{-1}$ $SO_2$ plus $NO_2$ caused an accumulation of the damaging

ions sulphite and nitrite in the extracellular fluid. These ions could interfere with cold metabolism or directly affect the integrity of membranes. Another, possibly related, adverse effect of $NO_2$ plus $SO_2$ on frost tolerance could be via alterations in the levels of metabolites which may have protective roles under low temperature conditions. Proline, for example, is believed to play a cryo-protective role in plant cells and substantial increases in concentration often occur under frost-hardening conditions (Levitt, 1980). However, Davison et al. (1988) found that fumigation of *Lolium perenne* with 70 nl $l^{-1}$ $NO_2$ plus $SO_2$ significantly lowered the accumulation of proline compared with that measured in clean-air controls.

The increase in shoot growth which resulted from fumigation with $NO_2 + SO_2$ is a feature recorded on several occasions in previous research using slightly higher concentrations of these gases. An increase in leaf expansion in polluted plants has sometimes been interpreted as a means of compensating for other negative physiological changes. Perhaps any apparent fertiliser 'benefits' from fumigation with oxides of nitrogen and sulphur are greater if plants grow on nutrient-poor soils. *C. vulgaris* and related heathland flora occur naturally on poor soils and, therefore, the stimulation to growth due to $NO_2 + SO_2$ may be a common response in this habitat. While $NO_2$ and $SO_2$ stimulated the overall plant growth, the imbalance between root and shoot mass in favour of the latter makes these plants vulnerable to plant water stress (Neighbour et al., 1988). However, changes in relative proportions of shoots and roots, measured at a single point in time should be interpreted with care, as discussed by Gedroc et al. (1995).

The large increase in potassium concentration, which was more than double in the foliage of polluted plants in comparison with controls, is perhaps due to greater uptake from the substrate but there is no obvious explanation for this change. It is not likely to be simply coupled to the rise in nitrogen content. This suggestion is based on the observation that the concentration of potassium in the shoots of *C. vulgaris* was very little altered by large inputs of nitrogen fertiliser applied to the soil in a field experiment (Caporn et al., 1995). Another possibility is that $NO_2$ and $SO_2$ affected translocation of ions in the phloem (Minchin and Gould, 1986) and the patterns of potassium re-mobilization within the plant.

Several previous studies also found that pollution treatments can alter the frost tolerance of vegetation. Caporn et al. (1994) and Lee and Caporn (1998) discovered that regular applications of aqueous $NH_4NO_3$ to *C. vulgaris* at an upland heathland in Wales resulted in increased frost tolerance in autumn, but increased injury caused by climatic conditions in late winter. Dueck et al. (1990/91) showed that high concentrations of $NH_3$ and $SO_2$ reduced frost tolerance in *P. sylvestris*. Several other experiments suggest that application of $NH_4^+$ and $NO_3^-$ to plants or soil can affect cold tolerance of woody species (reviewed by Sheppard et al., 1993), but there is little information about the effect of mixtures of $NO_2$ and $SO_2$. Freer-Smith and Mansfield (1987) found small increases in needle injury in *P. sitchensis* after freezing at $-5$ and $-10$°C following prolonged fumigation with 30 nl $l^{-1}$ $NO_2$ plus $SO_2$ during the hardening period. This latter study also suggests that plant stress tolerance can be influenced by exposure outside of the growing season as well as during summer when uptake of the pollution is greatest.

This research with *C. vulgaris* demonstrates the potential for two very common pollutants, $NO_2$ and $SO_2$, to exert negative effects on the physiological tolerance of cold stress yet, at the same time, to cause an increase in shoot growth. While the coldest test temperatures used here were lower than typical frosts in the main *Calluna* regions the broader frost temperature range was not unrealistic. Winter minimum temperatures of below $-10$°C are common in upland Britain in regions where snow cover is reduced by high wind speeds. The large, dramatic effects on frost tolerance in heather recorded in these experiments was the result of exposure to concentrations of $NO_2$ plus $SO_2$ which are greater than long term averages recorded in rural areas of the UK and most of Europe. However, concentrations over short periods at rural sites can often exceed those used in the experiments and levels of these gases in urban

Table 5
Concentrations of $NO_2$ and $SO_2$, in nl $l^{-1}$ (ppb), at selected remote, rural, suburban and urban monitoring sites in Britain for the calendar year 1995[a]

| Pollutant (and averaging period) | Strath Vaich (remote moorland) | Ladybower (rural moorland) | London Bexley (sub-urban) | Liverpool (urban) |
|---|---|---|---|---|
| $NO_2$ annual mean | 1 | 8 | 22 | 26 |
| $NO_2$ maximum 8 h mean | 11 | 40 | 132 | 90 |
| $SO_2$ annual mean | 0.2 | 4 | 8 | 9 |
| $SO_2$ maximum 8 h | 10 | 197 | 304 | 153 |

[a] For site and further details see Broughton et al. (1997).

and sub-urban sites are frequently very much higher (Table 5). For example, at a sub-urban monitoring station Bexley, near London (southern England) in the year 1995 the 98th percentile concentrations of $SO_2$ and $NO_2$ were 43 and 52 nl $l^{-1}$, respectively. Moreover, there is some evidence that rural concentrations of $NO_2$ are increasing (Ashenden and Edge, 1994). Further research, therefore, should aim to discover if frost tolerance of *C. vulgaris* and other native vegetation is affected by the lower levels of these pollutant gases (in combination and as single gases) typically measured in rural regions. Secondly, it is important to establish the extent to which the stress sensitivity of other common urban and sub-urban vegetation in-situ is affected by current levels of $NO_2$ and $SO_2$ in those areas. The small, but recreationally important, fragments of heath found in and around several major European cities may be vulnerable to these pollutants, but at present we have little knowledge of whether this is the case in situ.

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# Effects of atmospheric ammonia and ammonium sulphate on vesicular–arbuscular mycorrhizal colonization in three heathland species

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SUMMARY

Three heathland species, *Arnica montana* L., *Viola canina* L. and *Nardus stricta* L., were exposed to gaseous ammonia and artificial rain containing ammonium sulphate for 11 wk. Plants infected with *Glomus fasciculatum* (Thaxter *sensu* Gerdemann) Gerd. & Trappe grew faster than non-mycorrhizal plants. Ammonia increased the shoot dry weight of both mycorrhizal and non-mycorrhizal *V. canina* and mycorrhizal *N. stricta*. Only mycorrhizal *V. canina* and non-mycorrhizal *N. stricta* grew faster when supplied with increasing concentrations of ammonium sulphate. The nitrogen tissue concentration, in all three species, was not influenced by vesicular–arbuscular mycorrhiza (VAM), but increased when plants were treated with ammonia. Mycorrhizal and non-mycorrhizal *N. stricta* and mycorrhizal *V. canina* had a higher N tissue concentration when supplied with ammonium sulphate. The phosphorus tissue concentration was higher when plants were infected with VAM, but tended to be lower in the presence of ammonia or ammonium sulphate. Mycorrhizal plants had higher total amounts of N and P than non-mycorrhizal plants and plants treated with ammonia had higher total amounts of N than non-treated plants. VAM colonization increased in all three species when treated with ammonia but was not affected by exposure to ammonium sulphate. Mycorrhiza decreased the sensitivity of *N. stricta* to drought, while ammonia decreased the sensitivity to drought for all three species. The effects of additional nitrogen in relation to N/P ratios are discussed with respect to the ecological consequences for these heathland species.

Key words: Air pollution, ammonia, ammonium sulphate, heathland vegetation, vesicular–arbuscular mycorrhiza.

## INTRODUCTION

The composition of air pollution in the Netherlands differs from that in surrounding countries. This is mainly due to large quantities of ammonia and ammonium deposited annually on the soil and vegetation (Heij & Schneider, 1991). Unlike the other major air pollutants which are transported over large distances, ammonia and ammonium are emitted and deposited locally (Asman, 1987). Emission of ammonia and ammonium originates almost entirely from intensive animal husbandry and animal manure. In the Netherlands, livestock breeding farms are concentrated in areas formerly unfavourable for arable farming, because of the poor sandy soils with low organic content. These soils were improved by fertilizing them with large amounts of animal manure.

Promoting plant growth is the primary effect of ammonia and ammonium (Van der Eerden, 1992). This can have consequences in natural vegetation growing on nutrient poor soils, such as heathland vegetation. There, competition patterns between species can be changed by fertilization (Heil, 1984; Van der Eerden, 1992). On the other hand, negative effects of low and moderate concentrations of ammonia are also known. Van der Eerden (1992) found that the number of generative organs in *Arnica montana* L. and *Antennaria dioica* (L.) Gaertner is reduced after treatments with ammonia and ammonium. Though photosynthesis is stimulated by low and moderate concentrations of $NH_3$

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(Van Hove *et al.*, 1989), this may have secondary adverse effects such as increased sensitivity to water stress (Van der Eerden & Pérez-Soba, 1992) and to frost (Dueck *et al.* 1990). In the same experiment Dueck *et al.* (1990) found ammonia to delay bud burst and reduce shoot growth of *Pinus sylvestris* L. in spring and early summer.

Ammonia not only has direct effects on plants. Evidence is growing that ectomycorrhizal symbiosis may also be affected by gaseous ammonia. Both the number of fruiting bodies and number of species of ectomycorrhizal fungi is lower in areas with high levels of nitrogenous air pollution (Arnolds, 1988; Termorshuizen & Schaffers, 1991). The decline of the below ground ectomycorrhizal density is negatively correlated with air pollution (Jansen & Nie, 1988). The colonization of young root tips with ectomycorrhiza can be inhibited by ammonia (Van der Eerden *et al.*, 1992). There are several reports on the negative effect of ammonium sulphate on ectomycorrhizal symbiosis (e.g. Slankis, 1974; Alexander & Fairley, 1983; Finlay *et al.*, 1989) as well as on vesicular–arbuscular mycorrhiza (VAM). Most of the latter deal with agricultural crops grown on nutrient rich soils (e.g. Hepper, 1983; Johnson, Jarrell & Menge, 1984; Thompson, 1986). However, heathland vegetation grows on nutrient poor soils and effects of ammonium on VAM in heathland species may be different (Heijne *et al.*, 1992). Many of these species are becoming increasingly rare in the Netherlands and their decline is associated with increasing levels of nitrogenous air pollutants of which $NH_3$ is a major component (Heij & Schneider, 1991). The effects of nitrogenous air pollutants on the quality of VAM symbiosis may be important for the vegetation composition. To date no reports are known on the effect of ammonia on VAM. In this paper we report on the effects of ammonium sulphate and ammonia, two major air pollutants in the Netherlands, on VAM of *Arnica montana* L., *Viola canina* L. and *Nardus stricta* L.

## MATERIALS AND METHODS

### *Plants*

Tussocks of *Nardus stricta* L. were collected from the Deelense Veld and the Rozendaalse Veld (53° 05′ N, 05° 50′ E). The roots were removed and remaining shoots were rinsed thoroughly with tap water in order to remove spores of endomycorrhizal fungi. Adhering groups of three to four shoots were rooted in sterilized clay pots (250 ml) filled with sterilized sand (autoclaved for 2 h at 120 °C). The same procedure was repeated after 4 wk, resulting in VAM-free plants.

*Arnica montana* L. and *Viola canina* L. seeds were collected at Borger (52° 50′ N, 6° 50′ E) and at the Meinweg area (52° 10′ N, 06° 07′ E), respectively. To break dormancy in *V. canina*, seeds were stored at 2–3 °C in closed Petri dishes on wet filter paper in the dark for 97 d. The seeds of *A. montana* and *V. canina* were germinated on filter paper moistened with 0·01 M $KNO_3$. Individual seedlings were placed in sterilized sandy soil in sterilized clay pots (250 ml). Plants were rinsed clean with tap water after 4 wk. One of two uniform groups of *A. montana* and *V. canina* was inoculated with VAM by mixing 0·5 g fresh root material from *V. canina* heavily colonized with *Glomus fasciculatum* (Thaxter *sensu* Gerdemann) Gerd. & Trappe into each pot containing sterilized sandy soil. Mycorrhizal inoculum was originally collected in 1987 from the Meinweg area and since then kept in a glasshouse culture on *V. canina* (Heijne *et al.*, 1989). The other half of the plants was inoculated with sterilized (autoclaved for 2 h at 120 °C) root material from *V. canina*. *A. montana* and *V. canina* plants were 11 wk old when treatments as described below started.

*N. stricta*, *A. montana* and *V. canina* plants were kept in a glasshouse until treatments started. The temperature varied daily around 22 °C and around 17 °C during the night. The relative humidity in the glasshouse varied between 60 and 98 % (day and night). Additional illumination was given from 5.00 to 21.00 h (190–200 $\mu$mol $m^{-1}$ $s^{-1}$). During the experiment, each plant received 10 ml weekly of a nutrient solution described by Hepper (1983).

### *Treatments*

The experiment had 12 treatments: +VAM and −VAM, treated and not treated with ammonia and three concentrations of ammonium sulphate. Per treatment, there were 12 individually potted plants per species, which are considered as replicates. Treatments took place from 21 January to 8 April, i.e. 79 d. Three artificial rain treatments were applied, 20, 200 or 500 $\mu$mol ammonium sulphate $l^{-1}$. The treatment of 20 $\mu$mol ammonium sulphate $l^{-1}$ is comparable to the natural background deposition in the Netherlands of 50 yr ago (Heijne *et al.*, 1992). Apart from the additional ammonium sulphate, the artificial rain was composed of demineralized water containing 80 $\mu$mol sea salt $l^{-1}$, corresponding to the natural background deposition of sea spray in the centre of the Netherlands (Heijne *et al.*, 1992). Plants were sprinkled with artificial rain three times a week and this was their only source of water. Rain treatments were stopped 8 d before terminating the experiment to evaluate the effect of drought stress.

Half of the plants were exposed to clean air and the other half to ammonia in two glasshouses (area 12 $m^2$ each) inside a larger glasshouse. The air temperature was maintained at 20 °C during the day and at 15 °C at night. The relative air humidity varied with day and night temperatures between 40 and 65 %, respectively. Additional illumination was

**Table 1.** *Average dry weight (mg) of shoots and roots of* Arnica montana, Viola canina *and* Nardus stricta *with or without VAM (+VAM, −VAM) and treated with or without ammonia (+$NH_3$, −$NH_3$)*

| | −VAM | | +VAM | |
|---|---|---|---|---|
| | $-NH_3$ | $+NH_3$ | $-NH_3$ | $+NH_3$ |
| *Arnica montana* | | | | |
| Shoot | 33·6 | 59·1 | 149·9 | 205·4 |
| Root | 57·5 | 59·3 | 163·5 | 166·9 |
| *Viola canina* | | | | |
| Shoot | 38·4 | 142·1 | 223·6 | 632·9 |
| Root | 67·1 | 148·1 | 299·0 | 343·2 |
| *Nardus stricta* | | | | |
| Shoot | 363·7 | 470·7 | 809·5 | 1173·8 |
| Root | 412·9 | 515·7 | 684·9 | 972·2 |

ANOVA

| Species/ parameter | Source of variance: VAM | Ammonium | VAM × ammonium |
|---|---|---|---|
| *A. montana* | | | |
| Shoot | *** | ns | ns |
| Root | *** | ns | ns |
| *V. canina* | | | |
| Shoot | *** | *** | *** |
| Root | *** | *** | ns |
| *N. stricta* | | | |
| Shoot | *** | ** | ns |
| Root | *** | ** | ns |

Significance value $P \leqslant 0{\cdot}001$, ***; $P \leqslant 0{\cdot}01$, **; $P \leqslant 0{\cdot}05$, *; ns, not significant at $P \leqslant 0{\cdot}05$.

supplied for 12 h $d^{-1}$ (105 $\mu$mol $m^{-2}$ $s^{-1}$). The glasshouses were ventilated with 90 $m^3$ charcoal-filtered air $min^{-1}$ (air velocity *c.* 0.11 m $s^{-1}$) and pure $NH_3$ was injected into the air stream of one of them. The $NH_3$ concentration was regulated via thermal mass flow controllers (Brooks 5850 TR) and was measured with a chemiluminescent nitrogen oxides analyzer 8840, preceded by a thermo convertor 8750, both from Monitor Labs. The average concentration was 105 $\mu$g $m^{-3}$ $NH_3$.

### *Laboratory analyses*

After terminating the experiment, each plant was separated into roots and shoots. The root fresh weight was determined and roots were cut into pieces of 10 mm length and mixed thoroughly. A random sample of 200 mg of fresh roots was used to estimate VAM colonization. The rest of the plant material was dried for 72 h at 70 °C. The root dry weight was calculated.

The root samples were stained according to Phillips & Hayman (1970) and stored in Petri dishes containing pure glycerol. After staining, the degree of VAM colonization was estimated according to Biermann & Linderman (1981) with a dissecting microsope (×40). Each count was the average of 25

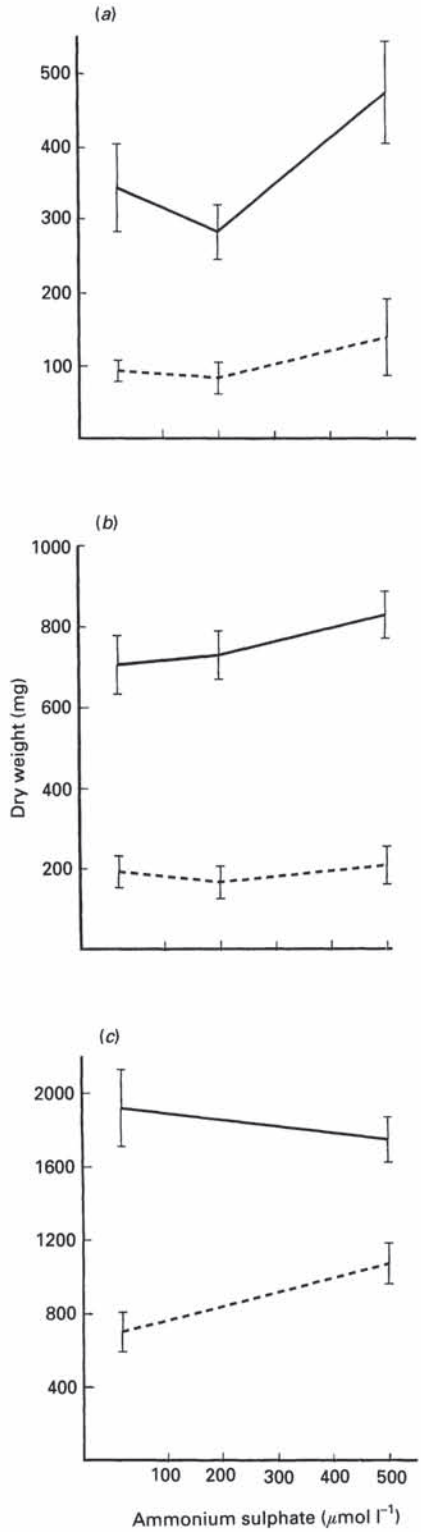


**Figure 1.** The average total dry weight (mg) of (*a*) *Arnica montana*, (*b*) *Viola canina* and (*c*) *Nardus stricta* with and without VAM (solid and dotted lines respectively) and treated with artificial rain containing 20, 200 or 500 $\mu$mol $l^{-1}$ ammonium sulphate. Vertical bars represent standard errors of means.

**Table 2.** *Average nitrogen (N) and phosphorus (P) concentration (% of dry weight), nitrogen:phosphorus ratio (N/P) and total amount of N and P (mg dry weight) in shoots and roots of* Arnica montana, Viola canina *and* Nardus stricta *with or without VAM (+VAM, −VAM) and treated with or without ammonia (+$NH_3$, −$NH_3$)*

| | −VAM | | | | +VAM | | | |
|---|---|---|---|---|---|---|---|---|
| | −$NH_3$ | | +$NH_3$ | | −$NH_3$ | | +$NH_3$ | |
| | % | Total | % | Total | % | Total | % | Total |
| *Arnica montana* | | | | | | | | |
| Shoot | | | | | | | | |
| N | 1·838 | 0·68 | 2·236 | 1·49 | 1·814 | 2·68 | 2·205 | 4·64 |
| P | 0·116 | 0·089 | 0·127 | 0·110 | 0·129 | 0·191 | 0·116 | 0·301 |
| N/P | 16·1 | | 20·6 | | 14·7 | | 14·2 | |
| Root | | | | | | | | |
| N | 1·080 | 0·94 | 2·411 | 2·02 | 1·446 | 1·84 | 2·625 | 4·92 |
| P | 0·064 | 0·054 | 0·068 | 0·070 | 0·140 | 0·193 | 0·143 | 0·258 |
| N/P | 17·0 | | 35·8 | | 10·4 | | 20·5 | |
| *Viola canina* | | | | | | | | |
| Shoot | | | | | | | | |
| N | 1·577 | 0·68 | 2·535 | 4·59 | 1·751 | 3·79 | 2·086 | 12·48 |
| P | 0·097 | 0·044 | 0·114 | 0·167 | 0·157 | 0·293 | 0·129 | 0·790 |
| N/P | 17·0 | | 21·9 | | 14·7 | | 17·0 | |
| Root | | | | | | | | |
| N | 0·927 | 0·70 | 1·620 | 2·61 | 1·080 | 3·07 | 1·714 | 5·60 |
| P | 0·055 | 0·044 | 0·062 | 0·107 | 0·126 | 0·334 | 0·124 | 0·394 |
| N/P | 20·8 | | 28·5 | | 9·9 | | 15·6 | |
| *Nardus stricta* | | | | | | | | |
| Shoot | | | | | | | | |
| N | 1·285 | 4·81 | 1·519 | 8·56 | 1·284 | 9·53 | 1·598 | 19·67 |
| P | 0·048 | 0·169 | 0·045 | 0·250 | 0·062 | 0·491 | 0·065 | 0·812 |
| N/P | 28·9 | | 35·9 | | 21·7 | | 25·4 | |
| Root | | | | | | | | |
| N | 0·750 | 3·17 | 0·941 | 5·96 | 0·804 | 4·89 | 1·185 | 10·83 |
| P | 0·030 | 0·116 | 0·028 | 0·180 | 0·049 | 0·296 | 0·050 | 0·483 |
| N/P | 24·3 | | 35·8 | | 17·5 | | 24·2 | |

ANOVA

| | Parameters | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Shoots | | | | | Roots | | | | |
| | N | | P | | | N | | P | | |
| Source of variance | % | Total | % | Total | N/P | % | Total | % | Total | N/P |
| *Arnica montana* | | | | | | | | | | |
| VAM | ns | *** | ns | ** | * | ** | ** | *** | *** | ** |
| $NH_3$ | ** | ** | ns | ns | ns | *** | *** | ns | ns | *** |
| VAM*$NH_3$ | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns |
| *Viola canina* | | | | | | | | | | |
| VAM | ns | *** | *** | *** | *** | ns | *** | *** | *** | *** |
| $NH_3$ | *** | *** | ns | *** | *** | *** | *** | ns | ** | *** |
| VAM*$NH_3$ | ** | *** | * | *** | ns | ns | ns | ns | ns | ns |
| *Nardus stricta* | | | | | | | | | | |
| VAM | ns | *** | *** | *** | *** | *** | *** | *** | *** | *** |
| $NH_3$ | *** | *** | ns | ** | *** | *** | *** | ns | *** | *** |
| VAM*NH | ns | * | ns | ns | ns | ns | * | ns | ns | ns |

Significance value $P \leqslant 0{\cdot}001$, ***; $P \leqslant 0{\cdot}01$, **; $P \leqslant 0{\cdot}05$, *; ns, not significant at $P \leqslant 0{\cdot}05$.

estimates (= 'one measurement'). These 'measurements' were repeated three times to calculate the average colonization percentage per plant.

The nitrogen and phosphorus concentrations of shoots and roots were determined after wet Kjeldahl digestion of dried plant material. The samples were analyzed chemically with a continuous flow Skalar autoanalyzer.

