

## Four Factor Analysis: GCC Dacotah – Rapid City

GCC Dacotah operates a Portland cement plant in Rapid City, South Dakota. The Wind Cave National Park is approximately 55 kilometers south southwest and the Badlands National Park is approximately 70 kilometers east southeast of the facility. DENR modeled the wet kiln stacks based on actual emissions for calendar year 2002. The modeling was conducted in order to estimate the visibility impacts of the wet kiln’s air emissions on the Wind Cave and Badlands National Parks.

EPA promulgated the CALPUFF modeling system as a *Guideline Model* for Class I impact assessments and other long range transport applications or near field applications involving complex flows (U.S. EPA, 2000). The model is also recommended by both the Federal Land Managers (FLM) Air Quality Workgroup (FLAG, 2010) and the Interagency Workgroup on Air Quality Modeling (IWAQM, 1998). As described in EPA’s Guideline on Air Quality Models (Appendix W of 40 CFR Part 51), long-range transport is defined as modeling with source receptor distances greater than 50 kilometers.

The CALPUFF modeling system consists of a meteorological data pre-processor (CALMET), the air dispersion model (CALPUFF), and post-processor program (CALPOST). DENR’s modeling analysis was performed with EPA’s approved Version 5.8 of the CALMET and CALPUFF models. Version 6.221 of CALPOST was used because it contains the FLM-approved implementation of Visibility Method 8 (FLAG, 2008).

Table G-1 displays the modeled emission rates. The other stack parameters are available for review in the CALPUFF control file included as Appendix G-1.

**Table G-1 – Wet Kilns Actual Emissions**

Scenario	Filterable PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Kiln #3	34.2 pounds/hour	6.5 pounds/hour	178 pounds/hour
Kiln #4	10.4 pounds/hour	100.0 pounds/hour	90.0 pounds/hour

DENR calculated emission rates for condensible particulate matter 10 microns in diameter or less (PM<sub>10</sub>) emissions and speciation of the filterable and condensible fraction of PM<sub>10</sub> (see Table G-2). The speciation is based on recommendations for modeling PM<sub>10</sub> speciation for wet process Portland cement kilns controlled by fabric filter. Workbooks and instructions are available for several types of cement kilns at the following National Park Service website:

<http://www.nature.nps.gov/air/permits/ect/ectCementKiln.cfm>

**Table G-2 – PM<sub>10</sub> Speciation**

Particle Size (microns)	CALPUFF Species Designation	Mass Fraction of Total PM <sub>10</sub>
Condensable Inorganic <sup>1</sup>	SO <sub>4</sub>	0.323
10-6	PM800	0.051
6-2.5	PM425	0.240
2.5-1.25	PM187	0.329

Particle Size (microns)	CALPUFF Species Designation	Mass Fraction of Total PM10
1.25-0.625	PM081	0.035
0.625-0	PM056	0.022

<sup>1</sup> - Assumed less than 1 micron.

The PM<sub>10</sub> speciation values in Table G-2 were used in the evaluation.

DENR used the preprocessed CALMET.dat modeling files for calendar years 2002, 2006, and 2007, as submitted with the Modeling Report for a BART Assessment of the Big Stone I Coal-Fired Power Plant, Big Stone City, South Dakota in October 2009. Detailed discussion of the development of the data processing and CALMET settings used is available in the report (see Appendix B of this document). The CALMET processing was reviewed and approved by EPA and follows EPA's recommended CALMET switches issued August 31, 2009.

Regulatory default and or recommended visibility modeling settings were used in the CALPUFF input files for the technical options. Table G-3 lists key user-defined CALPUFF settings that were selected as well as the applicable default settings.

**Table G-3 – Key CALPUFF Switch Settings**

Parameter	Description	Default Value	DENR Value	Notes
<b>Group 1 – General Options</b>				
NSPEC	Number of chemical species	5	10	Particulate matter speciation discussed above
NSE	Number of species emitted	3	8	
METFM	Meteorological data format	1	1	1 = CALMET file
PGTIME	Pasquill-Gifford (PG) averaging time	60	60	Minutes
MGAUSS	Near-field vertical distribution	1	1	1 = Gaussian
MCTADJ	Terrain adjustments to plume path	3	3	3 = Partial plume path adjustment
MCHEM	Chemical mechanism flag	1	1	1 = MESOPUFF II chemistry
MDISP	Method for dispersion coefficients	3	3	3 = PG for rural and McElroy-Pooler (MP) for urban
MREG	Regulatory default checks	1	1	1 = Technical options must conform to EPA Long Range Transport guidance

Parameter	Description	Default Value	DENR Value	Notes
SYTDEP	Equations used to determine sigma-y and -z	550	550	Puff size (m) beyond which equations (Heffter) are used to determine sigma y and z
MHFTSZ	Heffter equation for sigma z	0	0	0 = Not use Heffter

Receptor locations and elevations for the potentially affected Class I areas were obtained from the National Park Service’s Nature and Science website. The modeled receptor grids for each potentially affected Class I are shown relative to the source location in Figure G-1 below along with the surface roughness lengths. The receptors numbered 1 through 189 in the modeling files correspond to the Wind Cave National Park and receptors numbered 1 through 289 correspond to the Badlands National Park.

To allow chemical transformations within CALPUFF with the recommended chemistry scheme (MESOPUFF II), the model required input of background ozone and ammonia. For ozone, hourly data collected from EPA’s Air Quality System and Clean Air Status and Trends Network (CASTNET) databases was used. For any hour that was missing ozone data, the CALPUFF default value of 80 parts per billion was substituted.

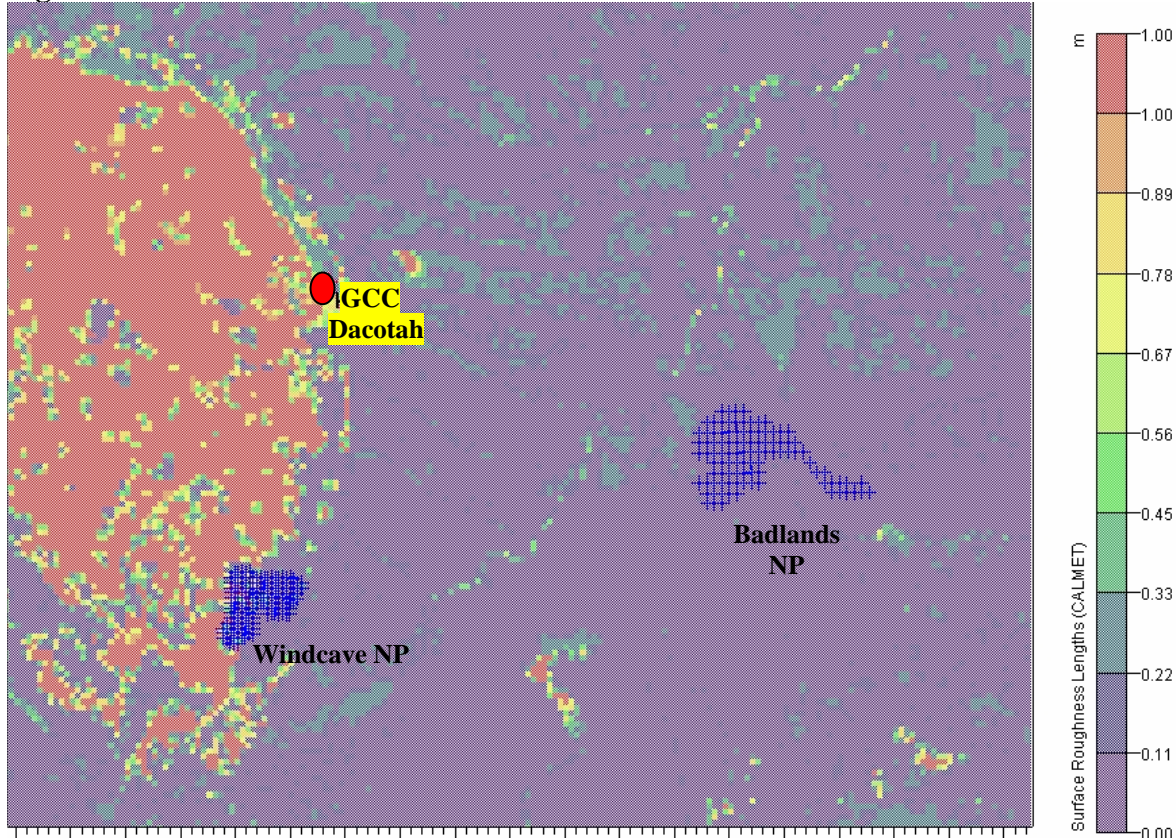
Along with ozone data, monthly average ammonia background values are required by the model. The background ammonia concentration used for the analysis was based on IWAQM Phase II guidance document (USEPA, 1998) list of suggested values. This document provides the following values for background ammonia concentrations:

1. Grasslands – 10 parts per billion;
2. Forest – 0.5 parts per billion; and
3. Arid Lands at 20°C – 1 parts per billion.

The chemical equilibrium between particle-phase ammonium nitrate and gas-phase nitric acid and ammonia has a fast reaction rate. Therefore, the local ammonia concentrations in the Class I areas themselves are the relevant factor of interest, not the ammonia concentrations across the entire domain. At the Wind Cave National Park the predominant land use is forest, while at the Badlands National Park the predominant land use is barren land and tundra (arid). A background ammonia concentration of 1.0 part per billion was used for both National Parks.

POSTUTIL is a post processing program used to process the concentrations generated by CALPUFF. POSTUTIL occurs prior to the visibility processing in CALPOST and allows the user to sum the contributions of sources from different CALPUFF simulations into a total concentration file. In addition, it contains options to scale the concentrations from different modeled species (e.g., different particle sizes) into species dependent size distributions for the particulate matter. For example, emission rates for each total particulate particle size category (e.g., PM800, PM425) were modeled in CALPUFF and, in the POSTUTIL stage; these are redistributed into the light scattering groups input into CALPOST.

**Figure G-1**



POSTUTIL requires the user to input the fractional distribution of the particulate emissions. DENR used the fractional distribution shown in Table G-4, based on the information in the National Park Service workbook for particulate matter speciation.

**Table G-4 – PM10 Speciation**

CALPUFF Inputs Total Particulate Sizes	POSTUTIL Group	Fractional Distribution POSTUTIL Inputs			
		PMC <sup>1</sup>	SOA <sup>2</sup>	EC <sup>3</sup>	SOIL <sup>4</sup>
SO4	SO4 (Sulfates)	1.00	0.00	0.00	0.00
PM800	100% PM Coarse (filterable)	1.00	0.00	0.00	0.00
PM425	100% PM Coarse (filterable)	1.00	0.00	0.00	0.00
PM187	100% SOIL (filterable)	0.00	0.00	0.00	1.00
PM081	64% SOA (condense) and 36% EC (filterable)	0.00	0.64	0.36	0.00
PM056	100% SOA	0.00	1.00	0.00	0.00

<sup>1</sup> – PM Coarse means filterable particulates between 10 and 2.5 microns;

<sup>2</sup> – SOIL means filterable fine particulates (between 2.5 and 0.625 microns);

<sup>3</sup> – SOA means Secondary organic aerosol; and

<sup>4</sup> – EC means filterable fine particulates smaller than 0.625 microns.

Class I impacts for the kilns' different PM<sub>10</sub> size fractions and primary sulfate impacts were summed using the POSTUTIL program and distributed into the POSTUTIL groups with known light extinction values (e.g., PM coarse, PM fine) prior to running CALPOST. Appendix G-2 contains an example POSTUTIL output file. This output file shows all of the POSTUTIL options employed for the analysis.