If appropriate, data were transformed by $ln(x+1)$ or square root arcsin, before analysis of variance (two-way and three-way ANOVA) was performed. If significant treatment effects were found ($P \leqslant$

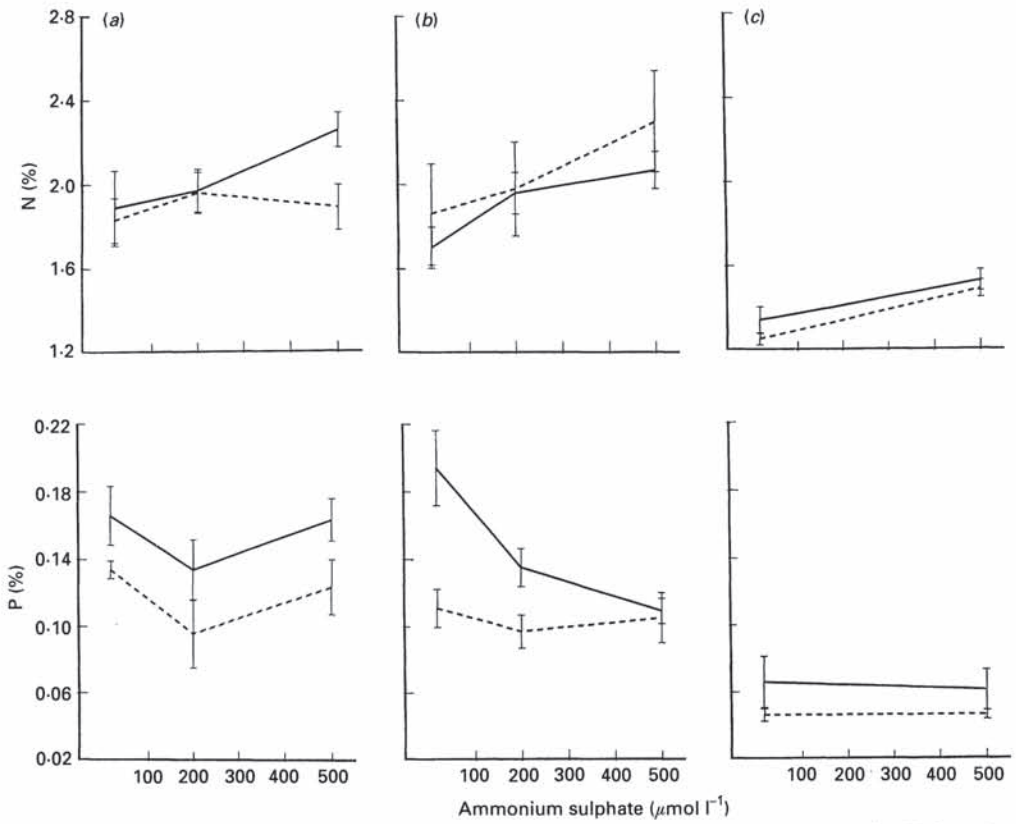


**Figure 2.** The average shoot N and P content (% of dry weight) of (*a*) *Arnica montana*, (*b*) *Viola canina* and (*c*) *Nardus stricta* with and without VAM (solid and dotted lines respectively) and treated with artificial rain containing 20, 200 or 500 $\mu$mol $l^{-1}$ ammonium sulphate. Vertical bars represent standard errors of means.

0·05), unplanned multiple comparisons were used to demonstrate differences between treatments groups (Sokal & Rohlf, 1981). The computer programs SAS (version 6·03) and Genstat (version 5) were used to perform these statistical analyses.

## RESULTS

### *Plant growth*

The effects of the treatments on plant growth are given in Table 1. Colonization with VAM fungi significantly increased both shoot and root dry weight for all species ($P < 0{\cdot}001$). The dry weight of *A. montana* was not influenced by ammonia for plants without (−VAM) and with (+VAM) mycorrhiza. The dry weight of *V. canina* shoots in the ammonia treatment increased by a factor of nearly three for both −VAM and +VAM plants. The roots of non-mycorrhizal *V. canina* plants also showed an increase in dry weight. The ammonia treatment increased dry weight of *N. stricta* shoots and roots, but only significantly in mycorrhizal plants.

Since shoots and roots responded similarly to ammonium sulphate, only the total dry weight is depicted in Figure 1. The higher dry weight of the +VAM plants of all three species compared with the −VAM plants is evident ($P < 0{\cdot}001$). The dry weight of mycorrhizal *A. montana* and *V. canina* increased with increasing concentrations of ammonium sulphate, but only significantly in *V. canina* ($P < 0{\cdot}05$). In *N. stricta* however, dry weight of −VAM plants increased ($P = 0{\cdot}013$) with increasing ammonium sulphate, while that in +VAM plants tended to decrease.

### *Nitrogen concentration and total amount of N*

Shoots had a higher N concentration (% of d. wt) than the roots, except in *A. montana* treated with ammonia (Table 2). There was no effect of VAM colonization on shoot N concentration, but the total amounts of N increased in all species. However, the root N concentration was higher in *A. montana* ($P = 0{\cdot}006$) and *N. stricta* ($P = 0{\cdot}002$) when infected with VAM. Ammonia increased both shoot and root N concentration and the total amounts of N in all species.

The effect of increasing concentrations of ammonium sulphate on the shoot N concentration can be seen in Figure 2. There was no effect on shoot N concentration in *A. montana* (−VAM and +VAM)

and *V. canina* (−VAM) with increasing ammonium sulphate. For *V. canina* (+VAM) and *N. stricta* (−VAM and +VAM), the N shoot concentration increased. The responses in root N concentrations (not presented) were similar to that in the shoots.

### *Phosphorus concentration and total amount of P*

VAM colonization increased the P concentration (% of d. wt) of both shoots and roots in all species, however not significantly in *A. montana* shoots (Table 2). For all species, the total amount of P in shoots and roots was higher in mycorrhizal plants. Ammonia had no effect on the P concentration, but the total amount of P in *V. canina* and *N. stricta* increased.

The effect of increasing concentrations of ammonium sulphate on the shoot P concentration can be see in Figure 2. The shoot P concentration of +VAM *V. canina* decreased with increasing ammonium sulphate ($P = 0{\cdot}002$). For the other species, no significant effect was measured. The effects on the root P concentration (not presented) were similar to those on the shoots.

### *Nitrogen : phosphorus ratio (N/P ratio)*

VAM colonization decreased the N/P ratio of both shoots and roots in all species (Table 2 and Fig. 4). The effect was more pronounced in roots than in shoots. Ammonia as well as increasing concentrations of ammonium sulphate increased the N/P ratios of shoots (Fig. 4) and roots (not shown) ($P < 0{\cdot}01$, except for *A. montana* where $P = 0{\cdot}055$).

### *VAM colonization*

Before the beginning of the treatments, VAM colonization determined from a sample of *A. montana* and *V. canina* was 44±6% and 69±5%, respectively. At the end of the experiment, VAM colonization was determined in each individual plant. It appeared that there were uninfected +VAM plants and infected −VAM plants. The proportion of plants not falling into the intended VAM category was for *A. montana* 6·9% and 1·4% respectively, for *V. canina* 2·7% and 2·7% and for *N. stricta* 2·7% and 5·5%. These plants were excluded from further analyses.

The VAM colonization in all species increased when treated with ammonia. Ammonium sulphate had no effect on VAM colonization (Table 3).

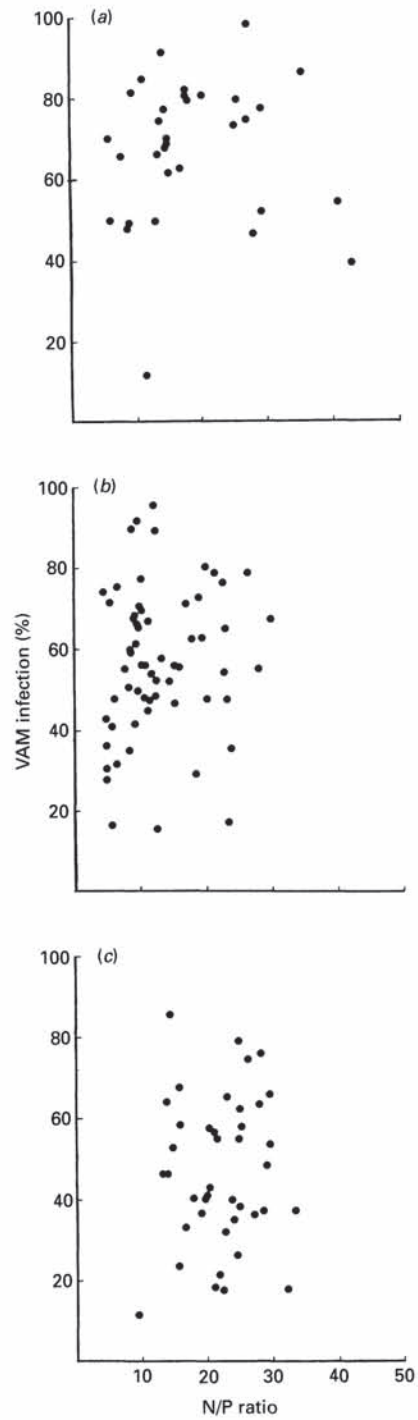


**Figure 3.** The relationship between the N/P ratios in roots and the percentage of root length infected with mycorrhizal fungus in (*a*) *Arnica montana*, (*b*) *Viola canina* and (*c*) *Nardus stricta*.

### *Drought stress*

Water was withheld from the plants during the last week of the experiment, resulting in the death of several plants of *A. montana* and *V. canina*. The quotient of dead to living plants is given in Table 4. To evaluate the effect of the preceding treatments on drought stress, we used analysis of cross-classified

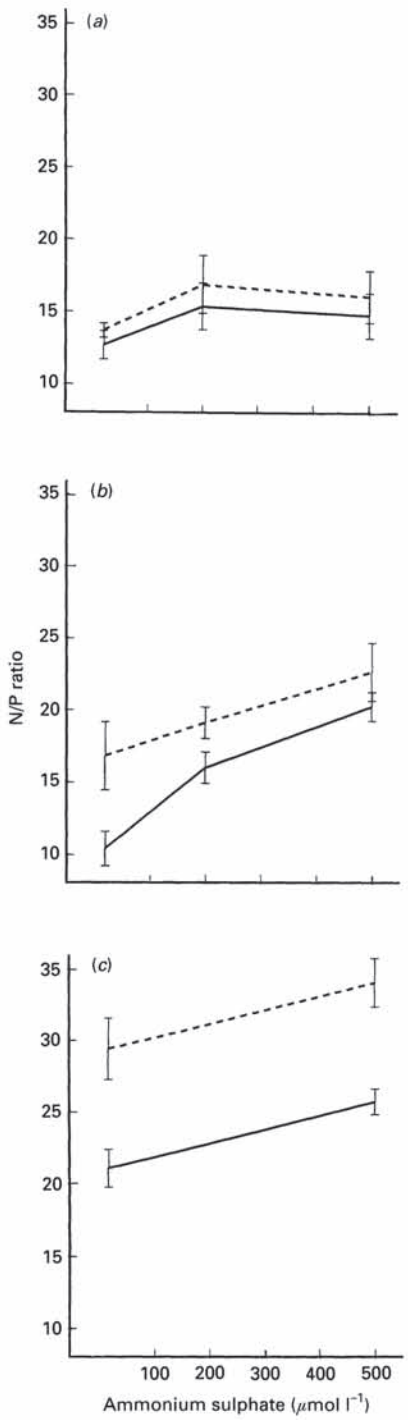


**Figure 4.** The average N/P ratio in shoots of (*a*) *Arnica montana*, (*b*) *Viola canina* and (*c*) *Nardus stricta* with and without VAM (solid and dotted lines respectively) and treated with artificial rain containing 20, 200 or 500 $\mu$mol $l^{-1}$ ammonium sulphate. Vertical bars represent standard errors of means.

categorical data using logit linear models (Fienberg, 1977). To simplify the model with optimal goodness-of-fit, we used a stepwise selection procedure

**Table 3.** *Average VAM infection (% of root length infected) of* Arnica montana, Viola canina *and* Nardus stricta *treated with or without ammonia* ($+NH_3$, $-NH_3$) *and artificial rain containing ammonium sulphate at 20, 200 or 500 $\mu$mol $l^{-1}$*

| Ammonium sulphate | $-NH_3$ | $+NH_3$ | ANOVA | |
|---|---|---|---|---|
| *Arnica montana* | | | | |
| 20 | 63·3 | 70·4 | $P_{NH_3}$ | 0·034 |
| 200 | 61·6 | 71·6 | $P_{rain}$ | 0·504 |
| 500 | 50·0 | 68·7 | $P_{NH_3*rain}$ | 0·694 |
| *Viola canina* | | | | |
| 20 | 43·7 | 73·4 | $P_{NH_3}$ | < 0·001 |
| 200 | 56·1 | 56·5 | $P_{rain}$ | 0·459 |
| 500 | 52·5 | 66·7 | $P_{NH_3*rain}$ | 0·001 |
| *Nardus stricta* | | | | |
| 20 | 37·1 | 52·2 | $P_{NH_3}$ | 0·081 |
| — | — | — | $P_{rain}$ | 0·738 |
| 500 | 38·8 | 46·3 | $P_{NH_3*rain}$ | 0·593 |

*P*, significance value.

**Table 4.** *Percentage of plants of* Arnica montana *and* Viola canina *which survived after drought. Plants were colonized with or without VAM* ($+VAM$, $-VAM$), *treated with or without ammonia* ($+NH_3$, $-NH_3$) *and artificial rain containing ammonium sulphate at 20, 200 or 500 $\mu$mol $l^{-1}$*

| | −VAM | | +VAM | |
|---|---|---|---|---|
| Ammonium sulphate | $-NH_3$ | $+NH_3$ | $-NH_3$ | $+NH_3$ |
| *Arnica montana* | | | | |
| 20 | 75 | 75 | 72·7 | 45·4 |
| 200 | 50 | 100 | 40 | 75 |
| 500 | 66·6 | 80 | 70 | 83·3 |
| *Viola canina* | | | | |
| 20 | 100 | 83·3 | 100 | 100 |
| 200 | 66·6 | 83·3 | 50 | 83·3 |
| 500 | 30·7 | 58·3 | 15·3 | 83·3 |

(forward selection and backwards elimination), which resulted in the following model:

$$\text{Dead/living} = \text{species} + \text{rain} + \text{gas} + (\text{species} \times \text{gas}) + (\text{doses} \times \text{gas}),$$

where dead/living = logit transformed quotient of numbers of dead and living plants, species = the species effect, rain = the effect of ammonium sulphate, gas = the effect of ammonia and (species × gas) and (doses × gas) are interaction effects. The factors VAM and species had no effect on survival, while ammonia-treated plants survived drought stress better than the control plants. With increasing ammonium sulphate, more plants died ($P = 0{\cdot}05$).

All plants of *N. stricta* survived the drought treatment, but part of the foliage died. The percentage of dead foliage was estimated for each individual plant (Table 5). A higher percentage of

**Table 5.** *Average percentage of live foliage of drought stressed* Nardus stricta *with or without VAM (+VAM, −VAM) and treated with or without ammonia (+$NH_3$, −$NH_3$) and artificial rain containing ammonium sulphate at 20 or 500 μmol $l^{-1}$*

| Ammonium sulphate | −VAM | | +VAM | |
|---|---|---|---|---|
| | −$NH_3$ | +$NH_3$ | −$NH_3$ | +$NH_3$ |
| 20 | 55·4 | 58·2 | 60·9 | 74·2 |
| 500 | 62·2 | 55·6 | 62·0 | 75·0 |

ANOVA

| Source of variance | | | | | |
|---|---|---|---|---|---|
| VAM | $NH_3$ | Rain | VAM × $NH_3$ | VAM × rain | $NH_3$ × rain |
| *** | ns | ns | * | ns | ns |

Significance value $P \leqslant 0{\cdot}001$, ***; $P \leqslant 0{\cdot}01$, **; $P \leqslant 0{\cdot}05$, *; ns, not significant at $P \leqslant 0{\cdot}05$.

living foliage remained after drought stress in mycorrhizal plants ($P = 0{\cdot}006$). Treatment of −VAM plants with ammonia had no effect on the percentage of live foliage, but ammonia increased it in +VAM plants ($P = 0{\cdot}002$). Ammonium sulphate had no influence on the percentage of living foliage.

## DISCUSSION

### *Analyses*

Several *A. montana* plants died during the experiment and as a result of the drought period. Only three replicates remained for analyses in some treatments, especially for −VAM plants, resulting in a high degree of variance for *A. montana*.

### *Plant growth*

Colonization with VAM increased plant dry weight in our experiment. This was to be expected, particularly in soils of low nutrient status (Harley & Smith, 1983). Increased growth is a general response to additional nitrogen and this is valid also when nitrogen is applied in the form of ammonia at low concentrations. Not only growth is stimulated by ammonia. In long term exposure studies, Van Hove *et al.* (1989) also demonstrated a higher photosynthetic performance of poplar leaves (*Populus euramericana* L.), when treated with 50 and 100 μg $m^{-3}$ ammonia. For plants from a heathland vegetation, increased growth was demonstrated for *C. vulgaris* and *Deschampsia flexuosa* L. (Van der Eerden *et al.*, 1991) as well as for plants from the Violion caninae alliance, such as *A. montana*, *Antennaria dioica* (L.) Gaertner, *V. canina* and *Agrostis capillaris* L. (Van der Eerden *et al.*, 1990; Dueck & Elderson, 1992). Root growth of *A. dioica* however, was not stimulated when exposed to ammonia (Van der Eerden, 1992). In the present experiment, we found an increase in dry weight for *V. canina* and for +VAM *N. stricta*, but not for *A. montana* and −VAM *N. stricta*. This may be due to the low phosphorus concentration, especially in −VAM *N. stricta*, which appeared to be growth limiting. In an earlier experiment (Heijne *et al.*, 1992), the phosphorus concentration of shoots in *A. montana* was about twice as high as in this experiment. Therefore, the most plausible explanation is that growth of *A. montana* and −VAM *N. stricta* was limited by phosphorus and not by nitrogen. On the other hand, the growth of +VAM *V. canina*, which had a similar phosphorus concentration, was increased when treated with ammonia and ammonium sulphate. The phosphorus concentration in *N. stricta* was substantially lower than that in *A. montana* and *V. canina*. None the less, −VAM *N. stricta* increased growth when treated with ammonium sulphate and +VAM *N. stricta* increased growth when treated with ammonia. This may indicate that the P limitation is species specific. The shoot dry weight increased more than the root dry weight, which is consistent with the direct uptake of $NH_3$ observed by Dueck *et al.* (1991) and the increased metabolism of $NH_3$ in leaves (Van Hove, 1989). This can result in higher shoot/root ratios in ammonia treated plants (Van der Eerden *et al.*, 1990).

Ammonium sulphate was another source of nitrogen, but only −VAM *N. stricta* and +VAM *V. canina* responded with more growth. *A. montana* did not increase growth when supplied with either of the two sources of nitrogen. Similar results were found with *H. pilosella* and *A. dioica* (Heijne *et al.*, 1989). In an earlier glasshouse experiment, *A. montana* biomass increased when ammonium sulphate was supplied in artificial rain (Heijne *et al.*, 1992).

Negative effects of ammonia on plant growth are known (De Temmerman, 1982; Van der Eerden, 1982), although none was observed in this ex-

periment. Heijne *et al.* (1992) found a detrimental effect of ammonium sulphate on *A. montana* when applied at high concentrations to −VAM plants during 2 yr under field conditions. The lack of a detrimental effect in this experiment may be due to the short duration of exposure to the nitrogenous pollutants.

### *Nitrogen*

VAM colonization stimulated growth in this experiment, while the nitrogen tissue concentration remained constant, resulting in higher total amounts of N in the plant. This indicates that VAM increased the nitrogen uptake and that nitrogen uptake and growth were well-balanced. Indeed, we found higher total amounts of N in mycorrhizal plants in all species. Earlier reports demonstrated that VAM can be involved in nitrogen uptake (e.g. Barea, Azcón-Aguilar & Azcón, 1987) and that VAM fungi can transport N from soil to the host (Kessel, Singleton & Hoben, 1985; Johansen, Jakobsen & Jensen, 1992, 1993; Frey & Schüepp, 1993). The uptake of nitrogen exceeded the growth of roots of *A. montana* and *N. stricta* when infected with VAM, resulting in increased N concentrations. This was not expected since Cliquet & Stewart (1993) demonstrated that mycorrhizal plants translocated relatively more nitrogen to their shoots than control plants.

### *Phosphorus*

In agreement with literature (e.g. Powell & Bagyaraj, 1984), our results show that VAM stimulates phosphorus uptake. Phosphorus appeared to be growth limiting in −VAM *A. montana* and *N. stricta* because neither growth nor P concentration was changed by ammonia or ammonium sulphate. The reduced P concentration in −VAM *V. canina* and +VAM *A. montana* is probably due to 'dilution' of tissue phosphorus as a result of growth (e.g. Johnson, Joiner & Crews, 1980). Similar effects of nitrogen treatments on the P concentration were obtained in earlier experiments (Heijne *et al.*, 1992).

### *Nitrogen:phosphorus ratio*

N/P ratios were lower in +VAM plants, confirming earlier results (Heijne *et al.*, 1992). This appears to be due to the fact that mycorrhizal plants appear to take up relatively more P than N. That the N/P ratio was higher when more nitrogen was supplied in the form ammonia or ammonium sulphate makes it plausible that phosphorus was growth limiting even in VAM infected plants.

### *Effects on VAM colonization*

In the discussion on the effects of ammonia and ammonium sulphate on plants this far, the starting point was that plants are mycorrhizal (+VAM) or non-mycorrhizal (−VAM). However, in mycorrhizal plants, treatments also have an effect on the degree of VAM colonization. The response of VAM colonization to additional nitrogen is different for ammonia and ammonium sulphate. VAM colonization did not change with increasing ammonium sulphate. Sylvia & Neal (1990) found similar results with *Allium cepa* L. which had about twice as high P tissue concentrations as in our experiment. Baath & Spokes (1989) differentiated between low and higher quantities of available phosphorus and concluded that at low phosphorus, which was also the case in our experiment, mycorrhizal colonization was not affected by the nitrogen level. In a previous experiment (Heijne *et al.*, 1992), VAM colonization of *A. montana* and *H. pilosella* L. were not affected by additional ammonium sulphate, while that of *A. dioica* increased with increasing concentrations of ammonium sulphate.

VAM colonization was increased by the ammonia treatment. The number of reports of positive responses of VAM colonization to additional nitrogen are limited. Mosse (1973) suggested that extra nitrogen slowed down the decline of colonization at high P levels in onion. In *Chrysanthemum morifolium* Ramat, Johnson, Menge & Johnson (1982) demonstrated increasing VAM colonization with higher levels of nitrogen added.

According to Hepper (1983) VAM colonization is positively related to the root N concentration at high N/P ratio (over 15). When the N/P ratio is low, VAM colonization would depend on the P availability. We also found this in *A. dioica* (Heijne *et al.*, 1992). Sylvia & Neal (1990) calculated the P/N ratios but they could not find a relation between tissue P/N ratios and root colonization. Both the addition of ammonia and ammonium sulphate increased the N/P ratio of mycorrhizal plants in the present experiment. The N/P ratios were lower than 17·5 in roots of plants not treated with ammonia and were over 15·6 in plants treated with ammonia. Root N/P ratios of plants treated with increasing concentrations of ammonium sulphate were lower than 18·5 for the lowest concentration and were over 27·3 for the highest concentration. The N/P ratios of plants given low quantities of additional nitrogen fall within the range where VAM colonization is dependent on P availability. When given more nitrogen, N/P ratios fall into the range where VAM colonization is dependent on N availability. Thus, with increasing N, the VAM colonization should increase. This did not occur when increasing ammonium sulphate concentrations were applied. Additional nitrogen in the form of ammonia did not result in a correlation in accordance with this theory either (Fig. 3). Hence, the results from this experiment do not support the theory of Hepper (1983). The form in which nitrogen is available might be an

important factor in this respect. Several results were obtained showing different responses in the degree of mycorrhizal colonization when plants were supplied with either nitrate, ammonium or combinations of the two at different ratios (Chambers, Smith & Smith, 1980; Johnson, Jarrell & Menge, 1984; Thompson, 1986; Azcón, Gomez & Tobar, 1992). The difference between the uptake route probably plays a role, for ammonium is mainly taken up via roots while ammonia is mainly taken up via the leaves (Azcón, Gomez-Ortega & Barea, 1982; Van der Eerden, 1992).

### *Sensitivity to drought*

Many authors have shown relations of drought stress and mycorrhizal colonization. Effects were measured after periods of several weeks or months, such as 4–6 cycles for a total of 21 d (Augé, Schekel & Wample, 1986; Augé *et al.*, 1992), 6 wk (Zajicek, Daniels Hetrick & Albrecht, 1987), 12 wk (Osonubi *et al.*, 1991), 91 d (Sweatt & Davies, 1984), 3 months (Bolgiano, Safir & Warncke, 1983) or even 6 months (Johnson & Hummel, 1985). A drought period developed the last 3–4 d of the experiment by not watering the plants the last 8 d. It is expected that this period of drought is too short to influence drastically the effects of the preceding treatments. Thus, it is assumed that the effects measured in this experiment are the result of differences in VAM colonization (+VAM and −VAM), the treatments with or without ammonia during 79 d, and the rain treatments during 71 d. On the other hand however, it is expected that plants as a result of differences in the preceding treatments respond differently to drought stress. Indeed, *A. montana* and *V. canina* plants survived drought stress better when treated with ammonia than when exposed to increasing concentrations of ammonium sulphate. This contrasts with findings in woody plants, such as *P. sylvestris* (Dueck *et al.*, 1990; Van der Eerden & Pérez-Soba, 1992) and *C. vulgaris* (Van der Eerden *et al.*, 1991). Endo-mycorrhizal plants are usually found to have a higher resistance to drought stress than non-mycorrhizal plants (Levy & Krikun, 1980; Hardie & Leyton, 1981; Allen & Boosalis, 1983; Allen & Allen, 1986; Augé, Schekel & Wample, 1986, 1987), but we were not able to demonstrate this effect for *A. montana* and *V. canina* probably because of the short period of drought. Mycorrhizal plants of *N. stricta* however, had a higher percentage living foliage than non-mycorrhizal plants.

### *Ecological consequences*

It is concluded that at these concentrations ammonium sulphate has no adverse effects on the plants themselves or their symbionts. Moderate concentrations of ammonia have a positive effect on both the plants and the degree of mycorrhizal colonization. Ammonia also had a more positive effect than ammonium sulphate on survival of *A. montana* and *V. canina* during drought, a regularly occurring phenomenon in the natural habitat of the species. In contrast to observations that ectomycorrhizal symbiosis is negatively affected by ammonia (e.g. Termorshuizen, 1993), we conclude that VAM colonization is stimulated by gaseous ammonia and is not changed by ammonium. Van Dam *et al.* (1986) and Quené-Boterenbrood (1988) suggested that the species used in this experiment are declining in the Netherlands due to air pollution. If this is true, it is probably not caused by pollutant effects via mycorrhiza. We suggest that altered competitive relations between plant species as a result of increased nitrogenous air pollution (Dueck & Elderson, 1992) is the main factor responsible for the decline of our test species. Other species, especially grasses present in heathland vegetation probably profit more from additional nitrogen (Dueck *et al.*, 1991). In that respect, such species could play an important role since they have potentially high relative growth rates (Heil, 1984; Aerts, 1989) and may be able to adapt to air pollution (Dueck, Dil & Pasman, 1987).

## ACKNOWLEDGEMENTS

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# $NO_2$ increases wheat grain yield even in the presence of $SO_2$

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**Abstract**

A factorial experiment was conducted to determine the pattern of growth and grain production of wheat to intermittent exposure to $SO_2$, and how this response is changed by the additional presence of $NO_2$. Plants were grown in open-top chambers and exposed to one of five levels of $SO_2$ ( < 5 (control), 55, 149, 262 or 544 nl $l^{-1}$), and to one of two levels of $NO_2$ ( < 5 (control) or 170 nl $l^{-1}$) for 4 h per day for 108 days to grain harvest. $SO_2$ alone had little effect at concentrations up to 149 nl $l^{-1}$ but at concentrations of greater than 262 nl $l^{-1}$, growth was very severely affected. Incorporation of $NO_2$ significantly influenced both the vegetative growth and grain yield of plants. While the increase in the mean plant dry matter production in the presence of $NO_2$ was only 47%, the corresponding increase in the mean grain yield was 118%. The $NO_2$-induced increases in the number and weight of grain occurred with an increased vegetative growth.

These changes in plant production cannot be explained as simple responses to fertilization, as plant sulphur and nitrogen concentrations were adequate. These effects, and the increase in the amount of protein stored in grain are consistent with re-allocation of resources from vegetative growth to maturing grain. Thus, in addition to having the normal fertilizer effect, $NO_2$ also has influenced the partitioning of photoassimilates, favouring the production of grain. In the absence of $NO_2$, the fraction of the biological yield which was allocated towards grain filling was 0.375 (S.E. = 0.015) and when $NO_2$ was added this significantly (*$P < 0.001$) increased to 0.515 (S.E. = 0.011).

## 1. Introduction

Many industrial processes such as coal and oil combustion, and roasting of some mineral ores produce sulphur dioxide ($SO_2$) and nitrogen oxides (NO and $NO_2$) which are released into the environment. In many developed countries emissions and ambient air concentrations of $SO_2$ are decreasing in line with national and international policies; however, $SO_2$ concentrations in many cities in developing countries are still increasing (GEMS, 1988). Ambient air concentrations of NO and $NO_2$ are increasing in cities in both developing and developed countries around the world (GEMS, 1988). The atmospheres of cities and areas near heavy industry usually contain mixtures of $SO_2$ and $NO_2$.

Most studies of the response of plants to mixtures of $SO_2$ and $NO_2$ indicate that at low concentrations, mixtures may cause effects which are additive, synergistic, or antagonistic, although the most common response in long-term growth of grasses is synergistic (World Health Organisation, 1987). However, both $SO_2$ and $NO_2$ are potential nutrients to the leaf after uptake, as they can be oxidised to sulphate and nitrate, reduced and then metabolised to amino acids and proteins (Rennenberg, 1984; Wellburn, 1990). In a

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review of exposure-response relationships, Roberts (1984) concluded that continuous exposure to low concentrations of $SO_2$ (about 20 nl $l^{-1}$ for nine species and 40 nl $l^{-1}$ for ryegrass) can result in growth stimulation of about 5–10%. Studies with cereals have shown similar results. Exposure of barley to 42 nl $l^{-1}$ of $SO_2$ for 4 h $day^{-1}$ resulted in shoot height and weight exceeding controls by about 10% (Murray and Wilson, 1990). Fowler et al. (1988) found that barley exposed to unfiltered air containing 7–12 nl $l^{-1}$ $SO_2$ and 21–36 nl $l^{-1}$ $NO_x$ increased growth and/or yield by about 8% compared with filtered air. Barley exposed in the field to $SO_2$ concentrations up to approximately 50 nl $l^{-1}$ were heavier and had more tillers than control plants (Baker et al., 1987). Although most studies have indicated the phytotoxic effects of $NO_2$, some studies have suggested growth-stimulatory effects of $NO_2$ (Troiano and Leone, 1977; Marie and Ormrod, 1984; Okano et al., 1985; Edelbauer and Maier, 1988; Sandhu and Gupta, 1989). Consequently growth can be increased or decreased by exposure to $SO_2$ or $NO_2$ depending upon the exposure conditions and soil nutrient levels.

Although there have been previous studies of the effects of mixtures of $SO_2$ and $NO_2$ on the growth of cereals, few have continued to harvest, so that the effects of the pollutants on grain growth and quality, and the changes in the relative demands of sinks after anthesis have not been examined. This is important as grain provides a potential major sink for the storage of excess nitrogen compounds. Some studies have produced conflicting results as Whitmore and Mansfield (1983) found that growth of grasses exposed to $SO_2$ and $NO_2$ favoured vegetative growth over reproductive growth, resulting in a smaller number of culms. In contrast, Pande and Mansfield (1985) found that $NO_2$ increased the weight of spikes and 1000 grain weight in barley, at the expense of vegetative growth.

The purpose of this experiment was to determine the pattern of growth and yield response to intermittent exposure to $SO_2$ in a cereal growing in the ground under near-ambient climatic conditions, and how this response is changed by the additional presence of $NO_2$. A broad range of $SO_2$ concentrations was selected to investigate the full range of exposure and response relationships, from potential stimulation, through mild toxicity to severe toxicity. The experiment was not attempting to simulate only ambient concentrations.

## 2. Materials and methods

### 2.1. Fumigation conditions

Twenty open-top chambers (Heagle et al., 1973) were used in the fumigation. As the fumigation system has been described in detail previously (Clarke and Murray, 1990), it is only summarised here. Each chamber was 3 m in diameter and 2.4 m tall and the output of the fan was 1 $m^3$ $s^{-1}$ enabling an air exchange rate of about 3.5 air changes per minute.

Dried air was mixed with bottled anhydrous $SO_2$ from a temperature-controlled cylinder and passed through a regulator, mass flow controllers and series of needle valves into the inlets of the fumigated chambers. $SO_2$ was monitored using a timer-controlled electronic sequencer connected to solenoid valves. $SO_2$ was measured using a Thermo Electron pulsed fluorescence analyser, calibrated with a Thermo Electron model 145 calibrator with National Bureau of Standards traceable certified permeation tubes. Monitoring within the chambers showed that $SO_2$ distribution was uniform. Bottled anhydrous nitric oxide (NO) was continually mixed with dry air in a mixing chamber to facilitate the oxidation of NO to $NO_2$ at a constant rate. The nitrogen oxides mixture was passed through a regulator, mass flow controller and needle valves to the inlets of the required chambers. The concentrations of NO and $NO_2$ were monitored in each chamber using a Monitor Labs Chemiluminescent Nitrogen Oxides Analyser, Model 8840, calibrated by the gas phase titration technique. A certified reference nitric oxide gas was obtained

from CIG (Melbourne), and diluted with a Monitor Labs Model 8500 calibrator. A Thermo Electron Model 143 calibrator was used with certified permeation tubes to check the functioning of the catalytic converter in the analyser. Pollutant monitoring was controlled using a time-sharing system. Data were recorded with a Starlog portable logger (Unidata, Australia).

The experiment consisted of a completely randomised design with ten treatments, each duplicated: five $SO_2$ treatments, and two $NO_2$ treatments in factorial combinations (Table 1). Fumigation was for 4 h $day^{-1}$ (1000–1400 h) 7 days $week^{-1}$ for 108 days. As the $NO_2$:NO ratio in the chambers was 9:1, for simplicity, only the $NO_2$ concentration is given in this paper. Monitored background concentrations at the experimental site of $SO_2$ were $<5$ nl $l^{-1}$, annual average $NO_x$ concentrations were $<6$ nl $l^{-1}$ (NO:$NO_2$ was approximately 3:1). Monitoring of $O_3$ at the experimental site showed typical daily 1 h maximum ambient concentrations of about 20 nl $l^{-1}$.

### 2.2. Climatic conditions

The experiment was conducted from late winter to mid-summer (August – December). The mean daily maximum temperature was 23.0°C and the minimum temperature was 13.4°C. The mean daily ambient relative humidity at 0900 was 61.2% and at 1500 it was 50.2%. Mean temperatures were about 1°C higher inside the chambers than outside and relative humidity was about 1.5% lower inside the chamber than outside. Irrigation took place when necessary to supplement natural rainfall.

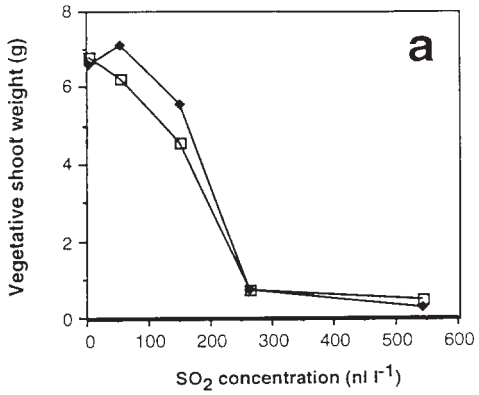
### 2.3. Plant culture

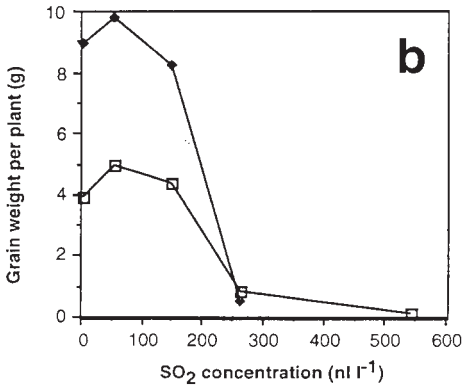
Seeds of wheat (*Triticum aestivum* cultivar 'Banks'), were planted in peat pots in a glasshouse. Three weeks after sowing, the seedlings were removed from the glasshouse and 11 plants per chamber (22 per treatment) were randomly assigned to each of the 20 chambers and transplanted into the ground. Each chamber had been pre-treated with the herbicide Roundup (Monsanto, active constituent Glyphosate) and was fertilized with both macro and micro-nutrients. Each chamber was pre-treated with the herbicide Roundup (Monsanto, active constituent Glyphosate). Each chamber was fertilized with a trace elements and superphosphate mixture (analysis: 4.3% P, 10.1% S, 0.6% Cu, 0.3% Zn, and 600 p.p.m. Mo) at a rate of 30 g $m^{-2}$, superphosphate (analysis: 8.4% P, 10.2% S) at a rate of 65 g $m^{-2}$, and potassium chloride at a rate of

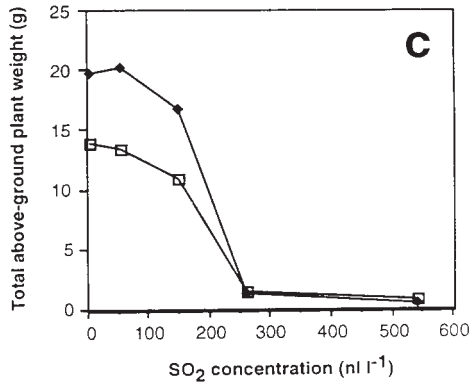
Table 1
Fumigation characteristics of the $SO_2$ and $NO_2$ exposure regime. All concentrations are in nl $l^{-1}$

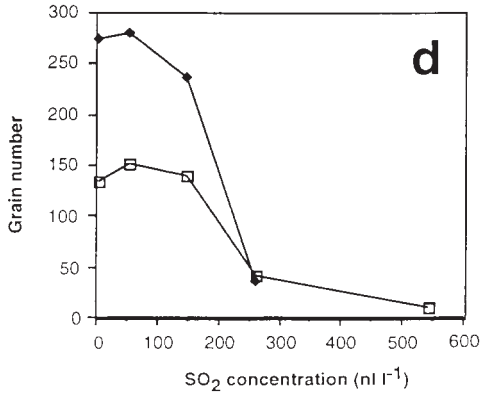
| $SO_2$ Level | Fumigated 4 h arithmetic mean | S.D. | Percentile | |
|---|---|---|---|---|
| | | | 10th | 90th |
| 1 | <5[1] | <5 | <5 | 7 |
| 2 | 55 | 24 | 22 | 86 |
| 3 | 149 | 59 | 76 | 223 |
| 4 | 262 | 96 | 142 | 390 |
| 5 | 544 | 154 | 351 | 743 |
| $NO_2$ Level | Fumigated 4 h arithmetic mean | S.D. | Percentile | |
| | | | 10th | 90th |
| 1 | <5[1] | <5 | <5 | 7 |
| 2 | 170 | 60 | 101 | 249 |

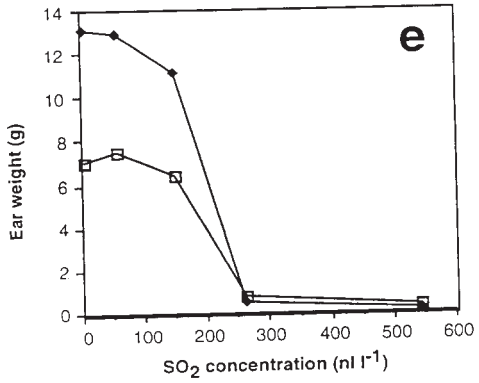
[1]Below the reliable detection limit of the analyser.

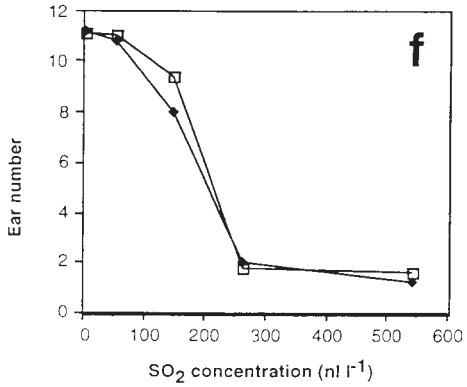

a
Vegetative shoot weight (g)
0
2
4
6
8
0 100 200 300 400 500 600
SO2 concentration (nl l-1)


b
Grain weight per plant (g)
0
2
4
6
8
10
0 100 200 300 400 500 600
SO2 concentration (nl l-1)


c
Total above-ground plant weight (g)
0
5
10
15
20
25
0 100 200 300 400 500 600
SO2 concentration (nl l-1)


d
Grain number
0
50
100
150
200
250
300
0 100 200 300 400 500 600
SO2 concentration (nl l-1)


e
Ear weight (g)
0
2
4
6
8
10
12
14
0 100 200 300 400 500 600
SO2 concentration (nl l-1)


f
Ear number
0
2
4
6
8
10
12
0 100 200 300 400 500 600
SO2 concentration (nl l-1)

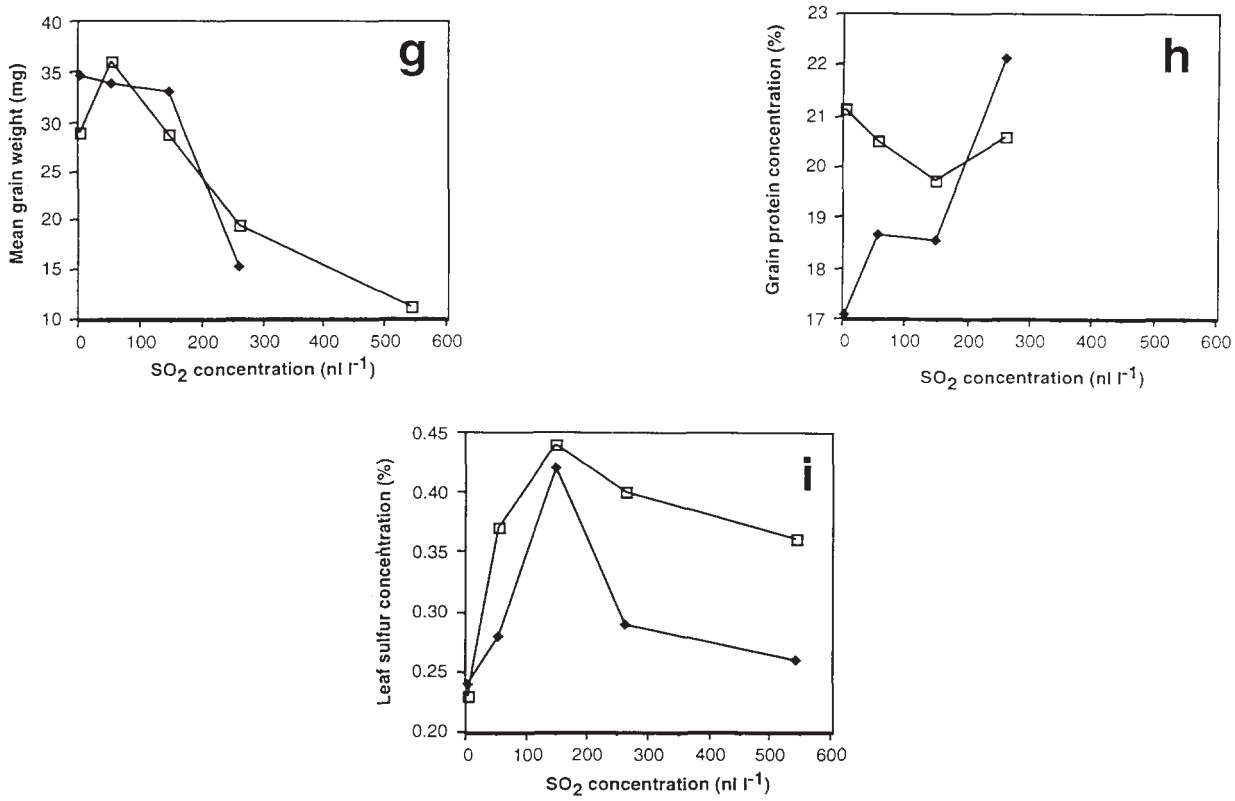



Fig. 1. $SO_2$ and $NO_2$ concentration-response relationships for wheat 'Banks' grown in open-top chambers. Plotted values represent arithmetic means of the response variables. The symbol -□- represents $SO_2$ only treatments, and the symbol -◆- represents $SO_2+NO_2$ treatments. The arithmetic mean $NO_2$ concentration was 170 nl $l^{-1}$. The NO:$NO_2$ ratio was 1:9. The data in graphs a - g are expressed on a per plant basis.

5 g $m^{-2}$. Typical laboratory analysis of the soil in the chambers was 2 p.p.m. $NO_3$, 1 p.p.m. $NH_4$, 8 p.p.m. P, 70 p.p.m. K, 2% organic C, 400 p.p.m. reactive Fe, and pH 7. The plants were sprayed once with the insecticide Rogor (Chemspray, active constituent Dimethoate) to protect against insect damage.

Table 2
Results of regression analysis of grain production and vegetative growth under different $NO_2$ treatments

| Treatment | Mean grain yield (g per plant) | Mean vegetative growth (g per plant) | Harvesting index $\beta\pm$ (SE) |
|---|---|---|---|
| $SO_2$ | 3.73 | 8.05 | 0.375±0.015 |
| $SO_2+NO_2$ | 8.14 | 11.81 | 0.515±0.011 |
| (*P*-value) | <0.001 | <0.01 | <0.001 |

SE, standard error of the mean.

### 2.4. Harvest

The plants were cut at the soil line, measured and dried at 70°C to constant weight. As the experiment was aimed to investigate plants growing in the ground, not in pots, it was not feasible to fully recover all roots, so below-ground components were not investigated. Harvesting index as described by Donald and Hamblin (1976), the ratio of harvested grain dry weight to total above ground dry weight was calculated to assess the efficiency of grain production or partitioning of photosynthetic product between economic yield and the rest of the plant.

Plant material was ground to pass a 40 mesh

sieve in a Wiley hammer mill, prior to analysis for sulphur (Hunt, 1980) and nitrogen determination by Kjeldahl digestion and distillation.

### 2.5. Statistical analysis

The experiment used a completely randomised design, and was duplicated so that chamber could be used as a factor in the analysis. Plant response data were analysed using the SPSS-X statistical package (Version 3.0). Preliminary statistical analysis using a 3-way ANOVA established that there was no significant interaction with the chamber factor, which justified pooling individual observations across duplicates. Response variables were subjected to a two-way analysis of variance to test for main and interactive effects of $SO_2$ and $NO_2$. Homogeneity of variance was tested using Cochran's C-test. Where variances showed heterogeneity, the data were log-transformed to achieve homogeneity. Linear regression was used to compare the grain yield production against the total vegetative (biological) yield for the different $NO_2$ treatments.

## 3. Results

Vegetative shoot weight was decreased by exposure to 149 nl $l^{-1}$ of $SO_2$, but grain weight per plant was not affected. However 262 nl $l^{-1}$ of $SO_2$ caused severe reductions in both vegetative shoot weight (90%) and grain weight per plant (79%) (Fig. 1a,b).