Calculations of the impact of the simulated plume particulate matter component concentrations on light extinction were carried out with the CALPOST postprocessor following the FLAG 2008 and 2010 guidance. In CALPOST, the IMPROVE algorithm as proposed by FLAG 2008 is implemented as CALPOST Method 8. The FLAG 2008 and methodology is included in CALPOST V6.221 Level 080724, which has been reviewed and approved by the FLMs. This version of CALPOST is publicly available on the TRC's CALPUFF website <http://www.src.com/calpuff/calpuff1.htm> and was used for this analysis.

Default settings or settings recommended under regulatory guidance were used in the CALPOST input files for the technical options. Table G-5 lists key user-defined CALPOST settings selected as well as the applicable default settings. A full CALPOST control file is included as Appendix G-3.

**Table G-5 – CALPOST Switch Settings**

Parameter	Description	Default Value	DENR Value	Notes
<b>Group 1</b>				
ASPEC	Species to process	No Default	VISIB	Visibility processing
<b>Group 2</b>				
MFRH	Particle growth curve f(RH)	4	4	4 = IMPROVE (2006) f(RH) tabulations for sea salt and for sulfate and nitrate particles
RHMAX	Maximum relative humidity (%) in growth curve	98	95	FLAG (2008) guidance
<b>Modeled Species</b>				
LVSO4	Include sulfate	T	T	
LVNO3	Include nitrate	T	T	
LVNO2	Include nitrogen dioxide absorption	T	T	
LVOC	Include organic carbon	T	T	
LVPMC	Include coarse particulates	T	T	
LVPMF	Include fine particulates	T	T	
LVEC	Include elemental carbon	T	T	
<b>Extinction Efficiency</b>				
EETMC	Particulate matter coarse	0.6	0.6	

Parameter	Description	Default Value	DENR Value	Notes
EPMF	Particulate matter fine	1.0	1.0	
EPMCBK	Particulate matter coarse background	0.6	0.6	Background particulate species
EES04	Ammonium sulfate	3.0	3.0	
EEN03	Ammonium nitrate	3.0	3.0	
EEOC	Organic carbon	4.0	4.0	
EESOIL	Soil	1.0	1.0	
EEEC	Elemental carbon	10.0	10.0	

DENR applied each emissions scenario to three years of meteorological data to compare the change in visibility impacts predicted at the Badlands or Wind Cave National Parks. The results are displayed in Table G-6. The values in Table G-6 represent the eighth highest modeled impact per year.

***Table G-6 – Summary – 8<sup>th</sup> High Modeled Delta-Deciview***

Year	Badlands	Wind Cave
2002	0.32	0.36
2006	0.32	0.36
2007	0.31	0.46

**Appendix G-1 – CALPUFF Control File**

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CALPUFF

Version: 5.8

Level: 070623

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**GCC Dacotah 2007 MET, 2002 Emissions**

Clock time: 00:29:53  
Date: 01-01-2011

Internal Coordinate Transformations by --- COORDLIB Version: 1.98 Level:  
060911

Run Title:

Based on Aug 2010 runs but , MSAM=99, sl2p5=10  
Calmet.dat files from BS oct2009 submittal  
Calpuff v5.8, Calpost v 6, postutil speciate

-----  
INPUT GROUP: 1 -- General run control parameters  
-----

Option to run all periods found  
in the met. file (METRUN) Default: 0 ! METRUN = 0 !

METRUN = 0 - Run period explicitly defined below  
METRUN = 1 - Run all periods in met. file

Starting date: Year (IBYR) -- No default ! IBYR = 2007 !  
(used only if Month (IBMO) -- No default ! IBMO = 1 !  
METRUN = 0) Day (IBDY) -- No default ! IBDY = 1 !  
Hour (IBHR) -- No default ! IBHR = 1 !

Base time zone (XBTZ) -- No default ! XBTZ = 7 !  
PST = 8., MST = 7.  
CST = 6., EST = 5.

Length of run (hours) (IRLG) -- No default ! IRLG = 8736 !

Number of chemical species (NSPEC)  
Default: 5 ! NSPEC = 10 !

Number of chemical species  
to be emitted (NSE) Default: 3 ! NSE = 8 !

Flag to stop run after  
SETUP phase (ITEST) Default: 2 ! ITEST = 2 !  
(Used to allow checking  
of the model inputs, files, etc.)

ITEST = 1 - STOPS program after SETUP phase  
ITEST = 2 - Continues with execution of program



after SETUP

Restart Configuration:

Control flag (MRESTART)           Default: 0           ! MRESTART = 0 !

- 0 = Do not read or write a restart file
- 1 = Read a restart file at the beginning of the run
- 2 = Write a restart file during run
- 3 = Read a restart file at beginning of run and write a restart file during run

Number of periods in Restart  
output cycle (NRESPD)           Default: 0           ! NRESPD = 500 !

- 0 = File written only at last period
- >0 = File updated every NRESPD periods

Meteorological Data Format (METFM)  
                                  Default: 1           ! METFM = 1 !

- METFM = 1 - CALMET binary file (CALMET.MET)
- METFM = 2 - ISC ASCII file (ISCMET.MET)
- METFM = 3 - AUSPLUME ASCII file (PLMMET.MET)
- METFM = 4 - CTDM plus tower file (PROFILE.DAT) and surface parameters file (SURFACE.DAT)
- METFM = 5 - AERMET tower file (PROFILE.DAT) and surface parameters file (SURFACE.DAT)

Meteorological Profile Data Format (MPRFFM)  
(used only for METFM = 1, 2, 3)  
                                  Default: 1           ! MPRFFM = 1 !

- MPRFFM = 1 - CTDM plus tower file (PROFILE.DAT)
- MPRFFM = 2 - AERMET tower file (PROFILE.DAT)

PG sigma-y is adjusted by the factor (AVET/PGTIME)\*\*0.2  
Averaging Time (minutes) (AVET)  
                                  Default: 60.0       ! AVET = 60 !

PG Averaging Time (minutes) (PGTIME)  
                                  Default: 60.0       ! PGTIME = 60 !

!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: 1957 2056  
-----

-----  
INPUT GROUP: 2 -- Technical options

-----

Vertical distribution used in the  
near field (MGAUSS) Default: 1 ! MGAUSS = 1 !  
0 = uniform  
1 = Gaussian

Terrain adjustment method  
(MCTADJ) Default: 3 ! MCTADJ = 3 !  
0 = no adjustment  
1 = ISC-type of terrain adjustment  
2 = simple, CALPUFF-type of terrain  
adjustment  
3 = partial plume path adjustment

Subgrid-scale complex terrain  
flag (MCTSG) Default: 0 ! MCTSG = 0 !  
0 = not modeled  
1 = modeled

Near-field puffs modeled as  
elongated slugs? (MSLUG) Default: 0 ! MSLUG = 0 !  
0 = no  
1 = yes (slug model used)

Transitional plume rise modeled?  
(MTRANS) Default: 1 ! MTRANS = 1 !  
0 = no (i.e., final rise only)  
1 = yes (i.e., transitional rise computed)

Stack tip downwash? (MTIP) Default: 1 ! MTIP = 1 !  
0 = no (i.e., no stack tip downwash)  
1 = yes (i.e., use stack tip downwash)

Method used to simulate building  
downwash? (MBDW) Default: 1 ! MBDW = 1 !  
1 = ISC method  
2 = PRIME method

Vertical wind shear modeled above  
stack top? (MSHEAR) Default: 0 ! MSHEAR = 0 !  
0 = no (i.e., vertical wind shear not modeled)  
1 = yes (i.e., vertical wind shear modeled)

Puff splitting allowed? (MSPLIT) Default: 0 ! MSPLIT = 0 !  
0 = no (i.e., puffs not split)  
1 = yes (i.e., puffs are split)

Chemical mechanism flag (MCHEM) Default: 1 ! MCHEM = 1 !  
0 = chemical transformation not  
modeled  
1 = transformation rates computed  
internally (MESOPUFF II scheme)  
2 = user-specified transformation  
rates used  
3 = transformation rates computed  
internally (RIVAD/ARM3 scheme)

4 = secondary organic aerosol formation  
computed (MESOPUFF II scheme for OH)

Aqueous phase transformation flag (MAQCHEM)  
(Used only if MCHEM = 1, or 3)           Default: 0           ! MAQCHEM = 0 !  
0 = aqueous phase transformation  
not modeled  
1 = transformation rates adjusted  
for aqueous phase reactions

Wet removal modeled ? (MWET)           Default: 1           ! MWET = 1 !  
0 = no  
1 = yes

Dry deposition modeled ? (MDRY)       Default: 1           ! MDRY = 1 !  
0 = no  
1 = yes  
(dry deposition method specified  
for each species in Input Group 3)

Gravitational settling (plume tilt)  
modeled ? (MTILT)                   Default: 0           ! MTILT = 0 !  
0 = no  
1 = yes  
(puff center falls at the gravitational  
settling velocity for 1 particle species)

Restrictions:

- MDRY = 1
- NSPEC = 1 (must be particle species as well)
- sg = 0 GEOMETRIC STANDARD DEVIATION in Group 8 is  
set to zero for a single particle diameter

Method used to compute dispersion  
coefficients (MDISP)                   Default: 3           ! MDISP = 3 !

- 1 = dispersion coefficients computed from measured values  
of turbulence, sigma v, sigma w
- 2 = dispersion coefficients from internally calculated  
sigma v, sigma w using micrometeorological variables  
(u\*, w\*, L, etc.)
- 3 = PG dispersion coefficients for RURAL areas (computed using  
the ISCST multi-segment approximation) and MP coefficients in  
urban areas
- 4 = same as 3 except PG coefficients computed using  
the MESOPUFF II eqns.
- 5 = CTDM sigmas used for stable and neutral conditions.  
For unstable conditions, sigmas are computed as in  
MDISP = 3, described above. MDISP = 5 assumes that  
measured values are read

Sigma-v/sigma-theta, sigma-w measurements used? (MTURBVW)  
(Used only if MDISP = 1 or 5)       Default: 3           ! MTURBVW = 3 !  
1 = use sigma-v or sigma-theta measurements  
from PROFILE.DAT to compute sigma-y  
(valid for METFM = 1, 2, 3, 4, 5)  
2 = use sigma-w measurements

```

    from PROFILE.DAT to compute sigma-z
    (valid for METFM = 1, 2, 3, 4, 5)
3 = use both sigma-(v/theta) and sigma-w
    from PROFILE.DAT to compute sigma-y and sigma-z
    (valid for METFM = 1, 2, 3, 4, 5)
4 = use sigma-theta measurements
    from PLMMET.DAT to compute sigma-y
    (valid only if METFM = 3)

Back-up method used to compute dispersion
when measured turbulence data are
missing (MDISP2)                Default: 3      ! MDISP2 = 3 !
(used only if MDISP = 1 or 5)
    2 = dispersion coefficients from internally calculated
        sigma v, sigma w using micrometeorological variables
        (u*, w*, L, etc.)
    3 = PG dispersion coefficients for RURAL areas (computed using
        the ISCST multi-segment approximation) and MP coefficients in
        urban areas
    4 = same as 3 except PG coefficients computed using
        the MESOPUFF II eqns.

[DIAGNOSTIC FEATURE]
Method used for Lagrangian timescale for Sigma-y
(used only if MDISP=1,2 or MDISP2=1,2)
(MTAULY)                Default: 0      ! MTAULY = 0 !
    0 = Draxler default 617.284 (s)
    1 = Computed as Lag. Length / (.75 q) -- after SCIPUFF
    10 <Direct user input (s)          -- e.g., 306.9

[DIAGNOSTIC FEATURE]
Method used for Advective-Decay timescale for Turbulence
(used only if MDISP=2 or MDISP2=2)
(MTAUADV)                Default: 0      ! MTAUADV = 0 !
    0 = No turbulence advection
    1 = Computed (OPTION NOT IMPLEMENTED)
    10 <Direct user input (s)          -- e.g., 300

Method used to compute turbulence sigma-v &
sigma-w using micrometeorological variables
(Used only if MDISP = 2 or MDISP2 = 2)
(MCTURB)                Default: 1      ! MCTURB = 1 !
    1 = Standard CALPUFF subroutines
    2 = AERMOD subroutines

PG sigma-y,z adj. for roughness?    Default: 0      ! MROUGH = 0 !
(MROUGH)
    0 = no
    1 = yes

Partial plume penetration of
elevated inversion?                Default: 1      ! MPARTL = 1 !
(MPARTL)
    0 = no
    1 = yes

```

Strength of temperature inversion      Default: 0      ! MTINV = 0 !  
provided in PROFILE.DAT extended records?