Incorporation of $NO_2$ had a significant positive effect on vegetative growth and grain production. While $NO_2$ has caused a 47% increase in the total vegetative growth, the corresponding increase in the grain production was 118%. The harvesting index (HI or $\beta$) links the grain production (y) to total vegetative growth (x) by the relationship $y=a+\beta x$. The $\beta$ values with and without $NO_2$ were 0.515 and 0.375, respectively and were significantly different ($P<0.001$) (Table 2). Although the quantity of grain was increased by $NO_2$, the grain protein and leaf sulphur concentrations were generally decreased (Fig. 1 h,i).

Exposure to the combination of $NO_2$ and 55 or 149 nl $l^{-1}$ of $SO_2$ stimulated ear weight (Fig. 1 e) and the number and weight of grain produced per plant, but had no effect on the vegetative shoot weight, ear number or the average weight of a grain. $SO_2$ concentrations up to 149 nl $l^{-1}$ with $NO_2$ approximately doubled the weight of ear per plant. Grain production was increased by producing more grain per ear, not by producing more ears or larger grain. Not surprisingly, the response to exposure to mixtures of $NO_2$ and higher $SO_2$ concentrations showed a response dominated by the response to $SO_2$. The effects were similar to $SO_2$ alone, and for most parameters the interaction term was not significant (Table 3).

As may be expected, exposure to $SO_2$ at 149 nl $l^{-1}$ significantly increased the foliar sulphur concentration, although it did not increase further with increasing $SO_2$ concentration, probably because of toxicity causing a decreased rate of uptake of $SO_2$. $NO_2$ alone had no effect, but the in-

Table 3
Mean squares from the two-way analysis of variance for response variables of wheat 'Banks' exposed to $SO_2$, $NO_2$ or their combination

| Source of variation | d.f. | Vegetative shoot weight | Aboveground total plant weight | Ear number | Ear weight | Grain number[1] | Grain weight[1] | Average grain weight ($\times 10^{-4}$) | Leaf sulfur conc. ($\times 10^{-2}$) | Grain protein conc. | Shoot weight: grain weight ratio[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $SO_2$ | 4 | 405.3*** | 2749*** | 947.8*** | 1064*** | 13.37*** | 9.68*** | 97.61*** | 5.73*** | 9.18** | 0.57 |
| $NO_2$ | 1 | 5.1 | 656*** | 6.4 | 519*** | 5.04* | 4.27** | 0.63 | 5.66*** | 26.46*** | 0.68 |
| $SO_2 \times NO_2$ | 4 | 3.8 | 131* | 4.4 | 101*** | 1.21 | 0.82 | 2.15 | 0.82 | 16.49*** | 1.54*** |
| Residuals | 197 | 5.9 | 49 | 15.8 | 22 | 0.77 | 0.42 | 1.38 | 0.38 | 1.92 | 0.22 |

[1]Natural log transformed.
Levels of significance: $P=0.05$ (*), $P=0.01$ (**) and $P=0.001$ (***).

crease in foliar sulphur concentration caused by $SO_2$ was prevented in all of the plants exposed to mixtures of $SO_2$ and $NO_2$ plants except at 149 nl $l^{-1}$ $SO_2$. This appears to have largely been the result of a growth dilution effect.

## 4. Discussion

$NO_2$ caused large increases in the number and weight of grain which were maintained in the presence of low or moderate concentrations of $SO_2$ (Fig. 1 b, d). Other authors have previously reported some indications of growth stimulation in response to continuous exposures to $NO_2$ alone at similar concentrations. Tomato exposed to 230 nl $l^{-1}$ for 80 h or 380 nl $l^{-1}$ for 164 h (Troiano and Leone, 1977) and 110 nl $l^{-1}$ for 28 days (Marie and Ormrod, 1984), sunflower exposed to 200 nl $l^{-1}$ for 2 weeks (Okano et al., 1985) and pea exposed to 112 nl $l^{-1}$ for 3 weeks (Edelbauer and Maier, 1988) produced some evidence of growth stimulation. Sandhu and Gupta (1989) reported increases in relative growth rate about 50% in black turtle bean (*Phaseolus vulgaris*) *exposed to* 50 *nl* $l^{-1}$ for 7 h day$^{-1}$, for 3 weeks. Exposure to 100 nl $l^{-1}$ increased the total plant weight by 75%, number of pods by 86% and relative growth rate by 50%.

Increases in plant growth parameters can be real or apparent. Real growth stimulation can most readily be explained by a response to an increase in plant nutrient status, although there may be other causal factors. Growth increases in plants in response to exposure to $NO_2$ may result from an improvement in plant nitrogen status. Rowland et al. (1987) showed small stimulations of shoot and root dry weight of barley from exposure to 300 nl $l^{-1}$ of $NO_2$ for 9 days, but only in plants deprived of nitrate in the hydroponic culture solution. In contrast, Troiano and Leone (1977) reported an increase in the weight of leaves and stems of tomato with optimal nitrogen nutrition exposed to $NO_2$, but not in plants with low nitrogen nutrition. Similarly, exposure to $NO_2$ resulted in increased grain production in barley grown at adequate plant nitrogen status (Murray et al., 1992). Analysis of grain of our control plants indicated a nitrogen concentration of 3.4 %, which indicates an adequate nitrogen nutrition (Reuter and Robinson, 1986). The control plants had a leaf sulphur concentration of 0.23%, indicating that they also had an adequate sulphur nutrition, which is in the range of 0.15–0.4% (Reuter and Robinson, 1986).

An apparent grain yield stimulation can result from changes in resource allocation. The harvesting index value of 0.515, obtained under the combined influence of $NO_2$ and $SO_2$, is approaching the upper limit of 0.62 for wheat as suggested by Austin et al. (1980). Similarly, Gifford et al. (1976) indicated that the increase in grain production could possibly be achieved by preferential partitioning of photoassimilates to harvested organs. This may be done by genetic or chemical manipulation and in this instance it is via the latter method. Carbon partitioning is influenced by a range of factors discussed by Wardlaw (1990), which change during development, and it is also sensitive to environmental changes. Exposure of crops to $SO_2$ and $NO_2$ can have more severe effects on root growth than shoot growth (Pande and Mansfield, 1985; Murray, 1985). However, this can change because of climatic factors or development stage as marked differences in assimilate distribution in *Poa pratensis* exposed to $SO_2$ and $NO_2$ were found between seasons in a long fumigation (Mansfield et al., 1986).

After uptake by the leaf, $NO_2$ participates in the normal pathway of nitrate reduction followed by synthesis of amino acids and proteins as a means by which plants detoxify $NO_2$ (Wellburn, 1990). Nutritional imbalances often result in the accumulation of carbohydrates in stems and leaves which are remobilised for storage in the grain at the later stages of grain development. The contribution of stem reserves in wheat can approach 50% of the final grain weight, if the plant is under stress and the supply of current photosynthate is reduced (Wardlaw, 1990). Okano et al. (1985) suggest that nitrogen derived from $NO_2$ is transferred from leaves to rapidly growing parts of the plant, probably through the phloem, along with photosynthates. After anthesis in cereals, grain growth dominates vege-

tative growth (Wardlaw, 1990). Consequently, grain is a major sink for nitrogen compounds in cereals after anthesis. Storage of nitrogen compounds in grain may provide a means to avoid the toxic effects of excess nitrogen compounds in cereals.

The amount of grain protein per plant increased in $NO_2$-treated plants although the grain protein concentration decreased slightly in this experiment (Fig. 1b, h). This was because of the large increase in the weight of grain produced by the $NO_2$-treated plants (with or without $SO_2$ at concentrations up to and including 149 nl $l^{-1}$). Compared with plants not exposed to $NO_2$, the amount of protein in the grain of plants exposed to the mixture of $NO_2$ and $SO_2$, almost doubled. This increase in protein storage in the grain of $NO_2$-treated plants is consistent with patterns of resource allocation in maturing cereals, especially patterns of storage and redistribution of assimilates from senescing organs to the maturing grain, and the role of air pollution stress in modifying resource allocation.

These results emphasise how little we know about the effects of mixtures of air pollutants at low concentrations on plants in the field. They suggest that small but commercially important increases in grain yields and protein concentration due to $NO_2$ and $SO_2$ may be occurring in some areas.

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# Responses of Spring Barley to $SO_2$ and $NO_2$ Pollution

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*ABSTRACT*

*Two-day-old plants of spring barley* Hordeum vulgare *cv Patty were exposed to 100 nl litre$^{-1}$ $SO_2$ and 100 nl litre$^{-1}$ $NO_2$ singly and in combination for 20 days. Exposure to $SO_2$ was found to reduce the root dry weight significantly but total shoot weight was relatively less affected. $NO_2$ applied on its own had very little effect on growth, but in combination with $SO_2$ it caused highly significant reductions in almost all the growth parameters measured. In another study plants of the same age were exposed for 2 weeks to mixtures of $SO_2$ and $NO_2$, ranging in concentration from 40 to 140 nl litre$^{-1}$ of each gas, and growth inhibitions were found to increase with increasing dose. It is concluded that the effects of $SO_2$ and $NO_2$ applied together are greater than would be predicted from their individual effects and that the dose-response curve could be used in a predictive manner for a given set of conditions.*

## INTRODUCTION

Sulphur dioxide and nitrogen dioxide are probably the most important air pollutants in those industrialized countries which are situated at higher latitudes, for example in Northern Europe (Heck, 1982). The two gases seldom occur alone because the combustion of sulphur-containing fuels produces nitric oxide as well as $SO_2$. The high temperatures of

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combustion cause atmospheric $N_2$ and $O_2$ to combine, and the NO first produced is then oxidised slowly to $NO_2$ in the atmosphere so that NO and $NO_2$ occur in varying proportions ($NO_x$). $NO_2$ is usually considered to be the most important component of $NO_x$ in relation to plant growth, and in rural locations in the UK the mass ratio $NO_2/SO_2$ is thought to be about 0·8 (Fowler & Cape, 1982). This figure is higher than would be predicted from the known emissions of the two gases, and it may be a result of the fact that the deposition velocities for both NO and $NO_2$ are lower than those for $SO_2$. Fowler & Cape (1982) have estimated that approximately 1·3 million ha of rural land in Western Europe may be subjected to annual arithmetic means of $NO_2$ greater than 80 $\mu g\, m^{-3}$, or approximately 40 nl litre$^{-1}$.

In recent years some estimates of yield loss in cereal crops have been made based on studies with individual pollutants. Godzik & Krupa (1982) compiled a comprehensive review of effects of $SO_2$ on the growth and yield of various crops and were able to provide some data relating yields of cereals to $SO_2$ dose, from both field observations and fumigation experiments. Studies of the effects of mixtures of pollutants on cereals have, on the other hand, been scarce and although Ormrod (1982) was able to review interactions between $SO_2$ and other pollutants in many types of crop, there was virtually no information available on cereals. However, in the first major study on the combined action of $NO_2$ and $SO_2$, Tingey *et al.* (1971) used oats *Avena sativa* in some of their experiments and there was evidence of synergistic effects comparable to those in the other species investigated. Previous studies in this laboratory with $NO_2$ and $SO_2$ have demonstrated more than additive inhibition of growth and of flowering of grasses (Ashenden & Mansfield, 1978; Ashenden & Williams, 1980; Whitmore & Mansfield, 1983). Such effects were not evident during all stages in growth, however, and in the case of *Poa pratensis* the greatest susceptibility to $NO_2$ and $SO_2$ in combination occurred in young plants.

Amundson & Maclean (1982) drew attention to the cost and complexity of obtaining useful information on the combined action of pollutants. Advances in our understanding of this difficult topic will depend in part on an ability to perform dose-response studies under experimental conditions which can be seen as relevant to particular situations out-of-doors. Such research will supplement the fumigations under field conditions which are now reaching increasing levels of sophistication (e.g. Baker *et al.*, 1982; Irving *et al.*, 1982). We report here

some preliminary attempts to establish the magnitude of effects of $NO_2$ and $SO_2$, singly and in combination, on the growth of young barley plants. When $NO_2$ and $SO_2$ were applied together we used equal concentrations on a volume basis (nl litre$^{-1}$) which corresponds to a mass ratio ($NO_2/SO_2$) of 0·72. This was considered to be sufficiently close to the ratio of 0·8 quoted by Fowler & Cape (1982) for rural parts of the UK, which can only be regarded as an approximate value.

## MATERIALS AND METHODS

Spring barley *Hordeum vulgare* L. cv Patty was sown in 10 cm pots containing John Innes no. 1 potting compost, and seedlings were raised in a heated glasshouse and thinned to one per pot two days after germination. At this stage the seedlings were selected for uniformity of appearance, and they were then randomly allocated to the experimental treatments and placed in the fumigation chambers.

The fumigation chambers were wind tunnels of the type described by Whitmore (1982) which have facilities for a partial recirculation of the air to help maintain defined environmental conditions. The chambers were installed in an air-conditioned room and were ventilated with air from within the room which was drawn through charcoal filters to remove any background levels of pollutants. Each chamber had a working area of 0·37 m$^2$, and the individual pots were placed in a tray of Perlite which retained moisture and gave improved control of the water supply. Water was provided daily. Illumination was from a horizontally fitted 400 W metal halide lamp providing a photon flux density of 350 $\mu$E m$^{-2}$ s$^{-1}$ between 400 and 700 nm at plant level. The plants were frequently relocated within the chambers to avoid any effect of small differences in position. The day length was 14 h and the temperatures were 21 °C (day) and 15 °C (night).

The air entering the chambers was mixed with $NO_2$ and/or $SO_2$ to give the required exposure concentrations. The pollutant gases were contained in cylinders supplied by the British Oxygen Company. Concentrations within the chambers were monitored regularly using a Meloy SA285 flame photometric analyser for $SO_2$, and a Meloy NA 520 Chemiluminizer for $NO_2$.

At the end of the required fumigation period the plants were harvested and the numbers of tillers and expanded leaves were recorded, the leaf

**TABLE 1**

Effects of $NO_2$ and $SO_2$, Alone and In Combination, on the Growth of Spring Barley *Hordeum vulgare* cv Patty (Fumigation began two days after germination and continued for 20 days)

| *Treatment* | *Number of tillers* | *Number of leaves* | *Leaf area* ($cm^2$) | *Root dry weight* (*g*) | *Stubble dry weight* (*g*) | *Leaf dry weight* (*g*) | *Shoot: root ratio* |
|---|---|---|---|---|---|---|---|
| Control | 6·5 | 13·0 | 140·2 | 0·106 3 | 0·185 6 | 0·391 6 | 5·4 |
| 100 nl litre$^{-1}$ $NO_2$ | 6·5 | 13·6 | 143·6 | 0·125 5 | 0·182 4 | 0·388 8 | 4·5 |
| 100 nl litre$^{-1}$ $SO_2$ | 5·9 | 12·1 | 131·4 | 0·084 8*** | 0·176 5 | 0·319 9** | 5·8 |
| 100 nl litre$^{-1}$ $NO_2$ + 100 nl litre$^{-1}$ $SO_2$ | 5·7 | 10·2 | 77·3*** | 0·052 1*** | 0·120 4*** | 0·213 9*** | 6·4 |

Significance of differences from controls: **, $P < 0·01$; ***, $P < 0·001$.

area was measured using a Platon Electronic Planimeter. Each plant was then divided into roots, green leaves and remaining stubble for dry weight determinations.

## RESULTS

In the first experiment barley seedlings were subjected to the following treatments: (1) clean air; (2) 100 nl litre$^{-1}$ $NO_2$; (3) 100 nl litre$^{-1}$ $SO_2$; (4) 100 nl litre$^{-1}$ $NO_2$ + 100 nl litre$^{-1}$ $SO_2$. Fumigation continued for 20 days, after which destructive harvests were made. The results are shown in Table 1, and the percentage changes in response to the treatments are in Table 2. It will be seen that there were no statistically significant effects of $NO_2$ applied on its own, and that the responses to $SO_2$ were relatively small. Although there were significant reductions in the dry weights of

**TABLE 2**
Percentage Changes, Relative to Controls, in the Parameters Listed in Table 1

| | $NO_2$ | $SO_2$ | $NO_2 + SO_2$ |
|---|---|---|---|
| Number of tillers | No change | 9·6↓ | 12·3↓ |
| Number of fully expanded leaves | 4·6↑ | 6·9↓ | 21·5↓ |
| Root dry weight | 18·1↑ | 20·2↓* | 51·0↓* |
| Stubble dry weight | 1·7↓ | 4·9↓ | 35·1↓* |
| Leaf dry weight | 1·3↓ | 18·3↓* | 45·4↓* |
| Leaf area | 2·4↑ | 6·3↓ | 44·8↓* |

↑, Increase above controls.
↓, Decrease below controls.
*, Significantly different from controls.

roots and of leaves, the reduction in dry weight of the plant as a whole amounted to only 15% after a treatment with $SO_2$ which would be considered to be a high dose in the context of concentrations experienced in the field. The combination of $NO_2 + SO_2$ led to much more severe inhibition of growth than did $SO_2$ alone, and the action of the two pollutants together would not be predicted from their separate effects. Observations of growth during the 20-day exposure period showed some apparent stimulations due to the two pollutants applied singly. After 8

**TABLE 3**

Growth Parameters for Seedlings of Spring Barley *Hordeum vulgare* cv Patty Exposed for Two Weeks to Different Mixtures of $NO_2$ and $SO_2$

| *Treatment* | *Number of tillers* | *Number of leaves* | *Leaf area* ($cm^2$) | *Root dry weight* (*g*) | *Stubble dry weight* (*g*) | *Leaf dry weight* (*g*) | *Total shoot dry weight* (*g*) | *Shoot:root ratio* |
|---|---|---|---|---|---|---|---|---|
| Control | 3·25 | 7·25 | 59·46 | 0·048 5 | 0·069 6 | 0·158 7 | 0·228 3 | 4·7 |
| 40 nl litre$^{-1}$ $NO_2$ + 40 nl litre$^{-1}$ $SO_2$ | 3·6 | 6·8 | 54·40 | 0·051 4 | 0·068 3 | 0·153 0 | 0·221 3 | 4·3 |
| 60 nl litre$^{-1}$ $NO_2$ + 60 nl litre$^{-1}$ $SO_2$ | 3·3 | 7·00 | 57·34 | 0·043 2 | 0·067 1 | 0·151 0 | 0·218 1 | 5·0 |
| 80 nl litre$^{-1}$ $NO_2$ + 80 nl litre$^{-1}$ $SO_2$ | 3·6 | 7·00 | 51·82 | 0·041 8 | 0·063 1 | 0·146 5 | 0·209 6 | 5·0 |
| 100 nl litre$^{-1}$ $NO_2$ + 100 nl litre$^{-1}$ $SO_2$ | 2·9 | 6·2 | 46·44 | 0·037 6 | 0·065 3 | 0·129 3 | 0·194 6 | 5·1 |
| 120 nl litre$^{-1}$ $NO_2$ + 120 nl litre$^{-1}$ $SO_2$ | 2·4 | 5·5 | 42·32 | 0·031 8 | 0·054 8 | 0·118 2 | 0·173 0 | 5·6 |
| 140 nl litre$^{-1}$ $NO_2$ + 140 nl litre$^{-1}$ $SO_2$ | 2·4 | 4·9 | 35·54 | 0·024 7 | 0·043 5 | 0·101 7 | 0·145 2 | 5·8 |

Details of environmental conditions during fumigation are in the legend for Fig. 1.

days of treatment, the percentages of plants with tillers were: controls, 47%; $NO_2$, 74%; $SO_2$, 60%; $NO_2 + SO_2$, 14%. By 20 days, however, these substantial differences were no longer evident. The reduced tillering in the $NO_2 + SO_2$ treatment after 8 days was accompanied by some clearly visible injury which was mainly on the older leaves. The damage consisted of bleached and necrotic areas which initially appeared along the margins and at the tips of the leaves, and then gradually extended to other parts of the laminae. There was little difference in the visible symptoms of injury in the $SO_2$ and in the $NO_2 + SO_2$ treatments, except that the extent of injury was greater in the latter than in the former.

As the above experiment showed greater than additive effects of $NO_2$ and $SO_2$ when they were presented together, a second fumigation was performed in which two-day-old seedlings of barley were exposed for 14 days to six combinations of the two pollutants ranging from 40 nl litre$^{-1}$ $NO_2$ + 40 nl litre$^{-1}$ $SO_2$ to 140 nl litre$^{-1}$ $NO_2$ + 140 nl litre$^{-1}$ $SO_2$. The results from the final harvest are shown in Table 3, and the relationship between total dry weight and pollutant concentration is presented in Fig. 1. Apart from small stimulations in the number of tillers and in root dry weight (neither of which was statistically significant) there was a steadily increasing inhibition of total dry weight as the exposure concentrations increased. The proportional effect of the pollutants on the dry matter in

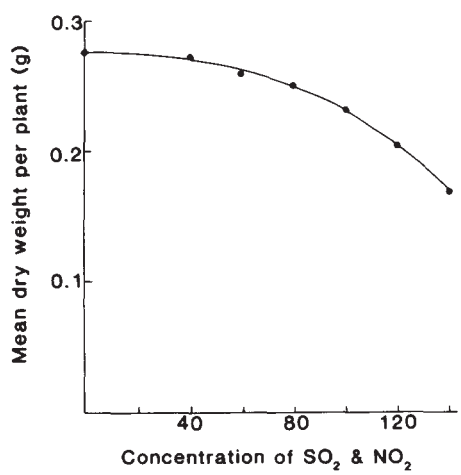


**Fig. 1.** Effects on the dry weight of barley seedlings of fumigation for 2 weeks with mixtures of $SO_2$ and $NO_2$. The concentrations of both gases were equal on a per unit volume basis (nl litre$^{-1}$). Fumigation began 3 or 4 days after germination. Photon flux density was 350 $\mu$E m$^{-2}$ s$^{-1}$ in 14 h days.

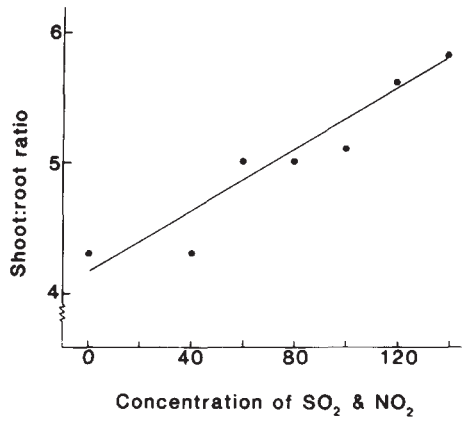


**Fig. 2.** Changes in shoot:root ratio after the fumigation treatments given in Fig. 1. The concentrations of both gases were equal on a per unit volume basis (nl litre$^{-1}$).

roots and shoots did, however, differ and the ratio of shoot to root became progressively greater with higher concentrations of the pollutants (Fig. 2).

## DISCUSSION

$SO_2$ applied on its own significantly reduced the leaf dry weight, and this effect was associated with a reduced number of tillers and consequently a smaller number of fully expanded leaves. A similar response to $SO_2$ was observed in *Dactylis glomerata* (Ashenden, 1978) and *Lolium perenne* (Bell & Clough, 1973). The reduction in leaf number was not a consequence of increased leaf senescence as found in some grasses (Ashenden, 1978), and could largely be attributed to reduced tillering. Thus increased senescence is not a prerequisite for growth reductions in response to $SO_2$.

$NO_2$ on its own has very little effect on the growth of spring barley. There was a slight stimulation in leaf area, which was the result of an increase in the number of leaves. After 8 days, a small increase in the number of tillers was recorded in the plants exposed both to $SO_2$ and $NO_2$. No such differences were, however, evident at the time of harvest after exposure for 3 weeks. These observations support the view of

Thomas & Hendricks (1956) that a low dose of pollutants applied for a limited period may stimulate plant growth. It is likely that the nutritional value of some pollutant-derived ions is the cause of the stimulation.

The combined effects of $SO_2$ and $NO_2$ on spring barley provide further evidence of the extreme toxicity which sometimes results from the simultaneous presence of these two gases. The growth reductions caused by the $SO_2/NO_2$ mixture would not be predicted from the effects observed when the gases are applied singly. The sensitivity of spring barley during its seedling growth is comparable to that of *Poa pratensis* (Mansfield *et al.*, 1982). Growth was progressively reduced with an increase in dose of $SO_2 + NO_2$ (Fig. 1) and it is clear that a curve of this nature could be used in a predictive manner. It is, however, important to recognise that responses to pollutants vary according to the environmental conditions and the state of the plant material. Whitmore & Freer-Smith (1982) found that grasses showed marked growth reductions in $SO_2$ and $SO_2 + NO_2$ during winter and spring, followed by a good recovery in more favourable summer conditions. Thus the curve in Fig. 1 is at present only of academic interest, and it should not be used predictively for plants under field conditions. It is nevertheless an important step forward that we can now obtain a good dose-response relationship, in view of the great difficulties encountered in doing so in the past (see Mansfield & Freer-Smith, 1981).

Greater reductions in the dry mass of the roots than of the shoots (Fig. 2) in plants exposed to $SO_2$ and $SO_2 + NO_2$ have been found in previous studies (Jones & Mansfield, 1982*a*,*b*; Whitmore & Mansfield, 1983). Hitherto, however, no clear indications of a dose-response relationship have emerged and therefore the data in Fig. 2 are of considerable interest. It can be suggested that reduced root growth in barley seedlings could affect their success during a period of water shortage, and hence the impact of pollution on plants in the field could be greater than we have seen here on well-watered plants in controlled conditions.

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# ESTABLISHING CRITICAL LEVELS FOR THE EFFECTS OF AIR POLLUTION ON VEGETATION

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**Abstract:** In recent years, international air pollution effects research has focused on setting critical levels of pollutants, above which adverse effects occur on sensitive receptors. Once established, these levels are used to determine the geographical extent of exceedance for different vegetation categories and ultimately in the development of international protocols for pollution control within the Convention on Long-range Transboundary Air Pollution. Ideally, the critical level for each pollutant and vegetation category should have a relatively simple definition to allow ease of mapping. Nevertheless, the definitions need to be sufficiently robust to apply to sensitive vegetation growing in a diverse range of climates. The restrictions imposed by these criteria have led to complex and delicate negotiations between scientists from the UN/ECE* region. Data for the direct effects of air pollutants on vegetation have been carefully reviewed for applicability to critical levels. To date, critical levels have been set for the effects of $SO_2$, ozone, NOx and $NH_3$ on crops, trees and natural vegetation. The use of effects data to establish these levels is critically assessed in this paper in relation to current and future requirements for mapping.

* United Nations Economic Commission for Europe

**Key words**: critical levels, trees, crops, semi-natural vegetation, level I mapping, level II mapping.

## 1. Introduction

The problem of long-range transboundary air pollution (LRTAP) was recognised in the late 1970s by the establishment of the UN/ECE (United Nations Economic Commission for Europe) LRTAP Convention. In 1987, 16 countries joined the so-called "30% club" by signing the first Sulphur Protocol. These countries were committed to a 30% reduction in S emissions by 1993, based on the values for 1980. However, several countries questioned the validity of 30% as the reduction target, and refused to sign the Protocol. A more subtle and sensitive approach to tackling the problem of transboundary air pollution was required. In 1988, the Convention agreed to adopt the critical levels and loads approach in the development of future Protocols. This is based on the apparently simple concept of reducing pollutant emissions to levels which result in gaseous concentrations or deposition rates which are lower than the critical level or load for adverse effects on the environment (UNECE, 1993). In practice, the approach has been to assign a critical level or load to a given receptor ecosystem, and to compare this value with the actual or estimated concentration at locations where that ecosystem is present. If the critical level or load is exceeded at a given location, it is then possible to estimate the extent to which this exceedance is reduced under a given reduction scenario, or to estimate the level of emission reduction required to eliminate this exceedance. The critical loads concept was used successfully in the revision of the S Protocol (signed in June 1994) in which separate reduction criteria were set for each party to the Convention (see Bull, this volume). Strategies for the control of gaseous pollutants are currently being considered in the development of Protocols for NOx and VOCs. These required the establishment of critical levels for effects on sensitive receptors; the decision

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processes involved in establishing critical levels for the effects of gaseous pollutants on vegetation are described in this paper.

The critical level is defined as the concentration of pollutants in the atmosphere, above which direct adverse effects on receptors, such as plants, ecosystems or materials, may occur according to present knowledge (UN/ECE, 1993). Critical levels for vegetation were first established at a UN/ECE Workshop held at Bad Harzburg, Germany, in 1988. The values were based on literature reviews of the effects of $SO_2$, NOx, ozone and $NH_3$ on vegetation. Where possible, separate critical levels were set for agricultural crops, forest trees, and natural vegetation. These critical levels were reviewed and revised at a second workshop held at Egham, UK, in 1992. By this stage, new information was beginning to emerge which further quantified the effects of ozone on vegetation in Europe. The importance of this information was considered at a further workshop, held at Bern, Switzerland, in 1993. The direct effects of acidity in cloud and mist on foliage, for which a critical level was set at the Egham workshop, have not been considered here, but are reviewed by Cape (1993).

## 2. Requirements for mapping and modelling

Important limitations are imposed by the mapping and modelling procedures which are used to assess critical level exceedance and to evaluate policy options. Pollutant concentrations are not measured at each location and so must be estimated by interpolation from monitoring networks, or by modelling the dispersion of emissions from known sources. The computer simulation models used have large requirements for meteorological and chemical input data, especially in the case of ozone in which the atmospheric chemistry involved is particularly complex. This limits both the spatial and temporal resolution of the estimated concentrations which can be provided.

Because of these practical limitations, it is essential that critical level values be defined in ways which are relatively simple and can be integrated within the existing mapping and modelling procedures. However, the response of vegetation to air pollutants is complex and the effects will depend on a number of factors (sections 3 and 4). To incorporate all of these factors into the definition and application of critical levels would provide a level of detail which could not be handled within the existing assessment procedures, even if it were scientifically possible.

These considerations relate to two approaches to defining critical levels. The level I approach assigns a single value which must be adequate to protect the most sensitive known receptors. This simple approach requires considerable care in identifying the vegetation type and environmental conditions under which pollutant impacts might be greatest. In the level II approach, knowledge of the factors influencing vegetation response to air pollutants is used to define a range of values for different vegetation types, climates, soils etc. This approach is more demanding in terms of mapping requirements and requires a greater degree of scientific knowledge, but can provide a finer resolution of areas which are particularly sensitive to the pollutant of concern.

Thus the key challenges in defining critical levels are to assess objectively the complexity and uncertainty of current scientific understanding; to provide values and concepts which are consistent with the precautionary approach and which have scientific credibility; and to produce values which can be integrated with mapping and modelling procedures.

## 3. The use of experimental data to develop critical levels

### 3.1. SOURCES OF SUITABLE DATA

Exposure-response information is essential in order to define the critical level. This can be obtained experimentally by using different exposure systems, or by field observation. Since critical levels must be applicable to field conditions, data from field-based systems are most relevant.

Open-top fumigation chambers (OTC) have been used extensively in crop loss assessment programmes both in the USA and in Europe. They can be used to manipulate pollutant exposure, and to study interactions between different pollutants, and between pollutants and other environmental factors. However, OTCs are known to alter the microclimate, which, in turn, alters plant growth and development (e.g. Sanders *et al.*, 1991; Fuhrer, 1994b). Pollutant fluxes in OTCs are also higher than in the open field due to higher deposition velocities caused by greater air turbulence (Pleijel *et al.*, 1994). Since pollutant fluxes are more directly related to plant injury and damage than concentrations, the effect at any given concentration in OTCs may be larger than under ambient conditions.

Field-release systems do not alter the microclimate and thus create more realistic environmental conditions (McLeod, 1993). However, unlike OTCs, they are not suitable to create exposures at below-ambient levels. Due to the high costs of these systems, the number of different pollutant treatments per experiment is often too small to create exposure-response functions. As with OTCs, field release systems are suitable for work with crops and small trees, and they provide homogeneous environmental conditions to all plants exposed. An alternative approach is the use of concentration gradients along transects downwind from the pollutant source (Wentzel, 1983). The usefulness of this approach is limited by heterogeneous climatic and edaphic conditions along the transects, and the fact that most sources emit a mixture of pollutants.

Exposure-response relationships can be obtained from time-series analysis where plants are exposed to ambient pollution, and observed effects are related to the pollutant exposure occurring prior to the date of observation (Tonneijck & Bugter, 1991). However, the effect of the pollutant may be modified by environmental factors, and by co-occurring pollutants. Thus critical levels derived from such data cannot be directly compared with those obtained under conditions which provide equal sensitivity of the plants in different pollution treatments.

### 3.2. CHARACTERISATION OF POLLUTANT EXPOSURE

Traditionally, exposure to gaseous pollutants has been described by concentration means for the treatment period, or for selected times during the year (e.g. growing season mean). A few recent studies (eg. Colls *et al.*, 1992) have reported that the effect of $SO_2$ and NOx is controlled by the average concentration, rather than by the occurrence of intermittent peaks. The importance of exposure statistics for ozone has received more attention, and a large number of exposure indices have been proposed and tested. The majority of the tests used retrospective data analysis. Goodness-of-fit was used as the criterion to select the best performing index. Lee *et al.* (1988) analysed data from the U.S. National Crop Loss Assessment Network (NCLAN) for five crops from different sites and years and tested over 600 different indices. These tests revealed that indices which accumulate exposure over time and emphasise

higher concentrations perform better than average concentrations. Analysing data for Loblolly pine (*Pinus taeda*) Lefohn *et al.*(1992) found that indices using a cut-off of 60 ppb or 80 ppb, i.e. 1-hr means >60 ppb or >80 ppb are accumulated, provided better correlation with observed effects than indices without cut-off concentrations. This indicated that higher hourly average ozone concentrations play a greater role in eliciting adverse effects than mid-level or lower concentrations, provided that all other factors are held constant.

## 3.3. THE THRESHOLD PROBLEM

A critical level can be seen as a threshold, i.e. a point at which an effect such as yield or biomass reduction begins to be produced. Hence, the challenge is to find a well-defined rate change in a exposure-response curve. Several types of curves are possible (Cairns, 1992) (Fig. 1): (a) curves with an abrupt change in response (step change), (b) curves with a stimulation at low and a decline at higher exposure, (c) curves with an asymptotic rate of change, and (d) linear curves. For the response to air pollutants, curves of Type b, c or d are commonly found.

All types can be used to derive a threshold, although with different degrees of difficulty. When curves of Type b are analysed, it must be decided whether the threshold for the stimulation or for the inhibition should be used. Examples of Type b curves are found for the effect of S or N containing gases which can have a nutrient effect as well as a detrimental effect on growth depending upon concentration (e.g. McLeod & Baker, 1988, Whitmore & Freer-Smith, 1982). This issue has been dealt with in different ways for each pollutant and receptor (section 4).

It is important to note that thresholds may be artefacts of experimental procedures and may not exist in natural systems. For example, plotting grain yield of cereals from different experiments, expressed as % of the yield in the lowest ozone treatment (i.e. treatment with charcoal-filtered air), against the seasonal mean ozone concentration may yield a curve of Type c, simply because of the difference in the mean ozone concentration in the control treatment of the different experiments (Skärby *et al.*, 1993). This problem is less important when using a cumulative index with the appropriate cut-off concentration. For curves of Type b or c with small positive or negative changes in the low range of exposure, it could be argued that they may be so small as to be biologically unimportant. In this case, an agreement must be sought as to what degree of change the threshold or critical level should be related to. Considering the uncertainty associated with any regression function, it seems reasonable to set the critical level to a degree of change which can be found to be statistically significant in most experiments. From this point of view, a suitable level of effect is 10%.

## 3.4. THE CHOICE OF SUITABLE EFFECTS

The definition of critical levels does not specify which attribute should be selected to determine the pollutant effect. Ideally, a critical level should protect plants from any change, independent of direction (adverse or stimulatory). This would require an array of information including tests on a variety of responses at different levels of biological organization.

One way of combining observations on a range of attributes from different studies is the use of the "envelope" approach. By plotting in a 2-dimensional concentration-exposure diagram any treatment which produced a change in any attribute, conditions which did not produce

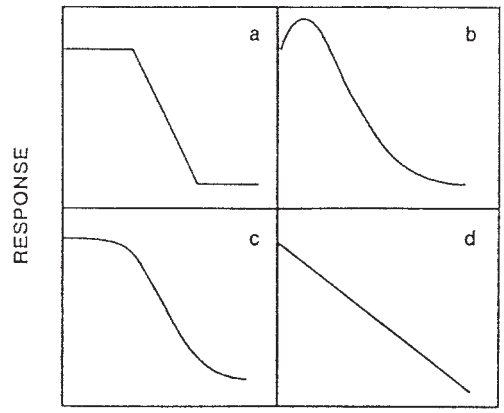


Fig. 1. Types of exposure-response curves (after Cairns, 1992).

effects are separated from actual and potential effective exposures (Fig. 2). However, this approach can only be used to define critical levels in terms of mean concentrations for selected exposure times, and not when using a cumulative-type index. In field experiments which were set up to produce exposure-response relationships, yield (for crops) or growth (for trees) have been the main attributes used to define critical levels.

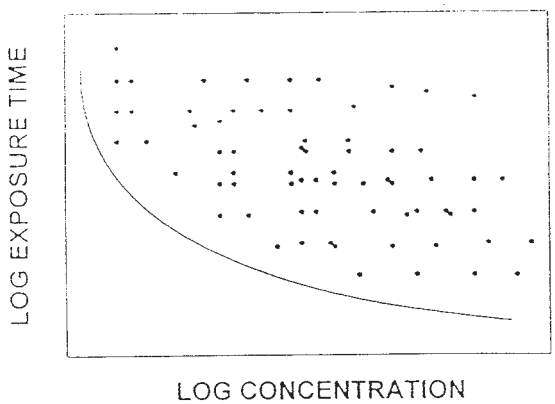


Fig. 2. Diagrammatic representation of a possible relationship between pollutant concentration and exposure time. The points represent experimental conditions under which adverse effects have occurred. The 'envelope' represents the no-observable-effect concentration.

## 3.5. DIFFICULTIES ASSOCIATED WITH THE SENSITIVE SPECIES APPROACH

Non-exceedance of the critical level should guarantee that no adverse effects occur on the most sensitive species. In other words, if the most sensitive species is protected, all other species should be protected as well. However, there is no most sensitive species; a species that is most

sensitive to a particular exposure is not likely to be the most sensitive species to all exposures (Cairns, 1992). Even if a range of species is tested under optimum growing conditions, or conditions providing maximum pollutant sensitivity, their ranking depends on the attribute used to determine the effect. Often, species have been ranked for their sensitivity on the basis of short-term exposures to relatively high concentrations of pollutants. Such screening experiments revealed that some attributes are well correlated, whereas others are not. For example, the relationship between foliar injury and growth depression can be disturbed because of acclimation, for instance by the increase in the production of new leaves to replace injured leaf area (Held *et al.*, 1991). Using the change in growth or yield as a parameter to determine the long-term impact, only a rather small number of species and cultivars have been compared directly, and it is unrealistic to assume at this stage that the most sensitive species has been included. This is particularly true for forest trees. In the past, the choice of an experimental species was not driven by the search for the most sensitive species, but by considering the economic importance of the receptor. Therefore, critical levels depend to a large extent on the availability of data, and they need to be re-evaluated as data for additional species become available.

## 4. Current critical levels

Vegetation is divided into the following broad categories: agricultural crops, forest trees, and semi-natural or natural vegetation. For some pollutants, e.g. NOx, it has not been possible to set separate critical levels for these vegetation types, whereas for others e.g. ozone, sufficient information was available for individual levels to be established for crops and trees. The specific requirements for crops, trees and natural vegetation are considered within this section, together with a justification for the values set so far.

### 4.1. AGRICULTURAL CROPS

Agricultural crops have been studied more extensively than any of the other vegetation types. Most crops have the advantages of having a clearly defined and comparatively short life cycle, a measurable product (i.e. yield) at the end of the growing period, and relatively little genetic variation within an individual cultivar. Thus, one might expect that it would be relatively straightforward to establish appropriate critical levels for this receptor. However, relatively few crops and cultivars have been studied. Effort in Europe has focused on spring-sown legumes and cereals, and major crops such as the oilseeds (rape, linseed, sunflower) are virtually unstudied. Similarly, very little information is currently available for the responses of Mediterranean crops to gaseous pollutants. The level I derivations of critical levels for crops are based on the assumption that crops are growing without biotic or abiotic stress. In reality, crops are usually subjected to pest and/or pathogen attack, pesticide treatment, and in some parts of Europe may be grown under conditions of climatic stress e.g. drought, waterlogging, cold or heat stress. These stresses may result in a decrease in sensitivity (e.g. ozone and drought stress, Tingey & Hogsett, 1985) or an increase in sensitivity (e.g. fungicide/herbicide interaction with $SO_2$, Baker & Fullwod, 1987). These factors add a level of complexity which will need to be taken into consideration when level II critical levels are derived.

For the reasons outlined in section 3, the critical levels for crops have, wherever possible, been set from data from long-term (>2 months) field-based exposure experiments. The yield

of the crop was chosen as the most suitable parameter for derivation of the critical level since this represents a net effect of exposure to pollution throughout the growing season. Furthermore, by choosing yield as the effect parameter, it will eventually be possible to make an estimate of the economic losses associated with air pollution in Europe. Responses to individual episodes have been considered for ozone by the inclusion of a short-term critical level to protect crops from ozone injury.

The long-term critical level for ozone was based on the recently published results of the European Open-Top Chamber programme (EOTC, Jäger *et al.*, 1993). Further analysis of these results confirmed that, as suggested at Egham, yield reduction was highly correlated with the cumulative exposure above a cut-off of either 30 (AOT30) or 40 ppb (AOT40) during daylight hours (Fuhrer, 1994a). Bean (*Phaseolus vulgaris)* was the most sensitive crop tested, but the relationship between AOT40 and yield was least well correlated for this crop. The exposure-response function for wheat (*Triticum aestivum*) (Fig. 3) was selected for the derivation of the critical level because this function had the highest correlation coefficient, and was derived from the most comprehensive data set incorporating experiments with four cultivars, conducted in four countries over five consecutive years. Furthermore, the exposure-response function for wheat was linear (as Fig. 1d). The critical level for reduction in yield was set at an AOT40 of 5300 ppb.h, the exposure which corresponds to a 10% loss in yield (Table 1). This figure was accumulated for daylight hours only since stomatal closure occurs during the dark for crops, and over a three month period when the crops are actively growing (e.g. May-July).

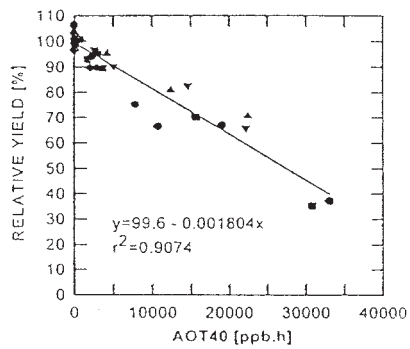


Fig.3. Relationship between the relative yield of spring wheat and ozone expressed as AOT40 calculated for daylight hours during three months (after Fuhrer, 1994a). Different symbols represent data from different experiments.

The provisional short-term critical level was based on an evaluation of field observations of injury development in ambient air as part of the UN/ECE ICP-Crops and The Netherlands Biomonitoring network. Injury development was considered to be a response to 1-3 day ozone episodes rather to a long-term average concentration. Observations showed that injury only occurred when an AOT40 of 700 ppb.h was exceeded when accumulated over three consecutive days.

Agricultural crops were considered to be the least sensitive of the main vegetation types to $SO_2$, NOx and $NH_3$ (Table 1). This was reflected in the establishment of a higher critical level for $SO_2$, and in general statements about the order of sensitivity of vegetation types to NOx and

$NH_3$. The critical levels for these pollutants were based on long-term changes in crop yield and/or biomass, although visible damage caused to horticultural crops by ammonia was considered in the derivation of the critical level for this pollutant.

## 4.2. FOREST TREES

Establishing critical levels for trees is far more difficult than for crops because of a shortage of suitable experimental and observational data. The longevity of trees poses a major problem in the interpretation of experimental data since the majority of studies have involved exposure of 1-5 year old tree seedlings to pollutants. Knowledge on how to scale up the results from seedlings to mature trees or tree stands is not very good at this stage. Consideration needs to be given to the cumulative effect of years of exposure to pollutants and other environmental stresses, together with the potentially greater flux of pollutants due to enhanced air turbulence over the rough surface of stands of mature trees. Therefore, there is a risk that data on seedlings may not reflect responses of older trees and effects from long-term exposure over 60-80 years.

A further consideration is the choice of suitable effect (see section 3.4). Ideally, the critical level should be based on an effect on biomass since this represents the economic value of the tree. This parameter has been measured in a relatively small number of experiments with young trees, but more usually, physiological responses have been measured. The latter include changes in transpiration, photosynthesis, and the activity of specific enzymes (e.g. nitrate reductase following exposure to $NO_2$). Nutrient or beneficial effects of atmospheric inputs of N and S are also of relevance since forest trees are frequently grown on acidic soils with low nutrient content. This range of effects has been considered separately for each pollutant leading to appropriate choices of "adverse effect" for each critical level.

As with crops, the critical level for ozone was based on the AOT40 index for exposure (Table 1). A 10% reduction in biomass over one year was considered to be the critical effect level. It was necessary to accept a very small and variable database (Skärby, 1994). These data met the criteria of being from field-based experiments, being conducted at environmentally realistic exposures, and showing a statistically significant 10% or greater reduction in biomass. On this basis, the critical level to protect trees from growth reductions was set at an AOT40 of 10 ppm.h accumulated for 24 hours per day over a six-month growing season (e.g. April-September). It was agreed that the AOT40 should be accumulated over 24 hours per day because the stomata of some tree species remain open at night and therefore are likely to absorb ozone during the dark (Matyssek *et al.*, 1995).

The critical level of $SO_2$ for forest trees was based largely on field evidence around point sources. This indicated that the threshold for effects on trees was lower than that for crops (Jäger & Schulze, 1988); thus a lower critical level of 20 $\mu g\ m^{-3}$ as an annual mean, was established. A short-term critical level of 70 $\mu g\ m^{-3}$, as a daily mean was abandoned at the Egham workshop in view of the evidence that the presence of episodic peak concentrations does not significantly alter plant responses to long-term $SO_2$ exposure. The interaction between $SO_2$ and low temperature was also considered at Egham. Discussions were based on a model developed by Mäkelä *et al.* (1987) which predicted the time to disintegration of Norway spruce (*Picea abies)* growing at different altitudes with the same $SO_2$ concentration. The model showed that the effective temperature sum (ETS, annual sum of daily temperatures exceeding a threshold) was negatively correlated with time to disintegration. A lower critical

level of 15 $\mu g\ m^{-3}$ was set for trees growing in areas where the ETS above 5 °C is below 1000 °C days. The importance of winter conditions was further recognised by the inclusion of a half-year (October to March) critical level which equals the annual mean.

Establishing a critical level of nitrogen oxides has proved difficult because of insufficient data from experiments using concentrations which are representative of annual means in rural areas (i.e. 10-30 $\mu g\ m^{-3}$). At higher concentrations, increase in nitrate reductase activity is frequently reported (e.g. Thoene *et al.*, 1991), and Wolfenden *et al.* (1991) have demonstrated the accumulation of toxic nitrite in *Picea rubens* exposed to 20 ppb $NO_2$ and $SO_2$ together. The problem arises in interpretation of these biochemical changes in relation to the critical level. At the Bad Harzburg workshop, Guderian (1988) argued that the threshold for biochemical and physiological effects was lower than that for growth, but at the Egham workshop, new evidence indicated that biochemical and growth effects might occur at similar concentrations (Caporn, 1994). This second workshop also considered new evidence on the phytotoxicity of NO, and, while retaining the critical level value of 30 $\mu g\ m^{-3}$ set at Bad Harzburg, it was proposed that it apply to NOx ($NO_2$ + NO) rather than to $NO_2$ only.