(MTINV)

- 0 = no (computed from measured/default gradients)
- 1 = yes

PDF used for dispersion under convective conditions?

Default: 0      ! MPDF = 0 !

(MPDF)

- 0 = no
- 1 = yes

Sub-Grid TIBL module used for shore line?

Default: 0      ! MSGTIBL = 0 !

(MSGTIBL)

- 0 = no
- 1 = yes

Boundary conditions (concentration) modeled?

Default: 0      ! MBCON = 0 !

(MBCON)

- 0 = no
- 1 = yes, using formatted BCON.DAT file
- 2 = yes, using unformatted CONC.DAT file

Note: MBCON > 0 requires that the last species modeled be 'BCON'. Mass is placed in species BCON when generating boundary condition puffs so that clean air entering the modeling domain can be simulated in the same way as polluted air. Specify zero emission of species BCON for all regular sources.

Individual source contributions saved?

Default: 0      ! MSOURCE = 1 !

(MSOURCE)

- 0 = no
- 1 = yes

Analyses of fogging and icing impacts due to emissions from arrays of mechanically-forced cooling towers can be performed using CALPUFF in conjunction with a cooling tower emissions processor (CTEMISS) and its associated postprocessors. Hourly emissions of water vapor and temperature from each cooling tower cell are computed for the current cell configuration and ambient conditions by CTEMISS. CALPUFF models the dispersion of these emissions and provides cloud information in a specialized format for further analysis. Output to FOG.DAT is provided in either 'plume mode' or 'receptor mode' format.

Configure for FOG Model output?

Default: 0      ! MFOG = 0 !

(MFOG)

- 0 = no
- 1 = yes - report results in PLUME Mode format
- 2 = yes - report results in RECEPTOR Mode format

Test options specified to see if  
they conform to regulatory  
values? (MREG)

Default: 1 ! MREG = 1 !

- 0 = NO checks are made
- 1 = Technical options must conform to USEPA  
Long Range Transport (LRT) guidance
  - METFM 1 or 2
  - AVET 60. (min)
  - PGTIME 60. (min)
  - MGAUSS 1
  - MCTADJ 3
  - MTRANS 1
  - MTIP 1
  - MCHEM 1 or 3 (if modeling SOx, NOx)
  - MWET 1
  - MDRY 1
  - MDISP 2 or 3
  - MPDF 0 if MDISP=3  
1 if MDISP=2
  - MROUGH 0
  - MPARTL 1
  - SYTDEP 550. (m)
  - MHFTSZ 0
  - SVMIN 0.5 (m/s)

!END!

-----  
INPUT GROUP: 3a, 3b -- Species list  
-----

-----  
Subgroup (3a)  
-----

The following species are modeled:

- ! CSPEC = SO2 ! !END!
- ! CSPEC = SO4 ! !END!
- ! CSPEC = NOX ! !END!
- ! CSPEC = HNO3 ! !END!
- ! CSPEC = NO3 ! !END!
- ! CSPEC = PM800 ! !END!
- ! CSPEC = PM425 ! !END!
- ! CSPEC = PM187 ! !END!
- ! CSPEC = PM081 ! !END!
- ! CSPEC = PM056 ! !END!

			Dry
OUTPUT GROUP			
SPECIES	MODELED	EMITTED	DEPOSITED
NUMBER			
NAME	(0=NO, 1=YES)	(0=NO, 1=YES)	(0=NO,

```

(0=NONE,
  (Limit: 12
1=1st CGRUP,
  Characters
2=2nd CGRUP,
  in length)
etc.)

```

```

1=COMPUTED-GAS
2=COMPUTED-PARTICLE
3=USER-SPECIFIED) 3=

```

```

!      SO2  =      1,          1,          1,          0
!
!      SO4  =      1,          1,          2,          0
!
!      NOX  =      1,          1,          1,          0
!
!      HNO3 =      1,          0,          1,          0
!
!      NO3  =      1,          0,          2,          0
!
!      PM800 =      1,          1,          2,          0
!
!      PM425 =      1,          1,          2,          0
!
!      PM187 =      1,          1,          2,          0
!
!      PM081 =      1,          1,          2,          0
!
!      PM056 =      1,          1,          2,          0
!

```

!END!

Note: The last species in (3a) must be 'BCON' when using the boundary condition option (MBCON > 0). Species BCON should typically be modeled as inert (no chem transformation or removal).

-----  
Subgroup (3b)  
-----

The following names are used for Species-Groups in which results for certain species are combined (added) prior to output. The CGRUP name will be used as the species name in output files. Use this feature to model specific particle-size distributions by treating each size-range as a separate species. Order must be consistent with 3(a) above.

-----  
INPUT GROUP: 4 -- Map Projection and Grid control parameters  
-----

Projection for all (X,Y):  
-----

Map projection

(PMAP) Default: UTM ! PMAP = LCC !

UTM : Universal Transverse Mercator  
TTM : Tangential Transverse Mercator  
LCC : Lambert Conformal Conic  
PS : Polar Stereographic  
EM : Equatorial Mercator  
LAZA : Lambert Azimuthal Equal Area

False Easting and Northing (km) at the projection origin

(Used only if PMAP= TTM, LCC, or LAZA)

(FEAST) Default=0.0 ! FEAST = 0 !  
(FNORTH) Default=0.0 ! FNORTH = 0 !

UTM zone (1 to 60)

(Used only if PMAP=UTM)

(IUTMZN) No Default ! IUTMZN = 0 !

Hemisphere for UTM projection?

(Used only if PMAP=UTM)

(UTMHEM) Default: N ! UTMHEM = N !  
N : Northern hemisphere projection  
S : Southern hemisphere projection

Latitude and Longitude (decimal degrees) of projection origin

(Used only if PMAP= TTM, LCC, PS, EM, or LAZA)

(RLAT0) No Default ! RLAT0 = 40N !  
(RLON0) No Default ! RLON0 = 98W !

TTM : RLON0 identifies central (true N/S) meridian of projection  
RLAT0 selected for convenience  
LCC : RLON0 identifies central (true N/S) meridian of projection  
RLAT0 selected for convenience  
PS : RLON0 identifies central (grid N/S) meridian of projection  
RLAT0 selected for convenience  
EM : RLON0 identifies central meridian of projection  
RLAT0 is REPLACED by 0.0N (Equator)  
LAZA: RLON0 identifies longitude of tangent-point of mapping plane  
RLAT0 identifies latitude of tangent-point of mapping plane

Matching parallel(s) of latitude (decimal degrees) for projection

(Used only if PMAP= LCC or PS)

(XLAT1) No Default ! XLAT1 = 20N !  
(XLAT2) No Default ! XLAT2 = 60N !

XLAT2 LCC : Projection cone slices through Earth's surface at XLAT1 and  
PS : Projection plane slices through Earth at XLAT1  
(XLAT2 is not used)

-----  
Note: Latitudes and longitudes should be positive, and include a  
letter N,S,E, or W indicating north or south latitude, and  
east or west longitude. For example,  
35.9 N Latitude = 35.9N  
118.7 E Longitude = 118.7E



Datum-region

-----

The Datum-Region for the coordinates is identified by a character string. Many mapping products currently available use the model of the Earth known as the World Geodetic System 1984 (WGS-84). Other local models may be in use, and their selection in CALMET will make its output consistent with local mapping products. The list of Datum-Regions with official transformation parameters is provided by the National Imagery and Mapping Agency (NIMA).

NIMA Datum - Regions(Examples)

-----

----

WGS-84	WGS-84 Reference Ellipsoid and Geoid, Global coverage (WGS84)
NAS-C	NORTH AMERICAN 1927 Clarke 1866 Spheroid, MEAN FOR CONUS (NAD27)
NAR-C	NORTH AMERICAN 1983 GRS 80 Spheroid, MEAN FOR CONUS (NAD83)
NWS-84	NWS 6370KM Radius, Sphere
ESR-S	ESRI REFERENCE 6371KM Radius, Sphere

Datum-region for output coordinates

(DATUM) Default: WGS-84 ! DATUM = NWS-84 !

METEOROLOGICAL Grid:

Rectangular grid defined for projection PMAP,  
with X the Easting and Y the Northing coordinate

No. X grid cells (NX)	No default	! NX = 313 !
No. Y grid cells (NY)	No default	! NY = 181 !
No. vertical layers (NZ)	No default	! NZ = 10 !
Grid spacing (DGRIDKM)	No default	! DGRIDKM = 4 !
	Units: km	

Cell face heights

(ZFACE(nz+1)) No defaults  
Units: m

! ZFACE = 0.0, 20.0, 40.0, 80.0, 160.0, 320.0, 640.0, 1200.0, 2000.0,  
3000.0, 4000.0 !

Reference Coordinates  
of SOUTHWEST corner of  
grid cell(1, 1):

X coordinate (XORIGKM)	No default	! XORIGKM = -506 !
Y coordinate (YORIGKM)	No default	! YORIGKM = 298 !
	Units: km	

COMPUTATIONAL Grid:

The computational grid is identical to or a subset of the MET. grid.  
The lower left (LL) corner of the computational grid is at grid point  
(IBCOMP, JBCOMP) of the MET. grid. The upper right (UR) corner of the

computational grid is at grid point (IECOMP, JECOMP) of the MET. grid.  
The grid spacing of the computational grid is the same as the MET. grid.

X index of LL corner (IBCOMP) (1 <= IBCOMP <= NX)	No default	! IBCOMP = 1 !
Y index of LL corner (JBCOMP) (1 <= JBCOMP <= NY)	No default	! JBCOMP = 1 !
X index of UR corner (IECOMP) (1 <= IECOMP <= NX)	No default	! IECOMP = 120 !
Y index of UR corner (JECOMP) (1 <= JECOMP <= NY)	No default	! JECOMP = 120 !

SAMPLING Grid (GRIDDED RECEPTORS):

The lower left (LL) corner of the sampling grid is at grid point (IBSAMP, JBSAMP) of the MET. grid. The upper right (UR) corner of the sampling grid is at grid point (IESAMP, JESAMP) of the MET. grid. The sampling grid must be identical to or a subset of the computational grid. It may be a nested grid inside the computational grid. The grid spacing of the sampling grid is DGRIDKM/MESH DN.

Logical flag indicating if gridded receptors are used (LSAMP) (T=yes, F=no)	Default: T	! LSAMP = T !
X index of LL corner (IBSAMP) (IBCOMP <= IBSAMP <= IECOMP)	No default	! IBSAMP = 1 !
Y index of LL corner (JBSAMP) (JBCOMP <= JBSAMP <= JECOMP)	No default	! JBSAMP = 1 !
X index of UR corner (IESAMP) (IBCOMP <= IESAMP <= IECOMP)	No default	! IESAMP = 75 !
Y index of UR corner (JESAMP) (JBCOMP <= JESAMP <= JECOMP)	No default	! JESAMP = 75 !
Nesting factor of the sampling grid (MESH DN) (MESH DN is an integer >= 1)	Default: 1	! MESH DN = 1 !

!END!

-----  
INPUT GROUP: 5 -- Output Options  
-----

\*

\*

FILE ----	DEFAULT VALUE -----	VALUE THIS RUN -----
Concentrations (ICON)	1	! ICON = 1 !
Dry Fluxes (IDRY)	1	! IDRY = 1 !
Wet Fluxes (IWET)	1	! IWET = 1 !
2D Temperature (IT2D)	0	! IT2D = 0 !
2D Density (IRHO)	0	! IRHO = 0 !
Relative Humidity (IVIS)	1	! IVIS = 1 !
(relative humidity file is required for visibility analysis)		
Use data compression option in output file? (LCOMPRS)	Default: T	! LCOMPRS = T !

\*  
0 = Do not create file, 1 = create file

QA PLOT FILE OUTPUT OPTION:

Create a standard series of output files (e.g.  
locations of sources, receptors, grids ...)  
suitable for plotting?  
(IQAPLOT) Default: 1 ! IQAPLOT = 1 !  
0 = no  
1 = yes

DIAGNOSTIC MASS FLUX OUTPUT OPTIONS:

Mass flux across specified boundaries  
for selected species reported hourly?  
(IMFLX) Default: 0 ! IMFLX = 0 !  
0 = no  
1 = yes (FLUXBDY.DAT and MASSFLX.DAT filenames  
are specified in Input Group 0)

Mass balance for each species  
reported hourly?  
(IMBAL) Default: 0 ! IMBAL = 0 !  
0 = no  
1 = yes (MASSBAL.DAT filename is  
specified in Input Group 0)

LINE PRINTER OUTPUT OPTIONS:

Print concentrations (ICPRT) Default: 0 ! ICPRT = 0 !  
Print dry fluxes (IDPRT) Default: 0 ! IDPRT = 0 !  
Print wet fluxes (IWPRT) Default: 0 ! IWPRT = 0 !  
(0 = Do not print, 1 = Print)

Concentration print interval  
(ICFRQ) in hours Default: 1 ! ICFRQ = 1 !  
Dry flux print interval  
(IDFRQ) in hours Default: 1 ! IDFRQ = 1 !  
Wet flux print interval  
(IWFRQ) in hours Default: 1 ! IWFRQ = 1 !

Units for Line Printer Output  
(IPRTU) Default: 1 ! IPRTU = 3 !

	for Concentration	for 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	

Messages tracking progress of run  
written to the screen ?  
(IMESG) Default: 2 ! IMESG = 2 !

0 = no  
1 = yes (advection step, puff ID)  
2 = yes (YYYYJJJHH, # old puffs, # emitted puffs)

SPECIES (or GROUP for combined species) LIST FOR OUTPUT OPTIONS

WET FLUXES	----- CONCENTRATIONS ----- -- MASS FLUX --	----- DRY FLUXES -----	-----
SPECIES /GROUP SAVED ON DISK?	PRINTED? SAVED ON DISK?	PRINTED? SAVED ON DISK?	PRINTED?
-----	-----	-----	-----
! SO2 =	1,	1,	1,
1, 1 !			
! SO4 =	1,	1,	1,
1, 1 !			
! NOX =	1,	1,	1,
1, 1 !			
! HNO3 =	1,	1,	1,
1, 1 !			
! NO3 =	1,	1,	1,
1, 1 !			
! PM800 =	1,	1,	1,
1, 0 !			
! PM425 =	1,	1,	1,
1, 0 !			
! PM187 =	1,	1,	1,
1, 0 !			
! PM081 =	1,	1,	1,
1, 0 !			
! PM056 =	1,	1,	1,
1, 0 !			

Note: Species BCON (for MBCON > 0) does not need to be saved on disk.

OPTIONS FOR PRINTING "DEBUG" QUANTITIES (much output)

Logical for debug output  
(LDEBUG) Default: F ! LDEBUG = F !

First puff to track (IPFDEB)	Default: 1	! IPFDEB = 1 !
Number of puffs to track (NPFDEB)	Default: 1	! NPFDEB = 100 !
Met. period to start output (NN1)	Default: 1	! NN1 = 1 !
Met. period to end output (NN2)	Default: 10	! NN2 = 10 !

!END!

-----

INPUT GROUP: 6a, 6b, & 6c -- Subgrid scale complex terrain inputs

-----

-----

Subgroup (6a)

-----

Number of terrain features (NHILL)	Default: 0	! NHILL = 0 !
Number of special complex terrain receptors (NCTREC)	Default: 0	! NCTREC = 0 !
Terrain and CTSG Receptor data for CTSG hills input in CTDM format ? (MHILL)	No Default	! MHILL = 2 !
1 = Hill and Receptor data created by CTDM processors & read from HILL.DAT and HILLRCT.DAT files		
2 = Hill data created by OPTHILL & input below in Subgroup (6b); Receptor data in Subgroup (6c)		
Factor to convert horizontal dimensions to meters (MHILL=1)	Default: 1.0	! XHILL2M = 1.0
Factor to convert vertical dimensions to meters (MHILL=1)	Default: 1.0	! ZHILL2M = 1.0
X-origin of CTDM system relative to CALPUFF coordinate system, in Kilometers (MHILL=1)	No Default	! XCTDMKM = 0.0
Y-origin of CTDM system relative to CALPUFF coordinate system, in Kilometers (MHILL=1)	No Default	! YCTDMKM = 0.0

! END !

-----

Subgroup (6b)

-----

1 \*\*

HILL information

HILL	XC	YC	THETAH	ZGRID	RELIEF	EXPO 1	EXPO 2
SCALE 1	SCALE 2	AMAX1	AMAX2				
NO.	(km)	(km)	(deg.)	(m)	(m)	(m)	(m)
(m)	(m)	(m)	(m)				
----	----	----	-----	-----	-----	-----	-----
-----	-----	-----	-----				

-----  
Subgroup (6c)

-----

COMPLEX TERRAIN RECEPTOR INFORMATION

XRCT	YRCT	ZRCT	XHH
(km)	(km)	(m)	
-----	-----	-----	-----

-----  
1

Description of Complex Terrain Variables:

XC, YC = Coordinates of center of hill  
THETAH = Orientation of major axis of hill (clockwise from North)  
ZGRID = Height of the 0 of the grid above mean sea level  
RELIEF = Height of the crest of the hill above the grid elevation  
EXPO 1 = Hill-shape exponent for the major axis  
EXPO 2 = Hill-shape exponent for the minor axis  
SCALE 1 = Horizontal length scale along the major axis  
SCALE 2 = Horizontal length scale along the minor axis  
AMAX = Maximum allowed axis length for the major axis  
BMAX = Maximum allowed axis length for the minor axis  
  
XRCT, YRCT = Coordinates of the complex terrain receptors  
ZRCT = Height of the ground (MSL) at the complex terrain Receptor  
XHH = Hill number associated with each complex terrain receptor  
(NOTE: MUST BE ENTERED AS A REAL NUMBER)

\*\*

NOTE: DATA for each hill and CTSG receptor are treated as a separate input subgroup and therefore must end with an input group terminator.

-----  
INPUT GROUP: 7 -- Chemical parameters for dry deposition of gases  
-----

SPECIES RESISTANCE NAME (dimensionless)	DIFFUSIVITY HENRY'S LAW COEFFICIENT (cm**2/s)	ALPHA STAR	REACTIVITY	MESOPHYLL (s/cm)
! HNO3 =	0.1628,	1,	18,	0,
8E-8 ! NOX =	0.1656,	1,	8,	5,
3.5 ! SO2 =	0.1509,	1000,	8,	0,
0.04 !				

!END!

-----  
INPUT GROUP: 8 -- Size parameters for dry deposition of particles  
-----

For SINGLE SPECIES, the mean and standard deviation are used to compute a deposition velocity for NINT (see group 9) size-ranges, and these are then averaged to obtain a mean deposition velocity.

For GROUPED SPECIES, the size distribution should be explicitly specified (by the 'species' in the group), and the standard deviation for each should be entered as 0. The model will then use the deposition velocity for the stated mean diameter.

SPECIES NAME	GEOMETRIC MASS MEAN DIAMETER (microns)	GEOMETRIC STANDARD DEVIATION (microns)
! NO3 =	0.48,	2 !
! PM056 =	0.5625,	0 !
! PM081 =	0.8125,	0 !
! PM187 =	1.875,	0 !
! PM425 =	4.25,	0 !
! PM800 =	8,	0 !
! SO4 =	0.48,	2 !

!END!

-----  
INPUT GROUP: 9 -- Miscellaneous dry deposition parameters  
-----

Reference cuticle resistance (s/cm)  
(RCUTR) Default: 30 ! RCUTR = 30 !  
Reference ground resistance (s/cm)  
(RGR) Default: 10 ! RGR = 10 !

Reference pollutant reactivity  
 (REACTR) Default: 8 ! REACTR = 8 !

Number of particle-size intervals used to  
 evaluate effective particle deposition velocity  
 (NINT) Default: 9 ! NINT = 9 !

Vegetation state in unirrigated areas  
 (IVEG) Default: 1 ! IVEG = 1 !  
 IVEG=1 for active and unstressed vegetation  
 IVEG=2 for active and stressed vegetation  
 IVEG=3 for inactive vegetation

!END!

-----

INPUT GROUP: 10 -- Wet Deposition Parameters

-----

Scavenging Coefficient -- Units: (sec)\*\*(-1)

Pollutant	Liquid Precip.	Frozen Precip.
! HNO3 =	6.00E-05,	0.00E00 !
! NO3 =	1.00E-04,	3.00E-05 !
! NOX =	0.00E00,	0.00E00 !
! PM056 =	1.00E-04,	3.00E-05 !
! PM081 =	1.00E-04,	3.00E-05 !
! PM187 =	1.00E-04,	3.00E-05 !
! PM425 =	1.00E-04,	3.00E-05 !
! PM800 =	1.00E-04,	3.00E-05 !
! SO2 =	3.00E-05,	0.00E00 !
! SO4 =	1.00E-04,	3.00E-05 !

!END!

-----

INPUT GROUP: 11 -- Chemistry Parameters

-----

Ozone data input option (MOZ) Default: 1 ! MOZ = 1 !  
 (Used only if MCHM = 1, 3, or 4)  
 0 = use a monthly background ozone value  
 1 = read hourly ozone concentrations from  
 the OZONE.DAT data file

Monthly ozone concentrations  
 (Used only if MCHM = 1, 3, or 4 and  
 MOZ = 0 or MOZ = 1 and all hourly O3 data missing)  
 (BCKO3) in ppb Default: 12\*80.  
 ! BCKO3 = 80, 80, 80, 80, 80, 80, 80, 80, 80, 80, 80, 80, 80 !





Urban - high biogenic (controls present)

BCKPMF	60.	60.	60.	60.	60.	60.	60.	60.	60.	60.	60.	60.
OFRAC	.25	.25	.30	.30	.30	.55	.55	.55	.35	.35	.35	.25
VCNX	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.

Regional Plume

BCKPMF	20.	20.	20.	20.	20.	20.	20.	20.	20.	20.	20.	20.
OFRAC	.20	.20	.25	.35	.25	.40	.40	.40	.30	.30	.30	.20
VCNX	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.

Urban - no controls present

BCKPMF	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
OFRAC	.30	.30	.35	.35	.35	.55	.55	.55	.35	.35	.35	.30
VCNX	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.