Very little information was available at Egham for the establishment of a critical level of $NH_3$ for trees. The values set for natural vegetation (see below) were considered appropriate for trees, although it was acknowledged that trees may be less sensitive to ammonia than natural vegetation.

## 4.3. NATURAL VEGETATION

The most important impacts of air pollutants on natural vegetation may not relate directly to growth or visible injury, but to shifts in species composition, loss of genetic diversity and changes in genetic composition. However, very few experimental studies have addressed the impact of air pollutants over ecological timescales on plant communities, while the interpretation of field studies is often uncertain. Over longer timescales, evolution of tolerance to air pollutants may become an important factor for natural communities (Bell *et al.*, 1991). This may reduce the impacts of pollutants, and in this sense such evolution is not an adverse effect.

A key characteristic of plant communities is the dynamic competitive interaction between component species. Thus, when a pollutant is present at a concentration which influences individual plants, the potential exists for an influence on competition between species. However, most experiments have been conducted over relatively short time periods, and are not representative of the complex horizontal and vertical heterogeneity which exists in real communities. For example, if pollutant exposure over one year causes a 10% decrease in the relative composition of one species, will continued exposure result in complete elimination of that species, or will a new pseudo-equilibrium be reached in which that species is maintained albeit at a lower density? While the former is clearly an adverse effect, the latter needs careful judgement of the size of the effect against other major influences on community composition such as grazing and succession.

The critical level for $SO_2$ of 20 $\mu g\ m^{-3}$ for natural vegetation is the same as that set for forests and, as for forests, is reduced in regions with relatively cold ambient temperatures. There is limited information from field observations and controlled fumigation experiments with heathland, grassland and woodland floor species which provide support for this value (Jäger & Schulze, 1988).

For $NH_3$, the critical level initially proposed at the Bad Harzburg workshop was substantially

reduced at Egham to 8 $\mu g\ m^{-3}$ as an annual mean following the use of the "envelope" approach (section 3.4) to analyse new data on the responses of a number of heathland species (van der Eerden *et al.*, 1991, van der Eerden *et al.*, 1994). These species appeared to be considerably more sensitive than the crop species on which the earlier critical level was based (van der Eerden, 1994). In some cases, the effect observed was an increase in above-ground growth, which, because it was not accompanied by increased below-ground growth, could lead to reduced drought tolerance. Nutrient effects of NOx were also considered

TABLE I

Current critical levels for vegetation (from UN/ECE, 1993).

| Gaseous Pollutant | Agricultural Crops | Forest Trees | Natural and Semi-natural Vegetation | Workshop where values were set |
|---|---|---|---|---|
| $SO_2$ ($\mu g\ m^{-3}$) Annual mean and half-year mean (October to March) | 30 | 20 (or 15 where ETS above 5°C is below 1000 °C days)<br>10 (annual mean for cyanobacterial lichens) | | Egham |
| $O_3$<br>AOT40** (ppb.h) | For yield reduction: 5300 (daylight hours, over 3 months)<br>For injury 700 ppb.h (daylight hours,over 3days) | 10000 (24 hours, over 6 months) | 5300 (daylight hours, 3 months) | Bern |
| NOx (as $\mu g\ m^{-3}$ of $NO_2$ equivalent ie add NO and $NO_2$ in ppb, and convert to $\mu g\ m^{-3}$ using the ratio for $NO_2$ ) | For all categories: Annual mean of 30 4 hour mean of 95 It is assumed that $SO_2$ and/or $O_3$ are close to their critical level. The following order of sensitivity of receptors was proposed: natural vegetation>forests>crops. | | | Egham |
| $NH_4$ ($\mu g\ m^{-3}$) | For all categories: 3300 (1 hour), 270 (1 day), 23 (1 month), 8 (1 year). The following order of sensitivity of receptors was proposed: natural vegetation>forests>crops. | | | Egham |

* effective temperature sum

** accumulation of the hourly means of ozone for the hours in which the mean exceeds 40 ppb.

to be of greater significance for natural vegetation than for crops, although there was insufficient experimental evidence to set different critical levels for each vegetation type.

In the case of ozone, critical levels were defined essentially on the basis of exposure-response relationships for crops and seedlings of commercial trees; there are relatively few data of relevance for natural vegetation. Nevertheless, some comparative studies have shown that some fast-growing wild herbaceous species are highly sensitive to ozone. Recent exposure-response data for ozone provides clear evidence that increases in ozone exposure can modify the outcome of competition in artificial mixtures of grassland species in favour of the

less ozone-sensitive species (Fuhrer *et al.*, 1994, Ashmore & Ainsworth, 1995). In both of these studies, a linear relationship was found between the shift in species composition and ozone exposure expressed as AOT40 values. However, effects on total yield were not found at exposures causing a shift in species composition, but required higher ozone concentrations to be applied. These results indicate that the AOT40 concept can usefully be applied to species mixtures, if the adverse effect of concern is change in species composition rather than total productivity.

There is good evidence that lower plants (mosses, lichens etc.) are particularly sensitive to most gaseous pollutants, with the possible exception of ozone. The sensitivity of most cryptograms to $SO_2$ has been estimated from field correlations, rather than through experimental studies. These suggest that annual mean concentrations of 30 $\mu g\ m^{-3}$ (the critical level for crops) are sufficient to completely eliminate some sensitive taxa, while community change has been detected at concentrations as low as 10 $\mu g\ m^{-3}$. For this reason, a new critical level of 10 $\mu g\ m^{-3}$ $SO_2$ was recommended to protect sensitive lichen species. For $NH_3$, concentrations of 20-30 $\mu g\ m^{-3}$, which caused growth stimulation in higher plants, were found to have adverse effects, such as necrosis and chlorosis, on bryophyte species within the same experimental system (van der Eerden *et al.*, 1991). The data from these species provides strong support for the new critical level for $NH_3$.

## 5. Synopsis

Although there is only one definition for the term critical level, there has not been a common approach to derive critical levels for the different pollutants considered, or for different receptors. The approach chosen in each case depended on the availability and nature of the data. In some cases, such as the critical levels for ozone to protect crops, sufficient quantitative exposure-response data was available to support a purely statistical approach. In other cases, data from field observations and various types of experiments have been pooled and analysed for the "no-observed-effect concentration". Accordingly, different methods have been used to characterise exposure for different pollutants. However, in spite of the diversity of methods for setting critical levels, it is now possible to use any of the existing values to estimate the ecological risk to vegetation by comparing the critical level with the actual level for a given site. Such an analysis of exceedances is technically possible on a pan-European scale. Important limitations arise because most data used to set critical levels have been obtained in north-western Europe, and data from southern areas are scarce. Because of the differences in vegetation types, species, cultivars or genotypes, land management, and climate, the use of the existing critical levels in these regions must be considered very carefully.

The use of a single critical level for each pollutant and for a few types of receptors largely ignores the variability in sensitivity between receptors and the influence of environmental and "internal" factors, such as developmental, morphological and genetic traits. A more detailed risk assessment (level II) can be obtained by incorporating information about the sensitivity of individual species or plant community data, and by introducing modifying factors, such as soil water, temperature, radiation etc. There is urgent need to conduct more research in this direction in order to improve the assessment of the geographical distribution of critical level exceedances in Europe.

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# Tolerance to $SO_2$, $NO_2$ and their mixture in *Plantago major* L. populations

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The possible evolution of tolerance to $NO_2$, alone or in combination with $SO_2$ was investigated in three populations of *Plantago major* L., originating from Hyde Park in central London (polluted site), Ascot (clean site) and The Netherlands. Screening for sensitivity to the pollutants was carried out by means of chronic fumigations with $NO_2$ or $NO_2$ plus $SO_2$ and acute fumigations with $SO_2$, $NO_2$ or their mixture. The Hyde Park population showed smaller growth reductions induced by the pollutant mixture, than did the other populations. In contrast no differential response in terms of foliar injury was observed after an acute fumigation with $SO_2$ + $NO_2$, but the Hyde Park population was the most sensitive to $NO_2$ alone. The results indicate that selection for tolerance to $SO_2$ does not confer tolerance to $NO_2$ alone or the pollutant mixture.

## INTRODUCTION

There is now abundant evidence (Bell *et al.*, 1991) that gaseous air pollution can act as a powerful selective force on plant populations, leading to the evolution of varying degrees of tolerance to acute and/or chronic injury at polluted locations. However, the only pollutant for which this evidence is extensive is sulphur dioxide ($SO_2$), mainly for temperate perennial grass species, with a very limited number of studies on nitrogen dioxide ($NO_2$) and ozone (Bell *et al.*, 1991). Consideration of $SO_2$ alone as a selective force is particularly unfortunate, as $NO_2$ often accompanies it in polluted atmospheres, often at similar concentrations (v/v basis) (Fowler & Cape, 1982). However, Taylor & Bell (1988) have recently demonstrated a higher level of tolerance to both acute and chronic injury caused by $SO_2/NO_2$ mixtures and to acute $NO_2$ injury in *Dactylis glomerata* L. populations collected from a site near a nitrogen fertiliser factory in East London, compared with a bred cultivar population of the same species. In contrast, Ashmore *et al.* (1984) failed to detect any greater degree of tolerance to $SO_2/NO_2$ mixtures in populations of *Lolium perenne* L. collected from polluted parts of southern Poland, compared with cleaner sites in the same region, despite this phenomenon being demonstrated for $SO_2$.

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The present investigation was aimed at extending the studies of Taylor & Bell (1988) to a non-grass herbaceous species. *Plantago major* L. was selected for the investigation, on the basis of a number of criteria. Firstly, this species has been demonstrated in experimental fumigations to display a very high degree of sensitivity to a number of air pollutants and their mixtures. Thus Posthumus (1978) found that it was the most sensitive of 17 species screened for acute injury when subjected to 150 nl litre$^{-1}$ $SO_2$ for 14 days. Subsequently Posthumus & Tonneijck (1980) demonstrated growth reductions after fumigation with only 60 nl litre$^{-1}$ $SO_2$ or 40 nl litre$^{-1}$ $O_3$ for 4 weeks, either singly or in a mixture. Further work by the same group showed the production of visible acute injury after 3 weeks exposure to 30–40 nl litre$^{-1}$ $NO_2$ plus 20–30 nl litre$^{-1}$ $SO_2$ (Wolting, 1980), with up to 20% reduction in growth (Wolting & Mooi, 1984). Secondly, *P. major* is known to exhibit substantial phenotypic and genotypic variation, thereby providing the potential for evolution of tolerance to the pollutant gases to which it shows extreme sensitivity. Thus Sagar & Harper (1964) describe it as 'one of the most variable species in the British flora', while a considerable range of morphological and physiological variation has been related to genetically controlled ecological adaptations (Groot & Boschhuizen, 1970; van Dijk & van Delden, 1981). Finally, a closely related species. *P. lanceolata* L., has been shown to possess the ability for evolution of tolerance to lead (Wu & Antonovics, 1976) and to zinc (Schwantiz & Hahn, 1954).

## MATERIALS AND METHODS

Three separate populations of *P. major* were studied for their response to chronic fumigations with $NO_2$ or $NO_2 + SO_2$ and acute fumigations with $SO_2$, $NO_2$ or their mixture. One of these was supplied from the Research Institute for Plant Protection at Wageningen, in The Netherlands, from a population which had been studied by Posthumus (1978), Posthumus & Tonneijck (1980), Wolting (1980) and Wolting & Mooi (1984) in fumigations with a range of pollutants which indicated its extreme sensitivity to $SO_2$, $SO_2 + O_3$, and $SO_2 + NO_2$. The other two populations were collected from British sites with either low or high levels of $SO_2/NO_2$. The unpolluted site population was obtained as seed from waste land at the Imperial College Field Station at Ascot (Grid Reference SU 945685), a rural location 37 km west of central London where mean annual $SO_2$ and $NO_2$ concentrations are $<10$ nl litre$^{-1}$. Seeds of the polluted site population were collected from mown grassland in Hyde Park in central London (Grid Reference TQ 283801), approximately 3 m from a road with an extremely heavy traffic flow. While no measurements of pollutants were made at this location, central London annual mean $SO_2$ and $NO_2$ concentrations at the time of collection were around 22 nl litre$^{-1}$ and 40 ml litre$^{-1}$, respectively (Ashmore *et al.*, 1988) and in the latter case were probably much higher in view of the proximity of the road.

Seeds of each population were germinated on filter paper and the seedlings transplanted to University of California D1 mix (peat:sand, 3:1) (Matkin & Chandler, 1957) which contained approximately 30 mg kg$^{-1}$ of nitrogen. In one experiment the amount of nitrate added to the mix was modified to give low (10 mg kg$^{-1}$) and high (100 mg kg$^{-1}$) nitrogen levels, in order to determine any possible interactions between soil nitrogen and the impact of fumigation.

Two chronic and three acute fumigations were performed, using the procedures described fully by Taylor (1986) and Taylor & Bell (1988). The chronic fumigations were conducted in a pair of outdoor perspex chambers, each with a volume of 2·25 m$^3$ ventilated with two changes per minute of charcoal-filtered air; inlet air-flow was balanced between the chambers at 7·8 m s$^{-1}$, while other environmental parameters had previously been shown on many occasions to be similar; $SO_2$ and $NO_2$ concentrations were measured by the wet chemical techniques of Anon. (1966) and Mulik *et al.* (1974), respectively, these also being employed in the acute fumigations.

The pollutant concentrations employed in the chronic fumigations were selected on the basis of previous experience as likely to induce growth reductions, without the production of acute necrotic symptoms (Taylor & Bell, 1988). In a preliminary chronic fumigation, ten 4-leaf stage Ascot plants growing in the high N soil and ten in the low N soil were placed in the chambers and subjected to 200 nl litre$^{-1}$ $NO_2$ for 9 weeks in summer; the plants were then harvested and numbers of leaves and flower spikes (with their stalks) counted, prior to determining their dry weight. The second chronic fumigation was performed over a 12 week period (28.2.83–19.5.83), with a mixture of 200 nl litre$^{-1}$ $NO_2$ + 140 nl litre$^{-1}$ $SO_2$. Twenty plants, at the 3-leaf stage of each of the three populations, were placed as matched pairs in either the control or treatment chamber. After 2, 4, and 8 weeks from the start of the fumigation, the length and width of the two largest leaves were measured on each plant. At the end of the experiment, root and shoot dry weights were determined.

The three acute fumigations were all performed over 6 h in a controlled environment cabinet, set at 20°C, with a 75% relative humidity and a photon flux rate of 300 $\mu$mol m$^{-1}$ s$^{-1}$ at plant height. In each case, twenty 5-leaf stage plants of each population were fumigated, randomised within the cabinet, followed by subjective assessment of injury 24 h later, according to the scale 0 (no damage), 1 (one necrotic spot, usually at the leaf tip), 2 (1–25% necrosis), 3 (26–50%), 4 (51–75%), 5 (76–100%). The numbers of leaves in each injury class were used to produce frequency distributions which were tested by Chi-square ($\chi^2$) for significant differences between populations. Two fumigations employed the single pollutants, with 3300 nl litre$^{-1}$ $NO_2$ and 800 nl litre$^{-1}$ $SO_2$. The third fumigation used a mixture of 1600 nl litre$^{-1}$ $NO_2$ and 700 nl litre$^{-1}$ $SO_2$, lower concentrations being employed than before, as a preliminary experiment (not reported here) had indicated that a mixture of these would kill most of the plants.

## RESULTS

Fumigation with 200 nl litre$^{-1}$ $NO_2$ in the preliminary experiment had no significant effect on any growth parameter of the Ascot population, although there was a tendency for higher values to be recorded in the pollution treatment (Table 1). However, a ten-fold increase in soil nitrogen resulted in an increase in all parameters, amounting to more than a doubling in total shoot dry weight, but there were no significant nitrogen/$NO_2$ interactions. In the main chronic fumigation, $NO_2 + SO_2$ significantly reduced leaf length and width after only 2 weeks in all three populations, with a population/pollutant interaction in the form of a greater reduction in the Ascot plants than those from either Hyde Park or Wageningen (Table 2). This reduction in all populations was maintained up to the end of the experiment, but with the nature of the interaction changing: after 8 weeks the leaf length of the Wageningen plants, as well as the Ascot plants, showed a greater reduction than the Hyde Park population; however leaf width showed a reduction in the order Wageningen >

**Table 1. Effects of Fumigation of *Plantago major* (Ascot) plants with 200 nl litre$^{-1}$ $NO_2$ for 9 weeks**

| Soil | Pollution treatment | Leaf no. | Leaf dry wt (g) | Fruit no. | Fruit dry wt (g) | Total shoot dry wt (g) |
|---|---|---|---|---|---|---|
| Low N | Control | 7·20 | 0·90 | 4·80 | 0·78 | 1·68 |
| | $NO_2$ | 7·40 | 1·01 | 5·40 | 0·91 | 1·91 |
| High N | Control | 10·00 | 1·90 | 6·20 | 1·48 | 3·42 |
| | $NO_2$ | 8·66 | 2·54 | 6·00 | 1·88 | 4·42 |
| ANOVA | N | * | *** | ** | *** | *** |
| | $NO_2$ | NS | NS | NS | NS | NS |
| | N × $NO_2$ | NS | NS | NS | NS | NS |

* $P < 0·05$; ** $P < 0·01$; *** $P < 0·001$; NS not signficant.

Ascot > Hyde Park, the differences between all populations being significant. There was also a significant change in response to the fumigation with time, with the Wageningen plants showing an increasing reduction in both leaf length and width over the course of the experiment compared with the other populations. Table 3 shows that the overall impact of $SO_2 + NO_2$ was reflected in the dry weight data, with significant reductions in both shoots and roots, but to a significantly greater extent in the populations from Ascot and Wageningen than that from Hyde Park. The root/shoot ratio was also reduced in all populations, but to a significantly greater extent in the Wageningen compared with the Ascot plants.

All three acute fumigations produced visible injury on the plants in the form of interveinal necrotic patches. The injury took the same form for $SO_2$ and $NO_2$ singly and their mixture, but showed a tendency towards greater severity on the older leaves in the fumigations which included $SO_2$. The data for the individual injury classes after each fumigation are shown in Table 4. The Hyde Park population was significantly more sensitive to $NO_2$ than the other two populations, on the basis of the $\chi^2$ test. However, all three populations were significantly different from each other in their response to $SO_2$, with sensitivity decreasing in the order Ascot > Hyde Park > Wageningen. In the case of responses to the pollutant mixture no significant differences were detected between populations.

**Table 2. Effect of fumigation with 200 nl litre$^{-1}$ $NO_2$ + 140 nl litre$^{-1}$ $SO_2$ up to 8 weeks on mean leaf size (mm) of three *Plantago major* populations (percentage reduction compared with controls is shown in parentheses)**

| Duration of fumigation | Population | | | | | | ANOVA | |
|---|---|---|---|---|---|---|---|---|
| | Ascot | | Hyde Park | | Wageningen | | | |
| | Length | Width | Length | Width | Length | Width | Length | Width |
| 2 weeks | | | | | | | | |
| Control | 36·2 | 18·1 | 23·3 | 13·6 | 28·1 | 15·5 | A*** | *** |
| $NO_2 + SO_2$ | 25·8 | 12·6 | 18·6 | 11·0 | 23·3 | 12·5 | P*** | *** |
| | $(-28·7)^b$ | $(-30·4)^2$ | $(-20·2)^a$ | $(-19·1)^1$ | $(-17·1)^a$ | $(-19·4)^1$ | A × P*** | ** |
| 4 weeks | | | | | | | | |
| Control | 40·9 | 25·9 | 29·8 | 21·3 | 35·5 | 25·6 | A*** | *** |
| $NO_2 + SO_2$ | 26·2 | 15·1 | 21·9 | 14·2 | 23·5 | 13·8 | P** | *** |
| | $(-35·9)^b$ | $(-41·7)^2$ | $(-26·5)^a$ | $(-33·3)^1$ | $(-33·8)^b$ | $(-46·0)^2$ | A × P** | ** |
| 8 weeks | | | | | | | | |
| Control | 45·2 | 34·0 | 36·0 | 29·4 | 41·8 | 35·5 | A*** | *** |
| $NO_2 + SO_2$ | 30·4 | 19·5 | 26·1 | 18·7 | 24·0 | 16·0 | P*** | ** |
| | $(-32·7)^b$ | $(-42·6)^2$ | $(-27·5)^a$ | $(-36·4)^1$ | $(-42·6)^b$ | $(-54·9)^3$ | A × P** | *** |

A, pollutant treatment; P, population; A × P, pollutant × population.
** $P < 0·01$; *** $P < 0·001$.
Different superscripts in each row denote significant differences in pollutant-induced reductions between individual populations at $P < 0·05$.

**Table 3. Effect of fumigation with 200 nl litre$^{-1}$ $NO_2$ + 140 nl litre$^{-1}$ $SO_2$ for 12 weeks on growth of three *Plantago major* populations (percentage reduction compared with controls is shown in parentheses)**

| Population | Pollutant treatment | Shoot dry wt (g) | Root dry wt (g) | Root/ shoot |
|---|---|---|---|---|
| Ascot | Control | 0·67 * | 1·41 * | 2·17 * |
| | $SO_2 + NO_2$ | 0·39 (−41·8)[a] | 0·43 (−69·5)[a] | 1·11 (−48·8)[a] |
| Wageningen | Control | 0·53 * | 1·29 * | 2·54 * |
| | $SO_2 + NO_2$ | 0·25 (−52·8)[a] | 0·26 (−79·8)[a] | 1·05 (−58·7)[b] |
| Hyde Park | Control | 0·46 * | 1·03 * | 2·30 * |
| | $SO_2 + NO_2$ | 0·36 (−21·7)[b] | 0·38 (−63·1)[b] | 1·08 (−53·0)[a,b] |
| ANOVA | A | *** | *** | *** |
| | P | *** | *** | NS |
| | A × P | ** | *** | * |

A, Pollutant treatment; P, population; A × P, pollutant × population.
* $P < 0·05$; ** $P < 0·01$; *** $P < 0·001$; NS not significant.
Different superscripts in each column denote a significant difference at $P < 0·05$.

**Table 4. Acute injury on leaves of three populations of *Plantago major* after fumigation with 3300 nl litre$^{-1}$ $NO_2$, 800 nl litre$^{-1}$ $SO_2$, or 1600 nl litre$^{-1}$ $NO_2$ + 700 nl litre$^{-1}$ $SO_2$ for 6 h**

| Pollutant | Leaf injury | Population | | |
|---|---|---|---|---|
| | | Ascot | Hyde Park | Wageningen |
| $NO_2$ | 0 No damage | 57 | 33 | 57 |
| | 1 One necrotic spot | 8 | 3 | 12 |
| | 2 1–25% | 24 | 29 | 28 |
| | 3 26–50% | 4 | 18 | 2 |
| | 4 51–75% | 2 | 7 | 1 |
| | 5 76–100% | 5 | 10 | 0 |
| | $\chi^2$ | a | b | a |
| $SO_2$ | 0 | 12 | 33 | 70 |
| | 1 | 12 | 14 | 16 |
| | 2 | 26 | 25 | 13 |
| | 3 | 19 | 16 | 1 |
| | 4 | 9 | 5 | 0 |
| | 5 | 22 | 7 | 0 |
| | $\chi^2$ | a | b | c |
| $NO_2 + SO_2$ | 0 | 59 | 64 | 52 |
| | 1 | 6 | 2 | 4 |
| | 2 | 7 | 9 | 18 |
| | 3 | 8 | 4 | 8 |
| | 4 | 5 | 3 | 7 |
| | 5 | 15 | 18 | 11 |
| | $\chi^2$ | a | a | a |

Different letters for $\chi^2$ in each row denote a difference at $P < 0·01$.