Default: Clean Continental

! BCKPMF = 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00, 1.00 !  
! OFRAC = 0.15, 0.15, 0.20, 0.20, 0.20, 0.20, 0.20, 0.20, 0.20, 0.20, 0.20, 0.20, 0.20, 0.15 !  
! VCNX = 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00, 50.00 !

!END!

-----  
INPUT GROUP: 12 -- Misc. Dispersion and Computational Parameters  
-----

Horizontal size of puff (m) beyond which  
time-dependent dispersion equations (Heffter)  
are used to determine sigma-y and  
sigma-z (SYTDEP) Default: 550. ! SYTDEP = 550  
!  
Switch for using Heffter equation for sigma z  
as above (0 = Not use Heffter; 1 = use Heffter  
(MHFTSZ) Default: 0 ! MHFTSZ = 0 !  
Stability class used to determine plume  
growth rates for puffs above the boundary  
layer (JSUP) Default: 5 ! JSUP = 5 !  
Vertical dispersion constant for stable  
conditions (k1 in Eqn. 2.7-3) (CONK1) Default: 0.01 ! CONK1 = 0.01  
!  
Vertical dispersion constant for neutral/  
unstable conditions (k2 in Eqn. 2.7-4)  
(CONK2) Default: 0.1 ! CONK2 = 0.1 !  
Factor for determining Transition-point from  
Schulman-Scire to Huber-Snyder Building Downwash  
scheme (SS used for Hs < Hb + TBD \* HL)

```

(TBD)                                Default: 0.5      ! TBD = 0.5 !
  TBD <0  ==> always use Huber-Snyder
  TBD = 1.5 ==> always use Schulman-Scire
  TBD = 0.5 ==> ISC Transition-point

Range of land use categories for which
urban dispersion is assumed
(IURB1, IURB2)                        Default: 10      ! IURB1 = 10 !
                                         19      ! IURB2 = 19 !

Site characterization parameters for single-point Met data files -----
(needed for METFM = 2,3,4,5)

  Land use category for modeling domain
  (ILANDUIN)                            Default: 20      ! ILANDUIN = 20
!

  Roughness length (m) for modeling domain
  (Z0IN)                                 Default: 0.25    ! Z0IN = .25 !

  Leaf area index for modeling domain
  (XLAIIN)                               Default: 3.0     ! XLAIIN = 3.0
!

  Elevation above sea level (m)
  (ELEVIN)                               Default: 0.0     ! ELEVIN = .0 !

  Latitude (degrees) for met location
  (XLATIN)                               Default: -999.   ! XLATIN = -
999.0 !

  Longitude (degrees) for met location
  (XLONIN)                               Default: -999.   ! XLONIN = -
999.0 !

Specialized information for interpreting single-point Met data files -----

  Anemometer height (m) (Used only if METFM = 2,3)
  (ANEMHT)                               Default: 10.     ! ANEMHT = 10.0
!

  Form of lateral turbulence data in PROFILE.DAT file
  (Used only if METFM = 4,5 or MTURBVW = 1 or 3)
  (ISIGMAV)                              Default: 1       ! ISIGMAV = 1 !
    0 = read sigma-theta
    1 = read sigma-v

  Choice of mixing heights (Used only if METFM = 4)
  (IMIXCTDM)                             Default: 0       ! IMIXCTDM = 0
!
    0 = read PREDICTED mixing heights
    1 = read OBSERVED mixing heights

Maximum length of a slug (met. grid units)
(XMXLEN)                                Default: 1.0     ! XMXLEN = 1 !

Maximum travel distance of a puff/slug (in
grid units) during one sampling step

```

```

(XSAMLEN)                                Default: 1.0      ! XSAMLEN = 1 !

Maximum Number of slugs/puffs release from
one source during one time step
(MXNEW)                                   Default: 99      ! MXNEW = 99 !

Maximum Number of sampling steps for
one puff/slug during one time step
(MXSAM)                                   Default: 99      ! MXSAM = 99 !

Number of iterations used when computing
the transport wind for a sampling step
that includes gradual rise (for CALMET
and PROFILE winds)
(NCOUNT)                                 Default: 2       ! NCOUNT = 2 !

Minimum sigma y for a new puff/slug (m)
(SYMIN)                                   Default: 1.0     ! SYMIN = 1 !

Minimum sigma z for a new puff/slug (m)
(SZMIN)                                   Default: 1.0     ! SZMIN = 1 !

```

```

Default minimum turbulence velocities sigma-v and sigma-w
for each stability class over land and over water (m/s)
(SVMIN(12) and SWMIN(12))

```

	LAND						WATER				
Stab Class :	A	B	C	D	E	F	A	B	C	D	E
Default SVMIN :	.50	.50	.50	.50	.50	.50	.37	.37	.37	.37	
Default SWMIN :	.20	.12	.08	.06	.03	.016	.20	.12	.08	.06	
! SVMIN =	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
! SWMIN =	0.2	0.12	0.08	0.06	0.03	0.016	0.2	0.12	0.08	0.06	

```

Divergence criterion for dw/dz across puff
used to initiate adjustment for horizontal
convergence (1/s)
Partial adjustment starts at CDIV(1), and
full adjustment is reached at CDIV(2)
(CDIV(2))                                Default: 0.0,0.0 ! CDIV =
0.01, 0.01 !

```

```

Minimum wind speed (m/s) allowed for
non-calm conditions. Also used as minimum
speed returned when using power-law
extrapolation toward surface
(WSCALM)                                 Default: 0.5     ! WSCALM = 0.5
!

```

```

Maximum mixing height (m)

```

(XMAXZI) Default: 3000. ! XMAXZI = 3000  
!

Minimum mixing height (m)  
(XMINZI) Default: 50. ! XMINZI = 50 !

Default wind speed classes --  
5 upper bounds (m/s) are entered;  
the 6th class has no upper limit  
(WSCAT(5))

Default :  
ISC RURAL : 1.54, 3.09, 5.14, 8.23, 10.8

(10.8+)

Wind Speed Class : 1 2 3 4 5  
--- --- --- --- ---  
! WSCAT = 1.54, 3.09, 5.14, 8.23, 10.8 !

Default wind speed profile power-law  
exponents for stabilities 1-6

(PLX0(6)) Default : ISC RURAL values  
ISC RURAL : .07, .07, .10, .15, .35, .55  
ISC URBAN : .15, .15, .20, .25, .30, .30

F

Stability Class : A B C D E

---

! PLX0 = 0.07, 0.07, 0.1, 0.15, 0.35,

0.55 !

Default potential temperature gradient  
for stable classes E, F (degK/m)

(PTG0(2)) Default: 0.020, 0.035  
! PTG0 = 0.02, 0.035 !

Default plume path coefficients for  
each stability class (used when option  
for partial plume height terrain adjustment  
is selected -- MCTADJ=3)

(PPC(6)) Stability Class : A B C D E

F

Default PPC : .50, .50, .50, .50, .35,

.35

---

! PPC = 0.5, 0.5, 0.5, 0.5, 0.35, 0.35

!

Slug-to-puff transition criterion factor  
equal to sigma-y/length of slug

(SL2PF) Default: 10. ! SL2PF = 10 !

Puff-splitting control variables -----

VERTICAL SPLIT  
-----

Number of puffs that result every time a puff

is split - nsplit=2 means that 1 puff splits  
into 2  
(NSPLIT) Default: 3 ! NSPLIT = 3 !

Time(s) of a day when split puffs are eligible to  
be split once again; this is typically set once  
per day, around sunset before nocturnal shear develops.  
24 values: 0 is midnight (00:00) and 23 is 11 PM (23:00)  
0=do not re-split 1=eligible for re-split  
(IRESPLIT(24)) Default: Hour 17 = 1  
! IRESPLIT = 0,0 !

Split is allowed only if last hour's mixing  
height (m) exceeds a minimum value  
(ZISPLIT) Default: 100. ! ZISPLIT = 100

!

Split is allowed only if ratio of last hour's  
mixing ht to the maximum mixing ht experienced  
by the puff is less than a maximum value (this  
postpones a split until a nocturnal layer develops)  
(ROLDMAX) Default: 0.25 ! ROLDMAX = 0.25

!

#### HORIZONTAL SPLIT

-----

Number of puffs that result every time a puff  
is split - nsplith=5 means that 1 puff splits  
into 5  
(NSPLITH) Default: 5 ! NSPLITH = 5 !

Minimum sigma-y (Grid Cells Units) of puff  
before it may be split  
(SYSPLITH) Default: 1.0 ! SYSPLITH = 1 !

Minimum puff elongation rate (SYSPLITH/hr) due to  
wind shear, before it may be split  
(SHSPLITH) Default: 2. ! SHSPLITH = 2 !

Minimum concentration (g/m<sup>3</sup>) of each  
species in puff before it may be split  
Enter array of NSPEC values; if a single value is  
entered, it will be used for ALL species  
(CNSPLITH) Default: 1.0E-07 ! CNSPLITH = 1E-

7 !

#### Integration control variables -----

Fractional convergence criterion for numerical SLUG  
sampling integration  
(EPSSLUG) Default: 1.0e-04 ! EPSSLUG =  
0.0001 !

Fractional convergence criterion for numerical AREA  
source integration  
(EPSAREA) Default: 1.0e-06 ! EPSAREA = 1E-6

!

Trajectory step-length (m) used for numerical rise  
integration  
(DSRISE) Default: 1.0 ! DSRISE = 1 !

Boundary Condition (BC) Puff control variables -----

Minimum height (m) to which BC puffs are mixed as they are emitted  
(MBCON=2 ONLY). Actual height is reset to the current mixing height  
at the release point if greater than this minimum.  
(HTMINBC) Default: 500. \* HTMINBC = \*

Search radius (km) about a receptor for sampling nearest BC puff.  
BC puffs are typically emitted with a spacing of one grid cell  
length, so the search radius should be greater than DGRIDKM.  
(RSAMPBC) Default: 10. \* RSAMPBC = \*

Near-Surface depletion adjustment to concentration profile used when  
sampling BC puffs?  
(MDEPBC) Default: 1 \* MDEPBC = \*  
0 = Concentration is NOT adjusted for depletion  
1 = Adjust Concentration for depletion

!END!

-----  
INPUT GROUPS: 13a, 13b, 13c, 13d -- Point source parameters  
-----

-----  
Subgroup (13a)  
-----

Number of point sources with  
parameters provided below (NPT1) No default ! NPT1 = 2 !

Units used for point source  
emissions below (IPTU) Default: 1 ! IPTU = 1 !

1 = g/s  
2 = kg/hr  
3 = lb/hr  
4 = tons/yr  
5 = Odour Unit \* m\*\*3/s (vol. flux of odour compound)  
6 = Odour Unit \* m\*\*3/min  
7 = metric tons/yr

Number of source-species  
combinations with variable  
emissions scaling factors  
provided below in (13d) (NSPT1) Default: 0 ! NSPT1 = 0 !

Number of point sources with  
variable emission parameters  
provided in external file (NPT2) No default ! NPT2 = 0 !

(If NPT2 > 0, these point source emissions are read from the file: PTEMARB.DAT)

!END!

-----  
 Subgroup (13b)  
 -----

a  
 POINT SOURCE: CONSTANT DATA  
 -----

c								b
Source Emission No.	X Coordinate (km)	Y Coordinate (km)	Stack Height (m)	Base Elevation (m)	Stack Diameter (m)	Exit Vel. (m/s)	Exit Temp. (deg. K)	Bldg. Dwash Rates
1	! SRCNAM = KILN4 !							
1	! X = -396.199,	438.552,	58.52,	1017.0,	3.11,	6.74,	478.0,	0.0,
0.825,	2.197,	22.4326,						
	0,	0,	0.344,	1.636,	2.249,	0.236,	1.5 !	
1	! ZPLTFM =	0.0 !						
1	! FMFAC =	1.0 !	!END!					
2	! SRCNAM = KILN5 !							
2	! X = -396.078,	438.556,	58.52,	1017.0,	3.11,	6.74,	451.0,	0.0,
12.5983,	0.668,	11.3414,						
	0,	0,	0.1049,	0.4984,	0.682,	0.07181,	0.04558 !	
2	! ZPLTFM =	0.0 !						
2	! FMFAC =	1.0 !	!END!					

-----  
 a

Data for each source are treated as a separate input subgroup and therefore must end with an input group terminator.

SRCNAM is a 12-character name for a source (No default)

X is an array holding the source data listed by the column headings (No default)

SIGYZI is an array holding the initial sigma-y and sigma-z (m) (Default: 0.,0.)

ZPLTFM is the platform height (m) for sources influenced by an isolated structure that has a significant open area between the surface and the bulk of the structure, such as an offshore oil platform. The Base Elevation is that of the surface (ground or ocean), and the Stack Height is the release height above the Base (not above the platform). Building heights entered in Subgroup 13c must be those of the buildings on the platform, measured from the platform deck. ZPLTFM is used only with MBDW=1 (ISC downwash method) for sources with building downwash.



(Default: 0.0)  
FMFAC is a vertical momentum flux factor (0. or 1.0) used to represent the effect of rain-caps or other physical configurations that reduce momentum rise associated with the actual exit velocity.  
(Default: 1.0 -- full momentum used)

b

- 0. = No building downwash modeled
  - 1. = Downwash modeled for buildings resting on the surface
  - 2. = Downwash modeled for buildings raised above the surface (ZPLTFM > 0.)
- NOTE: must be entered as a REAL number (i.e., with decimal point)

c

An emission rate must be entered for every pollutant modeled. Enter emission rate of zero for secondary pollutants that are modeled, but not emitted. Units are specified by IPTU (e.g. 1 for g/s).

-----  
Subgroup (13c)  
-----

BUILDING DIMENSION DATA FOR SOURCES SUBJECT TO DOWNWASH  
-----

Source		a
No.	Effective building height, width, length and X/Y offset (in meters) every 10 degrees. LENGTH, XBADJ, and YBADJ are only needed for MBDW=2 (PRIME downwash option)	

-----

-----

a

Building height, width, length, and X/Y offset from the source are treated as a separate input subgroup for each source and therefore must end with an input group terminator. The X/Y offset is the position, relative to the stack, of the center of the upwind face of the projected building, with the x-axis pointing along the flow direction.

-----  
Subgroup (13d)  
-----

a  
POINT SOURCE: VARIABLE EMISSIONS DATA  
-----

Use this subgroup to describe temporal variations in the emission rates given in 13b. Factors entered multiply the rates in 13b. Skip sources here that have constant emissions. For more elaborate variation in source parameters, use PTEMARB.DAT and NPT2 > 0.

IVARY determines the type of variation, and is source-specific:  
(IVARY) Default: 0

0 = Constant  
 1 = Diurnal cycle (24 scaling factors: hours 1-24)  
 2 = Monthly cycle (12 scaling factors: months 1-12)  
 3 = Hour & Season (4 groups of 24 hourly scaling factors,  
                   where first group is DEC-JAN-FEB)  
 4 = Speed & Stab. (6 groups of 6 scaling factors, where  
                   first group is Stability Class A,  
                   and the speed classes have upper  
                   bounds (m/s) defined in Group 12  
 5 = Temperature (12 scaling factors, where temperature  
                   classes have upper bounds (C) of:  
                   0, 5, 10, 15, 20, 25, 30, 35, 40,  
                   45, 50, 50+)

-----  
 a

Data for each species are treated as a separate input subgroup  
 and therefore must end with an input group terminator.

-----

INPUT GROUPS: 14a, 14b, 14c, 14d -- Area source parameters

-----

-----  
 Subgroup (14a)  
 -----

Number of polygon area sources with  
 parameters specified below (NAR1)           No default ! NAR1 = 0 !

Units used for area source  
 emissions below                           (IARU)           Default: 1 ! IARU = 1 !

1 = g/m\*\*2/s  
 2 = kg/m\*\*2/hr  
 3 = lb/m\*\*2/hr  
 4 = tons/m\*\*2/yr  
 5 = Odour Unit \* m/s (vol. flux/m\*\*2 of odour compound)  
 6 = Odour Unit \* m/min  
 7 = metric tons/m\*\*2/yr

Number of source-species  
 combinations with variable  
 emissions scaling factors  
 provided below in (14d)                   (NSAR1) Default: 0 ! NSAR1 = 0 !

Number of buoyant polygon area sources  
 with variable location and emission  
 parameters (NAR2)                       No default ! NAR2 = 0 !  
 (If NAR2 > 0, ALL parameter data for  
 these sources are read from the file: BAEMARB.DAT)

!END!

-----  
Subgroup (14b)  
-----

a  
AREA SOURCE: CONSTANT DATA  
-----

Source No.	Effect. Height (m)	Base Elevation (m)	Initial Sigma z (m)	Emission Rates
-----	-----	-----	-----	-----

- 
- a  
Data for each source are treated as a separate input subgroup and therefore must end with an input group terminator.
- b  
An emission rate must be entered for every pollutant modeled. Enter emission rate of zero for secondary pollutants that are modeled, but not emitted. Units are specified by IARU (e.g. 1 for g/m\*\*2/s).

-----  
Subgroup (14c)  
-----

COORDINATES (km) FOR EACH VERTEX(4) OF EACH POLYGON  
-----

Source No.	Ordered list of X followed by list of Y, grouped by source
-----	-----

- 
- a  
Data for each source are treated as a separate input subgroup and therefore must end with an input group terminator.

-----  
Subgroup (14d)  
-----

a  
AREA SOURCE: VARIABLE EMISSIONS DATA  
-----

Use this subgroup to describe temporal variations in the emission rates given in 14b. Factors entered multiply the rates in 14b. Skip sources here that have constant emissions. For more elaborate variation in source parameters, use BAEMARB.DAT and NAR2 > 0.

IVARY determines the type of variation, and is source-specific:  
(IVARY) Default: 0

- 0 = Constant
- 1 = Diurnal cycle (24 scaling factors: hours 1-24)
- 2 = Monthly cycle (12 scaling factors: months 1-12)
- 3 = Hour & Season (4 groups of 24 hourly scaling factors,

- 4 = Speed & Stab. (6 groups of 6 scaling factors, where  
 where first group is DEC-JAN-FEB)  
 first group is Stability Class A,  
 and the speed classes have upper  
 bounds (m/s) defined in Group 12
- 5 = Temperature (12 scaling factors, where temperature  
 classes have upper bounds (C) of:  
 0, 5, 10, 15, 20, 25, 30, 35, 40,  
 45, 50, 50+)

-----  
 a

Data for each species are treated as a separate input subgroup  
 and therefore must end with an input group terminator.

-----

INPUT GROUPS: 15a, 15b, 15c -- Line source parameters  
 -----

-----  
 Subgroup (15a)  
 -----

Number of buoyant line sources  
 with variable location and emission  
 parameters (NLN2) No default ! NLN2 = 0 !

(If NLN2 > 0, ALL parameter data for  
 these sources are read from the file: LNEARB.DAT)

Number of buoyant line sources (NLINES) No default ! NLINES = 0 !

Units used for line source  
 emissions below (ILNU) Default: 1 ! ILNU = 1 !

- 1 = g/s
- 2 = kg/hr
- 3 = lb/hr
- 4 = tons/yr
- 5 = Odour Unit \* m\*\*3/s (vol. flux of odour compound)
- 6 = Odour Unit \* m\*\*3/min
- 7 = metric tons/yr

Number of source-species  
 combinations with variable  
 emissions scaling factors  
 provided below in (15c) (NSLN1) Default: 0 ! NSLN1 = 0 !

Maximum number of segments used to model  
 each line (MXNSEG) Default: 7 ! MXNSEG = 7 !

The following variables are required only if NLINES > 0. They are  
 used in the buoyant line source plume rise calculations.

Number of distances at which Default: 6 ! NLRISE = 6 !

transitional rise is computed

Average building length (XL)	No default (in meters)	! XL = 0.0 !
Average building height (HBL)	No default (in meters)	! HBL = 0.0 !
Average building width (WBL)	No default (in meters)	! WBL = 0.0 !
Average line source width (WML)	No default (in meters)	! WML = 0.0 !
Average separation between buildings (DXL)	No default (in meters)	! DXL = 0.0 !
Average buoyancy parameter (FPRIMEL)	No default (in m**4/s**3)	! FPRIMEL = 0

!

!END!

-----  
Subgroup (15b)  
-----

BUOYANT LINE SOURCE: CONSTANT DATA  
-----

a	Source	Beg. X	Beg. Y	End. X	End. Y	Release	Base
Emission	No.	Coordinate	Coordinate	Coordinate	Coordinate	Height	Elevation
Rates		(km)	(km)	(km)	(km)	(m)	(m)
-----	-----	-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	-----	-----	-----	-----

a  
Data for each source are treated as a separate input subgroup and therefore must end with an input group terminator.

b  
An emission rate must be entered for every pollutant modeled. Enter emission rate of zero for secondary pollutants that are modeled, but not emitted. Units are specified by ILNTU (e.g. 1 for g/s).

-----  
Subgroup (15c)  
-----

a  
BUOYANT LINE SOURCE: VARIABLE EMISSIONS DATA  
-----

Use this subgroup to describe temporal variations in the emission rates given in 15b. Factors entered multiply the rates in 15b. Skip sources here that have constant emissions.

IVARY determines the type of variation, and is source-specific:  
(IVARY) Default: 0

0 =	Constant
1 =	Diurnal cycle (24 scaling factors: hours 1-24)
2 =	Monthly cycle (12 scaling factors: months 1-12)
3 =	Hour & Season (4 groups of 24 hourly scaling factors, where first group is DEC-JAN-FEB)
4 =	Speed & Stab. (6 groups of 6 scaling factors, where first group is Stability Class A, and the speed classes have upper bounds (m/s) defined in Group 12)
5 =	Temperature (12 scaling factors, where temperature classes have upper bounds (C) of: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 50+)

-----  
a

Data for each species are treated as a separate input subgroup and therefore must end with an input group terminator.

-----

INPUT GROUPS: 16a, 16b, 16c -- Volume source parameters

-----

-----  
Subgroup (16a)  
-----

Number of volume sources with parameters provided in 16b,c (NVL1) No default ! NVL1 = 0 !

Units used for volume source emissions below in 16b (IVLU) Default: 1 ! IVLU = 1 !

1 =	g/s
2 =	kg/hr
3 =	lb/hr
4 =	tons/yr
5 =	Odour Unit * m**3/s (vol. flux of odour compound)
6 =	Odour Unit * m**3/min
7 =	metric tons/yr

Number of source-species combinations with variable emissions scaling factors provided below in (16c) (NSVL1) Default: 0 ! NSVL1 = 0 !

Number of volume sources with variable location and emission

parameters (NVL2) No default ! NVL2 = 0 !

(If NVL2 > 0, ALL parameter data for these sources are read from the VOLEMARB.DAT file(s) )

!END!