## DISCUSSION

In the preliminary experiment, which was aimed at determining the responses of *Plantago major* to chronic concentrations of $NO_2$ alone, there was some indication of a stimulation of growth, reflecting the findings of Taylor & Bell (1988) who reported an increase in growth of *Lolium perenne* L. after fumigation with 200 nl litre$^{-1}$ $NO_2$ for 11 weeks; the lack of significance, however, was probably a reflection of the inadequate level of replication in the design of this preliminary investigation. The plants were clearly nitrogen-deficient in the low N soil, as the higher N soil produced an approximate doubling in shoot dry weight. However, the lack of any indication of a N × $NO_2$ interaction, showed that this deficiency could not be compensated for by $NO_2$ from the atmosphere, despite some suggestion of pollutant-induced growth stimulation, which again is in accord with similar work on *L. perenne* reported by Taylor & Bell (1988).

In the absence of a factorially designed experiment employing chronic levels of $SO_2$, $NO_2$ and their mixture in simultaneous treatments, it is not possible to demonstrate unequivocally a synergistic interaction between the pollutants. However, the present work does demonstrate a massive deleterious effect of adding $SO_2$ to a level of $NO_2$ which had no significant effect on *P. major* over a 3-week shorter period. Furthermore, subjective visual observation of the plants suggested that growth reduction was occurring on exposure to 200 nl litre$^{-1}$ $NO_2$ + 140 nl litre$^{-1}$ $SO_2$ after only 10 days, indicating the extreme sensitivity of this species to the pollutant mixture, reflecting the experience of Wolting (1980), although in the latter case acute injury was induced contrary to the present work. A clear demonstration of population differences in response to $SO_2 + NO_2$ was obtained in this experiment, although the changes in the order of their relative sensitivity with respect to leaf extension over the 8-week period raises the possibility that the results of screening for pollutant tolerance may be confounded by such temporal effects. Nevertheless, overall the dry weight data from the harvest to the end of the experiment provides strong evidence for evolution of tolerance to $SO_2 + NO_2$, with the Hyde Park population showing the smallest growth reduction, in terms of both shoots and roots. This population has certainly been exposed to high $NO_2$, as well as $SO_2$ (albeit declining in recent years) for a prolonged period, thereby providing the selection pressure on such a sensitive species for a shift towards tolerance to the pollutant mixture. The more sensitive Ascot population has bever been subjected to high ambient levels of either pollutant. No details are available on the origin of the Wageningen population, except that it is believed to have originated from the central Netherlands (possibly the Botanic Garden of the University of Nijmegen), where annual $SO_2$ and $NO_2$ levels in the late 1970s were around 10 nl litre$^{-1}$ and 17 nl litre$^{-1}$, respectively (L. Van der Eerden, pers. comm.), and thus

substantially lower than in central London at that time. This indication of evolution of tolerance to an $SO_2/NO_2$ mixture reflects the findings of Taylor & Bell (1988) for two grass species, in the form of smaller reductions after fumigation in root and flowering stem weights of *Dactylis glomerata* plants from a polluted site compared with a bred cultivar, and a similar differential response for both this species and *L. perenne* with respect to pollutant-induced increases in leaf dead weight. It is well known that air pollutants invariably reduce root weight to a greater extent than shoot weight (Kasana & Mansfield, 1986). This is likely to predispose plants to the adverse impacts of drought as well as trampling, grazing and mowing, as a result of the diminished pool of underground storage material available for regrowth (Bell, 1982). Thus it is not unreasonable to suggest that evolution of tolerance to air pollution could occur via selection pressure on the partitioning of dry matter between root and shoot and, indeed, evidence for this has been produced for *D. glomerata*, *Festuca rubra* L. and *Phleum bertolonii* D.C. by Ayazloo & Bell (1981). In the present work, a significant reduction in root/shoot ratio occurred after fumigation in all three populations, but the Wageningen population proved to be significantly more sensitive than the other two. In the absence of information on the pollutant regimes at the site of origin of the Wageningen population, and in view of the interaction only being significant at $P < 0{\cdot}05$, nothing can be stated with confidence concerning this phenomenon in the present investigation.

The acute fumigations provide an interesting contrast with the long-term chronic exposure to $SO_2 + NO_2$. In this case no significant differences were recorded in response to the pollutant mixture between any of the populations. This provides support for the findings of Taylor & Bell (1988) who found no relationship within species between relative sensitivity to acute $NO_2/SO_2$ and chronic $NO_2/SO_2$ injury, following earlier similar findings for $SO_2$ alone by Ayazloo & Bell (1981) and Wilson & Bell (1985). However, a possible explanation of these differences in relative tolerance to acute and chronic fumigations may lie in observations of differences in habit and surface morphology. For example, studies by Sharma & Tyree (1973) and Sharma & Butler (1975) have shown a positive association between trichome density of both tree and herbaceous species and the prevailing level of air pollution. The possession of a pubescent leaf surface may act as an avoidance mechanism by increasing aerodynamic resistance to pollutant uptake and/or by acting as an extra sink for removal of toxic gases over its increased surface area. The *P. major* population from Hyde Park had flatter, hairier leaves compared with the other two populations. It is possible that this characteristic resulted in lower uptake of chronic levels of pollutants, thereby providing an apparent degree of tolerance, but that in the presence of acute concentrations this avoidance mechanisms is lost, thereby resulting in a disappearance of the relative differences in sensitivity. The Hyde Park plants proved to be the most sensitive to acute $NO_2$, which is unexpected in view of its likely exposure for a prolonged period to the highest ambient $NO_2$ concentrations of the three populations. In the case of $SO_2$, the results were more in accordance with expectations, with the Ascot plants being more sensitive than the Hyde Park plants, but it is difficult to explain the highest level of tolerance being recorded in the Wageningen plants. However, the results strongly support the suggestion by Ashmore *et al.* (1984), Taylor & Bell (1988) and Bell *et al.* (1991) that selection for tolerance to acute $SO_2$ injury does not confer tolerance to $NO_2$ alone or to $NO_2/SO_2$ mixtures.

Whilst there are some apparently contradictory results in the present investigations, overall they can be taken to present further evidence for evolution of tolerance to $NO_2/SO_2$ mixtures, in a species not hitherto investigated for such behaviour. At the same time they indicate the complex nature of this phenomenon and the need for further research into the selective pressures on an intra-specific basis of the common phytotoxic pollutants which co-occur in ambient air. Furthermore, the physiological basis—whether avoidance or true tolerance—remains to be elucidated.

## ACKNOWLEDGEMENTS

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# Effects of Long-term Exposures to $SO_2$ and $NO_2$ on *Poa pratensis* and Other Grasses

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*ABSTRACT*

*The results of two long-term experiments are reported in which the amenity grass* Poa pratensis *L. cv. Monopoly was exposed to $SO_2$, $NO_2$ and $SO_2 + NO_2$ in concentrations found in some urban areas. Seedlings were exposed from October under conditions close to ambient, and sequential harvests were made to determine effects on the growth of roots and shoots. Severe, more than additive, effects were found with $SO_2$ and $NO_2$ in combination during late winter, but in later growth there were no interactive effects of the two pollutants. During rapid growth in the summer the dry weights of the shoots recovered from the effects of the pollutants, but there were much smaller numbers of flowerheads in the $SO_2$ and $SO_2 + NO_2$ treatments. The inhibition of growth earlier in the year, at the time when flowering is initiated, is considered to be the cause of smaller numbers of culms.*

*Both $SO_2$ and $NO_2$ are known to reduce net photosynthesis, and the growth analyses showed that compensatory mechanisms were operating to counteract reduced photosynthetic efficiency. The $SO_2$ and $SO_2 + NO_2$ treatments led to increased leafiness, and a concomitant reduction in dry weight of the roots. The leaf area per unit leaf weight was also increased.*

*Further experiments suggested that severe pollution effects were associated with early stages of development as well as with slow growth in winter. In a simulated sward the effects persisted for longer, into early summer, probably because the development of each individual was slowed.*

*The results of ancillary experiments on the following are reported:*



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P. pratensis *L. cv. Arina*, Lolium perenne *L. cv. S23 and cv. S24*, Phleum pratense *L. cv. Eskimo and cv. S48, and* Dactylis glomerata *L. cv. S37. The magnitude of effects differed between species and cultivars, and* P. pratensis *cv. Arina provided an interesting example of apparent resistance to $NO_2$ pollution.*

## INTRODUCTION

During the last 10 years there have been many investigations of the effects of $SO_2$ pollution on grasses, but the picture that has emerged from these studies is a confused one. Very different responses have been found in experiments, even when repeated by the same group of workers on a single grass cultivar. A detailed survey of the literature by Bell (1982) has, however, enabled him to draw some useful conclusions. The differences in response can be ascribed to a number of factors, some of which relate to techniques of fumigation (e.g. differences in aerodynamic resistance affecting rate of entry of $SO_2$ into leaves) and others which can be attributed to the physiological condition of the plants. Slow growing plants seem to be more sensitive to $SO_2$; for example, under winter conditions (Bell *et al.*, 1979) or when growth rate is purposefully manipulated in artificial environments (Jones & Mansfield, 1982). $SO_2$, however, rarely occurs as the only pollutant in the atmosphere (Fowler & Cape, 1982) and the presence of other pollutants, notably $NO_2$, may greatly affect sensitivity (Mansfield & Freer-Smith, 1981). Previous studies in our laboratory have shown that exposure of several grass species to $SO_2 + NO_2$ over a winter period caused substantial growth reductions which were greater than the summed individual responses to $SO_2$ and $NO_2$ (Ashenden & Mansfield, 1978; Ashenden, 1979; Ashenden & Williams, 1980). In subsequent preliminary studies with *Poa pratensis* L., a substantial $SO_2 \times NO_2$ interaction was detected when seedlings were fumigated under winter conditions, but not during the summer. In order to determine how the response may change over a prolonged period, detailed observations of growth have now been made at intervals on a single population of plants.

The concentrations of $SO_2$ and $NO_2$ used were comparatively high, being representative of urban, rather than rural, areas. *Poa pratensis* is, however, widely used for amenity purposes and is therefore often grown in urban regions.

## MATERIALS AND METHODS

### Fumigations

All the experiments were performed in the hemispherical fumigation chambers described in detail by Ashenden *et al.* (1982). These allowed plants to be exposed under natural light at temperatures close to ambient. The air within each chamber was exchanged every 40 s and internal fans created air movement over the plants comparable with that in a light breeze. Pollutants were supplied to three glasshouses between 0900 h on Monday and 1700 h on Friday each week, with clean air for the rest of the time. The control received clean air continuously. No treatments were given between 21 December 1979 and 8 January 1980, or between 24 December 1980 and 5 January 1981. During the periods of pollution, one chamber received 10 pphm $NO_2$, a second, 10 pphm $SO_2$ and a third, 10 pphm $SO_2$ + 10 pphm $NO_2$. The weekly mean concentrations were 6·2 pphm, which is equivalent to 177 $\mu g\,m^{-3}$ $SO_2$ and 127 $\mu g\,m^{-3}$ $NO_2$ at STP. The survey by Fowler & Cape (1982) of the distribution of both gases in Western Europe in the 1970s suggests that these concentrations would be uncommon in rural areas, but would be found within, and on the fringe of, some urban areas.

### Plant material

The main object of study was *Poa pratensis* L. cv. Monopoly. In ancillary experiments the following were also used: *P. pratensis* L. cv. Arina; *Lolium perenne* L. cv. S23; *L. perenne* L. cv. S24; *Phleum pratense* L. cv. Eskimo; *P. pratense* L. cv. S48; *Dactylis glomerata* L. cv. S37. Plants were grown from seed supplied by Gartons Gro-Plan Ltd and British Seed Houses Ltd, and in most experiments newly germinated seedlings were placed in 7·5 cm diameter pots containing a 7:3:2 mixture of loam, peat and sand with 6·44 $kg\,m^{-3}$ of John Innes base fertiliser. The pots were placed on a gravel base in the fumigation chambers and were irrigated daily as necessary.

## RESULTS

The first experiment was conducted overwinter in 1979/80. *Poa pratensis* seedlings were exposed from emergence on 26 October, and six harvests,

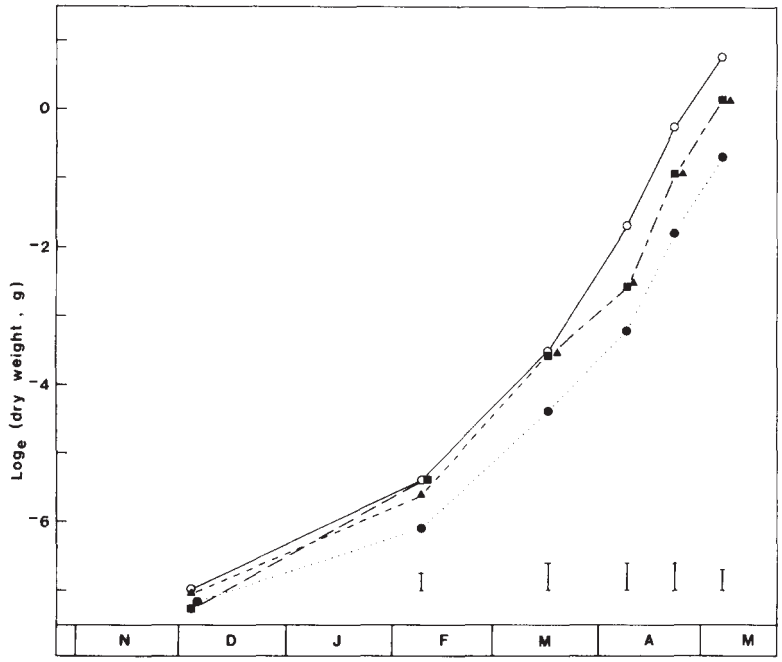


**Fig. 1.** The progression of growth of *Poa pratensis* cv. Monopoly during exposure from emergence to clean air (○—○) or air containing weekly mean concentrations of 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲) or 6·2 pphm $NO_2$ + 6·2 pphm $SO_2$ (●···●) over winter in 1979/80. Values are means of ten replicates except at the first harvest where block treatment measurements only were made. Least significant differences ($p = 0{\cdot}05$) are shown as bars.

each of 10 individuals, were made at intervals until 7 May. By this time total dry weight was reduced to about 55% of the controls in the treatments with $SO_2$ and $NO_2$ applied separately, and to 26% in the $SO_2 + NO_2$ treatment. The development of severe $SO_2 + NO_2$ effects did, however, precede those of the individual pollutants and at harvests 2 and 3, performed on 9 February and 17 March, there were substantial growth reductions in $SO_2 + NO_2$ but no significant effects of $SO_2$ or $NO_2$ alone (Fig. 1). The dry weights at harvests 2 and 3 showed a statistically significant $SO_2 \times NO_2$ interaction ($p < 0{\cdot}01$ at harvest 3) but the appearance of large individual effects of the two pollutants by harvest 4, only 22 days later, was accompanied by only a slightly increased combined effect so that the interaction was lost.

Shoot:root ratios illustrate that partitioning of dry weight in the polluted plants differed from that of the controls (Fig. 2). There were

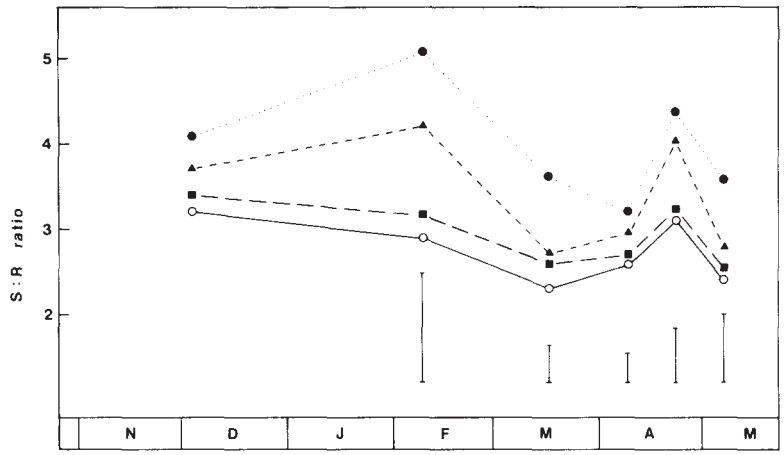


**Fig. 2.** Shoot:root weight ratios of *Poa pratensis* cv. Monopoly grown in clean air (○—○) or air containing weekly mean concentrations of 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲), or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$ (●···●) over winter in 1979/80. Values are means of ten replicates except at the first harvest where block treatment measurements only were made. LSDs ($p = 0{\cdot}05$) are shown.

reductions in the apportioning of dry matter to the root system while that to the leaves was maintained or increased, relative to the controls. It is interesting to note that the treatments involving $SO_2$, alone or with $NO_2$, had more influence on the shoot:root ratio than did $NO_2$ alone, even though the latter inhibited total dry weight gain as much as the $SO_2$ treatment. The $SO_2$ effect was significant, at $p < 0{\cdot}05$, at harvests 2, 4 and 5, while that of $NO_2$ did not achieve significance at any of the harvests.

In addition to the increased partitioning of dry weight to the leaves, the specific leaf areas (SLA) of plants exposed to $SO_2 + NO_2$ were higher than controls at several harvests. These two alterations resulted in increased leaf area ratios (LAR) which were statistically significant, $p < 0{\cdot}05$, at all harvests (Figs 3(a) and 3(b)). Similar, but much more consistent, effects were found for plants of *Phleum pratense* which were grown and exposed at the same time. In this case the $SO_2$ and $SO_2 + NO_2$ treatments both caused similar increases in LAR (Fig. 3(c)). This response may be regarded as compensatory in nature as a greater leaf area would maintain photosynthesis after a fall in net assimilation rate.

The changing pattern of response of *Poa pratensis* with time suggested that a fumigation over a longer period would be informative. Therefore, a similar experiment was begun in the autumn of 1980, with measurements continued until late summer 1981. The same pollution treatments were

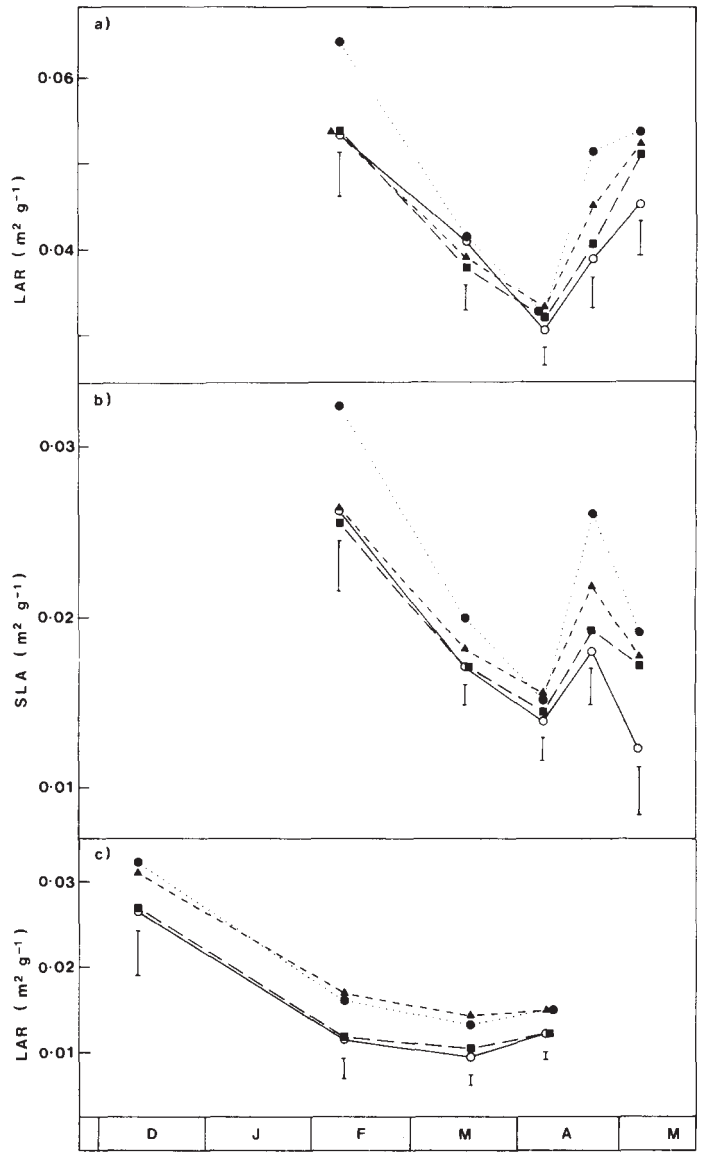


**Fig. 3.** Changes in LAR (leaf area ratio) and SLA (specific leaf area) during exposure to clean air (○—○) or air containing 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲) or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$ (●···●) over winter in 1979/80. (a) LAR of *Poa pratensis* cv. Monopoly; (b) SLA of *Poa pratensis* cv. Monopoly; (c) LAR of *Phleum pratense* cv. S48 Values are means of ten replicates. LSDs ($p = 0{\cdot}05$) are shown.

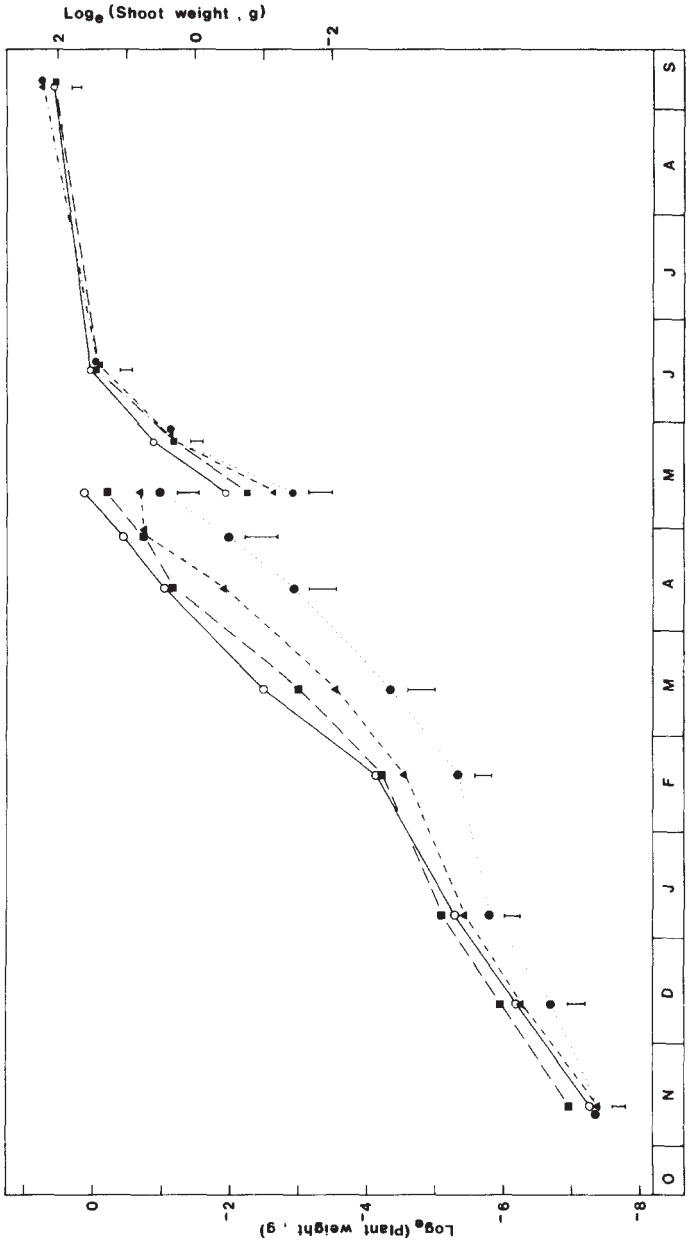


**Fig. 4.** The progression of growth of *Poa pratensis* cv. Monopoly during exposure from emergence to clean air (○—○) or air containing 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲) or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$ (●···●) in 1980/81. Up to early May 1981 total plant dry weights are shown but after this time only shoot dry weights were determined. Values are means of ten replicates. LSDs ($p = 0{\cdot}05$) are shown.

employed as before, with fumigations beginning at the time of emergence on 17 October. A total of 110 seedlings were placed in each of the treatments (including the control) and 10 of these were randomly selected for growth analysis at intervals between November 1980 and September 1981. The plants were grown individually in 7·5 cm diameter pots until the eighth harvest on 11 May, after which they were transferred to 10 cm pots. From this point onwards, the roots could not be separated from the soil satisfactorily, and so only shoot parameters were determined for the final three harvests.