-----  
Subgroup (16b)  
-----

a  
VOLUME SOURCE: CONSTANT DATA  
-----

b

Emission	X	Y	Effect.	Base	Initial	Initial	
	Coordinate	Coordinate	Height	Elevation	Sigma y	Sigma z	Rates
	(km)	(km)	(m)	(m)	(m)	(m)	
	-----	-----	-----	-----	-----	-----	-----

-

-----  
a  
Data for each source are treated as a separate input subgroup and therefore must end with an input group terminator.

b  
An emission rate must be entered for every pollutant modeled. Enter emission rate of zero for secondary pollutants that are modeled, but not emitted. Units are specified by IVLU (e.g. 1 for g/s).

-----  
Subgroup (16c)  
-----

a  
VOLUME SOURCE: VARIABLE EMISSIONS DATA  
-----

Use this subgroup to describe temporal variations in the emission rates given in 16b. Factors entered multiply the rates in 16b. Skip sources here that have constant emissions. For more elaborate variation in source parameters, use VOLEMARB.DAT and NVL2 > 0.

IVARY determines the type of variation, and is source-specific:  
(IVARY) Default: 0

- 0 = Constant
- 1 = Diurnal cycle (24 scaling factors: hours 1-24)
- 2 = Monthly cycle (12 scaling factors: months 1-12)
- 3 = Hour & Season (4 groups of 24 hourly scaling factors, where first group is DEC-JAN-FEB)
- 4 = Speed & Stab. (6 groups of 6 scaling factors, where first group is Stability Class A, and the speed classes have upper bounds (m/s) defined in Group 12)
- 5 = Temperature (12 scaling factors, where temperature

classes have upper bounds (C) of:  
 0, 5, 10, 15, 20, 25, 30, 35, 40,  
 45, 50, 50+)

a

Data for each species are treated as a separate input subgroup  
 and therefore must end with an input group terminator.

INPUT GROUPS: 17a & 17b -- Non-gridded (discrete) receptor information

Subgroup (17a)

Number of non-gridded receptors (NREC) No default ! NREC = 289 !

!END!

Subgroup (17b)

a

NON-GRIDDED (DISCRETE) RECEPTOR DATA

Receptor No.	X Coordinate (km)	Y Coordinate (km)	Ground Elevation (m)	Height Above Ground (m)	b
1 ! X =	-416.171,	380.781,	1280.0,	0.0 !	!END!
2 ! X =	-415.541,	380.742,	1280.0,	0.0 !	!END!
3 ! X =	-414.911,	380.702,	1271.0,	0.0 !	!END!
4 ! X =	-417.376,	381.730,	1280.0,	0.0 !	!END!
5 ! X =	-416.746,	381.690,	1280.0,	0.0 !	!END!
6 ! X =	-416.116,	381.651,	1280.0,	0.0 !	!END!
7 ! X =	-415.486,	381.611,	1280.0,	0.0 !	!END!
8 ! X =	-414.856,	381.571,	1219.0,	0.0 !	!END!
9 ! X =	-414.226,	381.532,	1219.0,	0.0 !	!END!
10 ! X =	-413.596,	381.492,	1252.0,	0.0 !	!END!
11 ! X =	-417.321,	382.599,	1280.0,	0.0 !	!END!
12 ! X =	-416.691,	382.559,	1280.0,	0.0 !	!END!
13 ! X =	-416.062,	382.520,	1280.0,	0.0 !	!END!
14 ! X =	-415.432,	382.480,	1280.0,	0.0 !	!END!
15 ! X =	-414.801,	382.440,	1244.0,	0.0 !	!END!
16 ! X =	-414.171,	382.401,	1244.0,	0.0 !	!END!
17 ! X =	-413.541,	382.361,	1236.0,	0.0 !	!END!
18 ! X =	-412.912,	382.322,	1226.0,	0.0 !	!END!
19 ! X =	-412.281,	382.282,	1209.0,	0.0 !	!END!
20 ! X =	-417.266,	383.469,	1341.0,	0.0 !	!END!



21 ! X =	-416.637,	383.429,	1330.0,	0.0 !	!END!
22 ! X =	-416.007,	383.389,	1307.0,	0.0 !	!END!
23 ! X =	-415.377,	383.349,	1280.0,	0.0 !	!END!
24 ! X =	-414.747,	383.310,	1274.0,	0.0 !	!END!
25 ! X =	-414.117,	383.270,	1271.0,	0.0 !	!END!
26 ! X =	-413.487,	383.230,	1274.0,	0.0 !	!END!
27 ! X =	-412.857,	383.191,	1280.0,	0.0 !	!END!
28 ! X =	-412.227,	383.152,	1224.0,	0.0 !	!END!
29 ! X =	-416.582,	384.298,	1341.0,	0.0 !	!END!
30 ! X =	-415.952,	384.258,	1336.0,	0.0 !	!END!
31 ! X =	-415.322,	384.218,	1290.0,	0.0 !	!END!
32 ! X =	-414.692,	384.178,	1256.0,	0.0 !	!END!
33 ! X =	-414.062,	384.139,	1219.0,	0.0 !	!END!
34 ! X =	-413.432,	384.099,	1219.0,	0.0 !	!END!
35 ! X =	-412.803,	384.060,	1219.0,	0.0 !	!END!
36 ! X =	-412.172,	384.020,	1177.0,	0.0 !	!END!
37 ! X =	-415.897,	385.127,	1340.0,	0.0 !	!END!
38 ! X =	-415.267,	385.087,	1290.0,	0.0 !	!END!
39 ! X =	-414.637,	385.048,	1280.0,	0.0 !	!END!
40 ! X =	-414.008,	385.008,	1280.0,	0.0 !	!END!
41 ! X =	-413.378,	384.969,	1219.0,	0.0 !	!END!
42 ! X =	-412.748,	384.929,	1271.0,	0.0 !	!END!
43 ! X =	-412.118,	384.890,	1251.0,	0.0 !	!END!
44 ! X =	-415.842,	385.996,	1334.0,	0.0 !	!END!
45 ! X =	-415.213,	385.957,	1298.0,	0.0 !	!END!
46 ! X =	-414.583,	385.917,	1280.0,	0.0 !	!END!
47 ! X =	-413.953,	385.878,	1280.0,	0.0 !	!END!
48 ! X =	-413.323,	385.838,	1280.0,	0.0 !	!END!
49 ! X =	-412.694,	385.799,	1280.0,	0.0 !	!END!
50 ! X =	-412.064,	385.759,	1219.0,	0.0 !	!END!
51 ! X =	-409.545,	385.602,	1186.0,	0.0 !	!END!
52 ! X =	-408.915,	385.563,	1158.0,	0.0 !	!END!
53 ! X =	-408.286,	385.524,	1140.0,	0.0 !	!END!
54 ! X =	-407.655,	385.485,	1145.0,	0.0 !	!END!
55 ! X =	-407.026,	385.446,	1152.0,	0.0 !	!END!
56 ! X =	-406.396,	385.407,	1158.0,	0.0 !	!END!
57 ! X =	-405.767,	385.369,	1158.0,	0.0 !	!END!
58 ! X =	-415.787,	386.865,	1344.0,	0.0 !	!END!
59 ! X =	-415.158,	386.826,	1294.0,	0.0 !	!END!
60 ! X =	-414.528,	386.786,	1280.0,	0.0 !	!END!
61 ! X =	-413.898,	386.746,	1280.0,	0.0 !	!END!
62 ! X =	-413.269,	386.707,	1280.0,	0.0 !	!END!
63 ! X =	-412.639,	386.668,	1280.0,	0.0 !	!END!
64 ! X =	-412.009,	386.628,	1220.0,	0.0 !	!END!
65 ! X =	-409.491,	386.471,	1219.0,	0.0 !	!END!
66 ! X =	-408.861,	386.432,	1158.0,	0.0 !	!END!
67 ! X =	-408.232,	386.393,	1153.0,	0.0 !	!END!
68 ! X =	-407.602,	386.354,	1156.0,	0.0 !	!END!
69 ! X =	-406.972,	386.315,	1158.0,	0.0 !	!END!
70 ! X =	-406.343,	386.276,	1157.0,	0.0 !	!END!
71 ! X =	-405.713,	386.238,	1219.0,	0.0 !	!END!
72 ! X =	-415.733,	387.735,	1341.0,	0.0 !	!END!
73 ! X =	-415.103,	387.695,	1306.0,	0.0 !	!END!
74 ! X =	-414.473,	387.655,	1304.0,	0.0 !	!END!
75 ! X =	-413.844,	387.616,	1341.0,	0.0 !	!END!
76 ! X =	-413.214,	387.576,	1289.0,	0.0 !	!END!
77 ! X =	-412.585,	387.537,	1272.0,	0.0 !	!END!
78 ! X =	-411.955,	387.497,	1219.0,	0.0 !	!END!

79	!	X	=	-411.326,	387.458,	1280.0,	0.0	!	!END!
80	!	X	=	-410.696,	387.419,	1280.0,	0.0	!	!END!
81	!	X	=	-410.066,	387.380,	1220.0,	0.0	!	!END!
82	!	X	=	-409.437,	387.341,	1218.0,	0.0	!	!END!
83	!	X	=	-408.807,	387.301,	1184.0,	0.0	!	!END!
84	!	X	=	-408.178,	387.262,	1158.0,	0.0	!	!END!
85	!	X	=	-407.548,	387.223,	1158.0,	0.0	!	!END!
86	!	X	=	-406.918,	387.185,	1158.0,	0.0	!	!END!
87	!	X	=	-406.289,	387.146,	1158.0,	0.0	!	!END!
88	!	X	=	-405.660,	387.107,	1212.0,	0.0	!	!END!
89	!	X	=	-415.678,	388.604,	1411.0,	0.0	!	!END!
90	!	X	=	-415.048,	388.564,	1341.0,	0.0	!	!END!
91	!	X	=	-414.419,	388.524,	1348.0,	0.0	!	!END!
92	!	X	=	-413.789,	388.485,	1347.0,	0.0	!	!END!
93	!	X	=	-413.160,	388.445,	1297.0,	0.0	!	!END!
94	!	X	=	-412.531,	388.406,	1284.0,	0.0	!	!END!
95	!	X	=	-411.901,	388.366,	1284.0,	0.0	!	!END!
96	!	X	=	-411.271,	388.327,	1280.0,	0.0	!	!END!
97	!	X	=	-410.642,	388.288,	1236.0,	0.0	!	!END!
98	!	X	=	-410.012,	388.249,	1219.0,	0.0	!	!END!
99	!	X	=	-409.383,	388.210,	1221.0,	0.0	!	!END!
100	!	X	=	-408.753,	388.170,	1202.0,	0.0	!	!END!
101	!	X	=	-408.124,	388.131,	1158.0,	0.0	!	!END!
102	!	X	=	-407.494,	388.092,	1158.0,	0.0	!	!END!
103	!	X	=	-406.865,	388.054,	1158.0,	0.0	!	!END!
104	!	X	=	-406.235,	388.015,	1219.0,	0.0	!	!END!
105	!	X	=	-405.606,	387.976,	1219.0,	0.0	!	!END!
106	!	X	=	-404.976,	387.937,	1191.0,	0.0	!	!END!
107	!	X	=	-404.347,	387.899,	1152.0,	0.0	!	!END!
108	!	X	=	-415.623,	389.473,	1402.0,	0.0	!	!END!
109	!	X	=	-414.994,	389.433,	1402.0,	0.0	!	!END!
110	!	X	=	-414.364,	389.394,	1402.0,	0.0	!	!END!
111	!	X	=	-413.735,	389.354,	1376.0,	0.0	!	!END!
112	!	X	=	-413.105,	389.315,	1341.0,	0.0	!	!END!
113	!	X	=	-412.476,	389.275,	1336.0,	0.0	!	!END!
114	!	X	=	-411.846,	389.236,	1322.0,	0.0	!	!END!
115	!	X	=	-411.217,	389.197,	1280.0,	0.0	!	!END!
116	!	X	=	-410.588,	389.157,	1274.0,	0.0	!	!END!
117	!	X	=	-409.958,	389.118,	1274.0,	0.0	!	!END!
118	!	X	=	-409.329,	389.079,	1280.0,	0.0	!	!END!
119	!	X	=	-408.700,	389.040,	1219.0,	0.0	!	!END!
120	!	X	=	-408.070,	389.001,	1177.0,	0.0	!	!END!
121	!	X	=	-407.440,	388.962,	1158.0,	0.0	!	!END!
122	!	X	=	-406.811,	388.923,	1163.0,	0.0	!	!END!
123	!	X	=	-406.182,	388.884,	1219.0,	0.0	!	!END!
124	!	X	=	-405.553,	388.845,	1165.0,	0.0	!	!END!
125	!	X	=	-404.923,	388.807,	1166.0,	0.0	!	!END!
126	!	X	=	-404.293,	388.768,	1158.0,	0.0	!	!END!
127	!	X	=	-415.568,	390.342,	1402.0,	0.0	!	!END!
128	!	X	=	-414.939,	390.302,	1402.0,	0.0	!	!END!
129	!	X	=	-414.309,	390.263,	1451.0,	0.0	!	!END!
130	!	X	=	-413.680,	390.223,	1360.0,	0.0	!	!END!
131	!	X	=	-413.051,	390.184,	1341.0,	0.0	!	!END!
132	!	X	=	-412.422,	390.144,	1341.0,	0.0	!	!END!
133	!	X	=	-411.792,	390.105,	1341.0,	0.0	!	!END!
134	!	X	=	-411.163,	390.065,	1288.0,	0.0	!	!END!
135	!	X	=	-410.534,	390.026,	1280.0,	0.0	!	!END!
136	!	X	=	-409.904,	389.987,	1280.0,	0.0	!	!END!