The changes in dry weight with time are shown in Fig. 4. Although there were some differences in detail from the previous year, the same general effects were apparent. There was an early stimulation in the $NO_2$ alone treatment which had not been observed in 1979/80. This compares with growth stimulations frequently observed initially in plants exposed to $NO_2$ in fumigations under controlled conditions (our data, unpublished). The interactive effects of $SO_2$ and $NO_2$ occurred at approximately the same time as in the previous winter: namely, up to the harvest in February. After this time there was little evidence of any interaction, and the effects of the two gases together became approximately additive.

The effects of the treatments on shoot:root ratio up to 11 May are

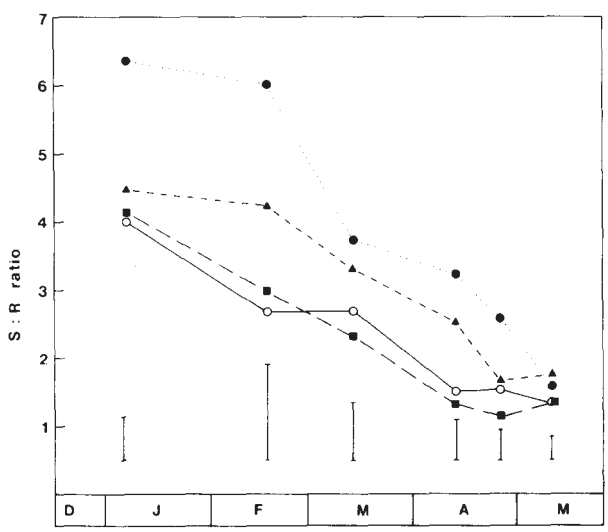


**Fig. 5.** Shoot:root weight ratios of *Poa pratensis* cv. Monopoly during exposure from emergence to clean air (○—○) or air containing 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲) or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$ (●···●) in 1980/81. Values are means of ten replicates. LSDs ($p = 0{\cdot}05$) are shown.

shown in Fig. 5. The pattern is essentially the same as that in Fig. 2, i.e. there is no evidence of an effect of $NO_2$, but both $SO_2$ and $SO_2 + NO_2$ caused a considerable shift in the distribution of dry matter between root and shoot. The harvest on 11 May was the last at which it was feasible to separate the roots, and from this point onwards in Fig. 4 the dry weights of the shoots only are shown. It will be seen, however, that at the time of the eighth harvest the magnitude of the treatment effects on the plants as a whole, and on the shoots only, was very similar. It is, therefore, possible to identify continuing trends through the data even though a full growth analysis was not possible with the later harvests. There was a rapid recovery of the shoot dry weight between 11 May and 16 June, and at the end of the experiment on 7 September the plants from both the $SO_2$ and $SO_2 + NO_2$ treatments showed a slight stimulation (significant at $p < 0{\cdot}05$).

During the later part of this experiment flowering occurred, stem elongation being observed first at harvest 8, followed by inflorescence development towards the end of May. Figure 6 shows the mean numbers

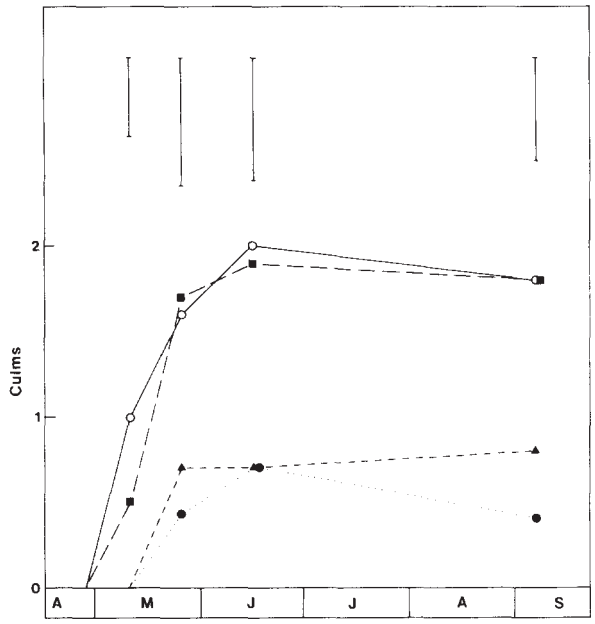


**Fig. 6.** The development of culms when *Poa pratensis* cv. Monopoly was exposed from emergence to clean air (○—○) or air containing 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲) or 6·2 pphm $NO_2$ + 6·2 pphm $SO_2$ (●···●) in 1981. Values are means of ten replicates. LSDs ($p = 0{\cdot}05$) are shown.

of culms per plant in the different treatments. All three pollution treatments had some effect on flowering. $NO_2$ delayed the development of flowering stems, but did not affect the final number of heads produced. $SO_2$ and $SO_2 + NO_2$ both delayed the start of stem elongation and severely reduced the number of flowering heads at the final harvest. Thus, the recovery of vegetative growth in these two treatments over the summer period was accompanied by a marked reduction in reproductive growth.

Three ancillary experiments were conducted concurrently with the above studies, with the object of providing more information about the factors determining the sensitivity of grasses to these treatments. During the 1979/80 study, newly emerged seedlings of five other grasses were also grown and exposed with *P. pratensis*. In addition, seedlings of all six grasses which had been sown on 6 September and grown in clean air up to the start of the exposure treatments were included. These grasses had 3–4 tillers at the commencement of exposures. It was thus possible to compare the effects of exposure from germination with those on well-established seedlings. The five additional grasses were *Dactylis glomerata* L. cv. S37, *Lolium perenne* cv. S23 and cv. S24, and *Phleum pratense* cv. S48 and cv. Eskimo. The growth responses of the two age groups of the six species/cultivars are shown in Fig. 7. Because the timing of the main experiment was given priority, there was some variation in the final harvest dates in this ancillary study, but all fell within the period 7–22 May. There was no indication that the magnitude of effects was related to the time of the final harvest within these limits. It will be seen that for *Poa pratensis*, *D. glomerata* and both cultivars of *Phleum pratense*, effects of overwinter pollution were much greater when the plants had been fumigated from the time of emergence. There was no evidence of interactive $SO_2 \times NO_2$ effects in any of the plants, which, by the time of harvesting, were in rapid spring growth.

Concurrently with the second main experiment in 1980/81, some plants were grown in simulated swards for comparison with the individually spaced plants on which the detailed growth analysis was performed. Six seedlings of *Poa pratensis* were regularly arranged in 7·5 cm pots on 11 November after germination on 17 October 1980 (at which time fumigations began) and were allowed to grow in competition until 8 June 1981. Ten such pots containing simulated swards were placed in each treatment, and the results of the final harvest of shoot growth are shown in Table 1. Competition reduced the growth of the individual plants compared with those individually spaced in pots, and the pollution effects

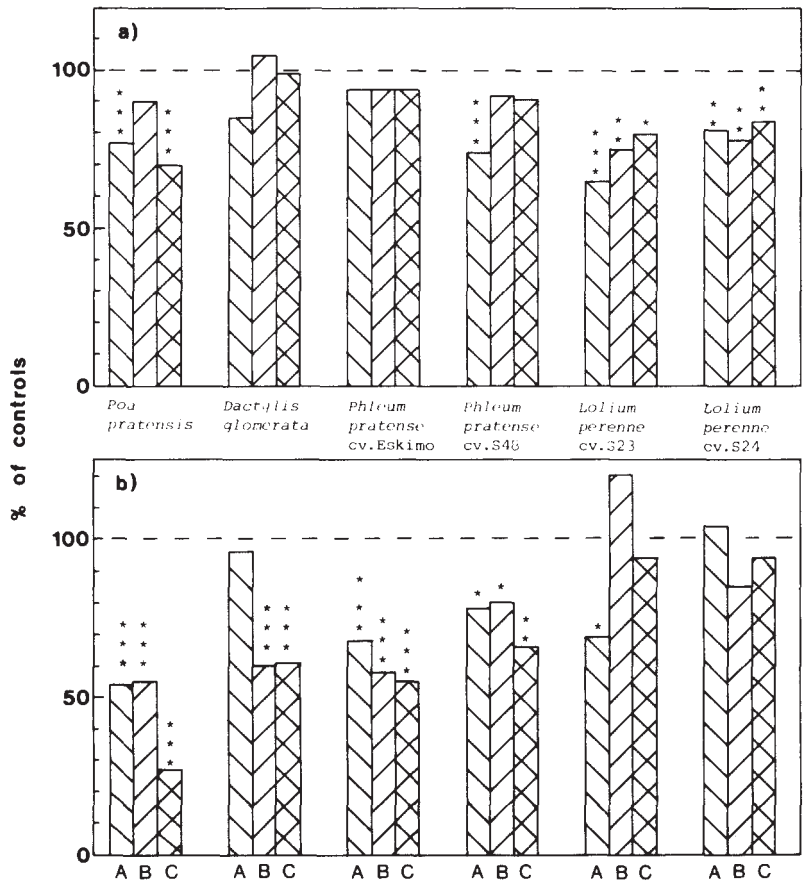


**Fig. 7.** A comparison of the responses of six grasses to a seven month exposure to weekly mean concentrations of 6·2 pphm $NO_2$ (A), 6·2 pphm $SO_2$ (B) or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$ (C) over winter in 1979/80. Mean shoot weights are expressed as percentages of controls grown in clean air. (a) Plants were grown for 42 days in clean air prior to exposure: (b) Plants were exposed from emergence. Significant differences between treatments and controls are indicated thus; $*p < 0{\cdot}05$; $**p < 0{\cdot}01$; $***p < 0{\cdot}001$

on dry weight were considerably greater in the swards. The reduced shoot weights were similar to those found at harvest 7 on 28 April, at which time the shoot of each individually spaced plant was similar to that in the swards on 8 June. There were also pronounced reductions in flowering in all treatments.

The results of the two overwinter experiments, and the subsequent recovery of the shoot growth of the polluted plants in summer, raised the

**TABLE 1**

Harvest Results when *Poa pratensis* Plants were Grown in Swards (Six Plants per 7·5 cm Pot) and Exposed to Clean Air or Air Containing Weekly Mean Concentrations of 6·2 pphm $NO_2$, 6·2 pphm $SO_2$ or 6·2 pphm $NO_2$ + 6·2 pphm $SO_2$ from Emergence on 17 October 1980 until 8 June 1981. Values are Means of 66 Replicates

| | *Number of tillers* | *Shoot dry weight (g)* | *Number of culms* |
|---|---|---|---|
| Control | 6·5 | 0·3203 | 0·8 |
| $NO_2$ | 6·9 | 0·1913 | 0·5 |
| $SO_2$ | 7·3 | 0·2327 | 0·3 |
| $SO_2 + NO_2$ | 6·6 | 0·1813 | 0·09 |
| LSD ($p = 0·05$) | 0·6 | 0·0335 | 0·16 |

question of whether the large effects of pollution in the period January to March were the result of slow growth, or were related to the stage of development of the plants at that time. In an attempt to resolve this question, an additional experiment was performed on seedlings between April and June 1981. Two cultivars of *Poa pratensis* were used for comparison, namely Monopoly and Arina. The latter is a variety which is included in seed mixtures marketed for use on roadsides and motorway verges where there are high levels of pollution, particularly of $NO_x$ (Hickman *et al.*, 1976; Rodes & Holland, 1981). Fifteen seedlings of each cultivar which had emerged on 16 April were placed individually in 7·5 cm

**TABLE 2**

Harvest Results for Two Cultivars of *Poa pratensis* Exposed to Clean Air, or Air Containing Weekly Mean Concentrations of 6·2 pphm $NO_2$, 6·2 pphm $SO_2$ or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$. Plants were Exposed for a Period of 2 Months Commencing at Emergence on 16 April 1980. Values are Means of Fifteen Replicates

| | *cv. Monopoly* | | | *cv. Arina* | | |
|---|---|---|---|---|---|---|
| | *Number of tillers* | *Number of leaves* | *Plant dry weight (g)* | *Number of tillers* | *Number of leaves* | *Plant dry weight (g)* |
| Control | 21·0 | 75·1 | 1·481 | 25·1 | 81·1 | 1·085 |
| $NO_2$ | 22·5 | 75·3 | 0·948 | 25·7 | 82·8 | 1·031 |
| $SO_2$ | 20·2 | 64·2 | 0·884 | 25·0 | 77·4 | 0·756 |
| $NO_2 + SO_2$ | 16·7 | 54·3 | 0·605 | 24·2 | 77·3 | 0·636 |
| LSD ($p = 0·05$) | 4·1 | 13·4 | 0·221 | 4·6 | 14·6 | 0·197 |

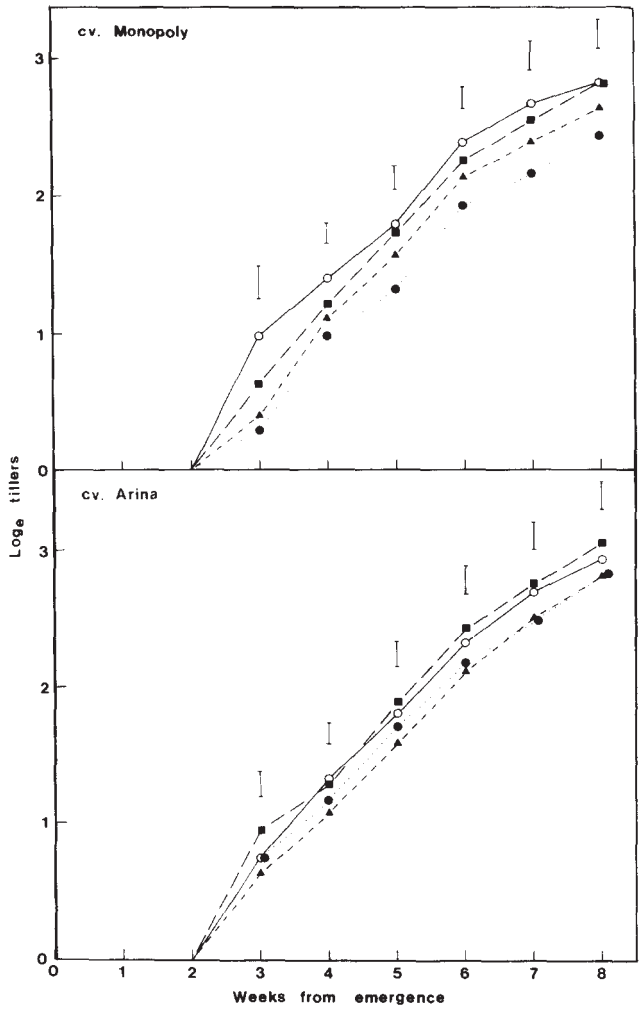


**Fig. 8.** The progression of number of tillers for two cultivars of *Poa pratensis* exposed to clean air (○—○), or air containing weekly mean concentrations of 6·2 pphm $NO_2$ (■—■), 6·2 pphm $SO_2$ (▲--▲) or 6·2 pphm $SO_2$ + 6·2 pphm $NO_2$ (●···●) for a period of nine weeks commencing at the time of emergence. Values are means of fifteen replicates. LSDs ($p = 0{\cdot}05$) are shown.

pots and exposed to the three treatments until 22 June. The final harvest data are shown in Table 2, and it will be seen that there were considerable reductions in dry weight of cv. Monopoly in all the treatments. However, although cv. Arina was affected by $SO_2$ and $SO_2 + NO_2$, it appeared to be resistant to the $NO_2$ treatment. An estimate of growth, obtained by counting numbers of tillers at weekly intervals (Fig. 8), showed that effects

of $SO_2$ and $SO_2 + NO_2$ occurred at an early stage on cv. Monopoly, but were much less apparent on cv. Arina. There were small increases (not statistically significant) in tiller numbers when the latter variety was exposed to $NO_2$ alone.

## DISCUSSION

Recent studies of the responses of grasses to $SO_2$ have emphasised the difficulty of estimating the magnitude of effects because of the way these are altered by other factors such as light, temperature and stage of development (Bell, 1982; Jones & Mansfield, 1982). $NO_2$ usually occurs alongside $SO_2$ in polluted atmospheres (Fowler & Cape, 1982) and there is experimental evidence that in some circumstances these two pollutants together can cause severe injury, greater than the sum of their individual effects (Mansfield & Freer-Smith, 1981). This synergism has not always been found, however, and the present study was a preliminary exercise to seek factors which might determine the level of response.

The results of both the overwinter fumigations of *P. pratensis* show that a synergistic interaction between $SO_2$ and $NO_2$ appears in the spring when the plants are at an early stage in growth. It was revealed at harvests on 9 February and 17 March in 1980, and on 7 January and 17 February in 1981. Later harvests up to early May in both years usually showed additive effects of the two pollutants. In the previous studies here in which an interaction between $SO_2$ and $NO_2$ was reported for four grass species, fumigations began in late October and the final harvest was made in mid-March (Ashenden & Mansfield, 1978; Ashenden, 1979; Ashenden & Williams, 1980). These earlier studies thus terminated at a stage which the present findings suggest is most likely to reveal an interaction between $SO_2$ and $NO_2$.

There are several reasons for attempting to define effects of air pollutants on plants. The one which usually receives the most emphasis is the assessment of economic losses in crops. The data presented here demonstrate the danger in reaching conclusions about such losses from experiments of limited duration. An overwinter fumigation with $SO_2$ and $NO_2$, with a final harvest in March, would be likely to give a greatly exaggerated impression of crop losses. There may, however, be other important consequences of pollution; for example, the competitive success of individuals in a natural plant community or an artificial one like a grass sward. In these cases, stages in a plant's growth or life cycle

which appear to be particularly sensitive are of most interest. In a recent study of the development of $SO_2$ tolerance in five species from grasslands in northern England, Ayazloo & Bell (1981) found evidence of the development of resistance to both acute and chronic injury in individuals from polluted sites. There was no evidence of a correlation between the susceptibility to acute and chronic injury, and they suggested that the development of resistance to these might involve different physiological mechanisms. The high sensitivity we have found to a mixture of $SO_2$ and $NO_2$ in winter suggests that this could play an important part in the selection of tolerant individuals. Plants which are highly sensitive at this stage would presumably not be able to compete successfully with those whose growth is less affected. It can be suggested that because there is normally a coincidence in time of $SO_2$ and $NO_2$ pollution, their combined, rather than their individual, effects need to be considered in relation to the development of pollution tolerance.

The growth analyses showed that the effects of all three pollution treatments could be attributed to lower net assimilation rates. It is known that both $SO_2$ and $NO_2$ pollution inhibit net photosynthesis (Bull & Mansfield, 1974; Capron & Mansfield, 1976; Black & Unsworth, 1979). There appeared to be compensatory growth mechanisms operating to counteract a reduced photosynthetic efficiency. First, the treatments involving $SO_2$ caused an increase in the relative leafiness of the plants, i.e. a larger proportion of dry weight was contained in the leaves. There was a concomitant reduction in the dry weight of the roots, so that the shoot:root ratios of plants treated with $SO_2$ or $SO_2 + NO_2$ were larger than the controls (Figs 2 and 5). Secondly, there was a reduction in leaf thickness, thereby increasing the leaf area per unit leaf weight. Although there have been several reports that $SO_2$ reduces the roots of grasses more than the shoots (Ashenden & Mansfield, 1977; Bell *et al.*, 1979; Ayazloo & Bell, 1981; Jones & Mansfield, 1982), specific leaf areas have been quoted in only a few cases. In one of the experiments reported by Bell *et al.* (1979) and in those of Jones & Mansfield (1982), specific leaf area was increased in grasses exposed to $SO_2$. The results presented here show that the same kinds of morphological responses occur in $SO_2 + NO_2$ as in $SO_2$ alone. When, however, there were significant reductions in dry weight in $NO_2$, the shoot:root ratio was unaffected.

During the summer in the second experiment there was a recovery in the dry weight of the shoots in all three pollution treatments, and in two of them ($SO_2$ and $SO_2 + NO_2$) the controls were overtaken. This recovery

may, however, have been associated with the inhibition of flowering. There were considerably fewer flowerheads in $SO_2$ and $SO_2 + NO_2$ and, therefore, because less of the shoot was committed in reproductive growth, there was an opportunity for a greater leaf area to develop in the polluted plants than in the controls.

There is a dual induction requirement for flowering in *P. pratensis* (Peterson & Loomis, 1949; Heide, 1980). Short days or low temperatures are required for initiation of flower primordia, but for the further development of culms and flowers long days and higher temperatures are needed. No histological observations of floral primordia were made in this experiment and so it is not known whether pollution interfered with induction or subsequent development, or both. However, the timing and magnitude of the size reductions of the plants in $SO_2$ and $SO_2 + NO_2$ may well have contributed to the effects on flowering. Most grasses have an obligate vegetative phase which they must pass through before flowering can occur (Langer, 1979), and there is some evidence that *P. pratensis* may be one of these (Cooper & Calder, 1961). The delayed development of the plants in $SO_2$ and $SO_2 + NO_2$ may have reduced the number of inductive short day cycles and/or periods of low temperature to which they could respond, because of a prolongation of the juvenile phase.

When culms first developed in the controls during the spring, the plants in $SO_2$ and $SO_2 + NO_2$ were still small, at 47 % and 32 % of the controls, respectively. The number of culms that subsequently developed appeared to be directly proportional to the size of the plants at this time. Clearly, further work is needed to elucidate the mechanisms behind these effects of pollutants on flowering. The possibility must be considered that assimilate partitioning in the polluted plants is unfavourable for flowering, with decreased amounts going to floral parts and more towards vegetative growth.

There is evidence that $SO_2$ inhibits flowering in other species. Bud formation was delayed and stem elongation depressed when sunflower plants were exposed to 5 or 10 pphm $SO_2$ for periods of 5 weeks (Shimizu *et al.*, 1980). Where crops are grown for fruit a reduction in flowering could have serious economic consequences. Poor formation of seedheads under turfgrass conditions is regarded as beneficial but, on the other hand, when the seeds of grasses are produced commercially, pollution effects could assume importance.

The three ancillary experiments provided supplementary evidence which helps the interpretation of some of the other data. First, the seedlings of

*P. pratensis* cv. Monopoly which were exposed to pollution for 9·5 weeks from 16 April 1981 were subject to marked growth inhibitions, while the older plants from the overwinter experiment were, at this same time, experiencing a recovery from the large effects which had occurred earlier. This strongly suggests that the biggest effects of the treatments are associated with early stages in growth. This was supported by the results of the experiment in which seedlings were grown for 42 days in clean air prior to fumigation overwinter (Fig. 7). The plants of *P. pratensis* treated in this way were much less affected by the pollution, at least in terms of the single harvest in May. Interpretation of this experiment may, however, be complicated by the lack of data from intermediate harvests. The species comparison in Fig. 7 is also of limited value for the same reason, but the results do emphasise the dangers of extrapolating information from species to species, or even between cultivars. In this context, the differences between the two cultivars of *P. pratensis* are of considerable interest (Fig. 8). The results of our experiments show that cv. Arina, which is used on roadside verges, can tolerate levels of $NO_2$ pollution which have a considerable effect on the other cultivar, cv. Monopoly. We are not aware of any comparable information on resistance to these levels of $NO_2$ in grasses, and this question is worthy of further study.

The results of the experiment in which the effects on a simulated sward were compared with those on individually spaced plants were not as might have been expected, for the effects on the sward (after overwinter fumigation) continued for longer, into the early summer, at which time the shoot growth of the spaced plants was recovering (Table 1). It might be considered that the intake of pollutants per unit of plant material would be smaller in a sward than with spaced plants, because of the combined effects of higher aerodynamic resistances and localised depletion of pollution levels by uptake into the leaves (Horsman *et al.*, 1979). The fact that we found *greater* effects on the swards suggests that other factors were dominant, and it seems likely that the delayed development of plants within the swards, because of competition, prolonged the stages in growth at which they were sensitive to pollution.

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