137	!	X	=	-409.275,	389.948,	1280.0,	0.0	!	!END!
138	!	X	=	-408.646,	389.909,	1273.0,	0.0	!	!END!
139	!	X	=	-408.016,	389.870,	1280.0,	0.0	!	!END!
140	!	X	=	-407.387,	389.831,	1201.0,	0.0	!	!END!
141	!	X	=	-406.758,	389.792,	1211.0,	0.0	!	!END!
142	!	X	=	-406.128,	389.753,	1219.0,	0.0	!	!END!
143	!	X	=	-405.499,	389.714,	1219.0,	0.0	!	!END!
144	!	X	=	-404.869,	389.676,	1214.0,	0.0	!	!END!
145	!	X	=	-404.240,	389.637,	1170.0,	0.0	!	!END!
146	!	X	=	-403.611,	389.598,	1158.0,	0.0	!	!END!
147	!	X	=	-415.513,	391.211,	1402.0,	0.0	!	!END!
148	!	X	=	-414.884,	391.172,	1455.0,	0.0	!	!END!
149	!	X	=	-414.255,	391.132,	1402.0,	0.0	!	!END!
150	!	X	=	-413.626,	391.092,	1399.0,	0.0	!	!END!
151	!	X	=	-412.996,	391.053,	1390.0,	0.0	!	!END!
152	!	X	=	-412.367,	391.014,	1350.0,	0.0	!	!END!
153	!	X	=	-411.738,	390.974,	1341.0,	0.0	!	!END!
154	!	X	=	-411.109,	390.935,	1283.0,	0.0	!	!END!
155	!	X	=	-410.480,	390.896,	1289.0,	0.0	!	!END!
156	!	X	=	-409.850,	390.856,	1291.0,	0.0	!	!END!
157	!	X	=	-409.221,	390.817,	1291.0,	0.0	!	!END!
158	!	X	=	-408.592,	390.778,	1280.0,	0.0	!	!END!
159	!	X	=	-407.963,	390.739,	1280.0,	0.0	!	!END!
160	!	X	=	-407.333,	390.700,	1219.0,	0.0	!	!END!
161	!	X	=	-406.704,	390.661,	1218.0,	0.0	!	!END!
162	!	X	=	-406.075,	390.623,	1252.0,	0.0	!	!END!
163	!	X	=	-405.446,	390.584,	1219.0,	0.0	!	!END!
164	!	X	=	-404.816,	390.545,	1189.0,	0.0	!	!END!
165	!	X	=	-404.187,	390.507,	1158.0,	0.0	!	!END!
166	!	X	=	-403.558,	390.468,	1153.0,	0.0	!	!END!
167	!	X	=	-415.458,	392.080,	1445.0,	0.0	!	!END!
168	!	X	=	-414.829,	392.041,	1402.0,	0.0	!	!END!
169	!	X	=	-414.200,	392.001,	1462.0,	0.0	!	!END!
170	!	X	=	-413.571,	391.961,	1402.0,	0.0	!	!END!
171	!	X	=	-412.942,	391.922,	1441.0,	0.0	!	!END!
172	!	X	=	-412.313,	391.883,	1395.0,	0.0	!	!END!
173	!	X	=	-411.683,	391.843,	1341.0,	0.0	!	!END!
174	!	X	=	-411.054,	391.804,	1320.0,	0.0	!	!END!
175	!	X	=	-410.425,	391.765,	1322.0,	0.0	!	!END!
176	!	X	=	-409.796,	391.725,	1296.0,	0.0	!	!END!
177	!	X	=	-409.167,	391.686,	1280.0,	0.0	!	!END!
178	!	X	=	-408.538,	391.647,	1276.0,	0.0	!	!END!
179	!	X	=	-407.909,	391.608,	1274.0,	0.0	!	!END!
180	!	X	=	-407.279,	391.569,	1280.0,	0.0	!	!END!
181	!	X	=	-406.650,	391.530,	1269.0,	0.0	!	!END!
182	!	X	=	-406.021,	391.492,	1217.0,	0.0	!	!END!
183	!	X	=	-405.392,	391.453,	1210.0,	0.0	!	!END!
184	!	X	=	-404.762,	391.414,	1173.0,	0.0	!	!END!
185	!	X	=	-414.775,	392.910,	1402.0,	0.0	!	!END!
186	!	X	=	-414.145,	392.870,	1387.0,	0.0	!	!END!
187	!	X	=	-413.516,	392.831,	1346.0,	0.0	!	!END!
188	!	X	=	-412.887,	392.791,	1341.0,	0.0	!	!END!
189	!	X	=	-412.259,	392.752,	1341.0,	0.0	!	!END!
190	!	X	=	-333.610,	400.508,	853.0,	0.0	!	!END!
191	!	X	=	-332.353,	400.444,	865.0,	0.0	!	!END!
192	!	X	=	-331.096,	400.381,	850.0,	0.0	!	!END!
193	!	X	=	-333.521,	402.248,	853.0,	0.0	!	!END!
194	!	X	=	-332.265,	402.184,	853.0,	0.0	!	!END!

195	!	X	=	-331.009,	402.121,	853.0,	0.0	!	!END!
196	!	X	=	-329.753,	402.057,	852.0,	0.0	!	!END!
197	!	X	=	-328.496,	401.995,	853.0,	0.0	!	!END!
198	!	X	=	-312.162,	401.199,	791.0,	0.0	!	!END!
199	!	X	=	-310.906,	401.139,	789.0,	0.0	!	!END!
200	!	X	=	-309.649,	401.080,	789.0,	0.0	!	!END!
201	!	X	=	-308.393,	401.021,	792.0,	0.0	!	!END!
202	!	X	=	-307.136,	400.962,	789.0,	0.0	!	!END!
203	!	X	=	-305.880,	400.904,	768.0,	0.0	!	!END!
204	!	X	=	-334.689,	404.051,	853.0,	0.0	!	!END!
205	!	X	=	-333.433,	403.987,	853.0,	0.0	!	!END!
206	!	X	=	-332.177,	403.924,	853.0,	0.0	!	!END!
207	!	X	=	-330.921,	403.860,	853.0,	0.0	!	!END!
208	!	X	=	-329.665,	403.797,	860.0,	0.0	!	!END!
209	!	X	=	-328.409,	403.734,	910.0,	0.0	!	!END!
210	!	X	=	-327.153,	403.672,	853.0,	0.0	!	!END!
211	!	X	=	-325.897,	403.609,	848.0,	0.0	!	!END!
212	!	X	=	-324.641,	403.547,	853.0,	0.0	!	!END!
213	!	X	=	-313.336,	402.999,	792.0,	0.0	!	!END!
214	!	X	=	-312.080,	402.939,	792.0,	0.0	!	!END!
215	!	X	=	-310.824,	402.879,	792.0,	0.0	!	!END!
216	!	X	=	-309.567,	402.820,	792.0,	0.0	!	!END!
217	!	X	=	-307.055,	402.702,	792.0,	0.0	!	!END!
218	!	X	=	-332.089,	405.664,	853.0,	0.0	!	!END!
219	!	X	=	-330.834,	405.600,	853.0,	0.0	!	!END!
220	!	X	=	-329.578,	405.537,	853.0,	0.0	!	!END!
221	!	X	=	-328.322,	405.474,	853.0,	0.0	!	!END!
222	!	X	=	-327.067,	405.412,	914.0,	0.0	!	!END!
223	!	X	=	-325.811,	405.349,	853.0,	0.0	!	!END!
224	!	X	=	-324.555,	405.287,	853.0,	0.0	!	!END!
225	!	X	=	-314.509,	404.799,	810.0,	0.0	!	!END!
226	!	X	=	-313.253,	404.739,	828.0,	0.0	!	!END!
227	!	X	=	-332.002,	407.404,	852.0,	0.0	!	!END!
228	!	X	=	-330.746,	407.340,	852.0,	0.0	!	!END!
229	!	X	=	-329.491,	407.277,	851.0,	0.0	!	!END!
230	!	X	=	-328.235,	407.215,	852.0,	0.0	!	!END!
231	!	X	=	-326.980,	407.152,	853.0,	0.0	!	!END!
232	!	X	=	-325.725,	407.090,	853.0,	0.0	!	!END!
233	!	X	=	-324.469,	407.027,	853.0,	0.0	!	!END!
234	!	X	=	-315.681,	406.599,	823.0,	0.0	!	!END!
235	!	X	=	-334.424,	409.271,	845.0,	0.0	!	!END!
236	!	X	=	-333.168,	409.207,	828.0,	0.0	!	!END!
237	!	X	=	-331.914,	409.144,	835.0,	0.0	!	!END!
238	!	X	=	-330.658,	409.080,	848.0,	0.0	!	!END!
239	!	X	=	-329.404,	409.017,	843.0,	0.0	!	!END!
240	!	X	=	-328.148,	408.954,	844.0,	0.0	!	!END!
241	!	X	=	-326.894,	408.892,	851.0,	0.0	!	!END!
242	!	X	=	-325.638,	408.829,	853.0,	0.0	!	!END!
243	!	X	=	-324.384,	408.767,	853.0,	0.0	!	!END!
244	!	X	=	-323.128,	408.706,	900.0,	0.0	!	!END!
245	!	X	=	-321.873,	408.644,	853.0,	0.0	!	!END!
246	!	X	=	-320.618,	408.583,	849.0,	0.0	!	!END!
247	!	X	=	-319.363,	408.521,	845.0,	0.0	!	!END!
248	!	X	=	-318.108,	408.461,	853.0,	0.0	!	!END!
249	!	X	=	-316.853,	408.400,	841.0,	0.0	!	!END!
250	!	X	=	-334.335,	411.011,	842.0,	0.0	!	!END!
251	!	X	=	-333.080,	410.947,	810.0,	0.0	!	!END!
252	!	X	=	-331.826,	410.883,	803.0,	0.0	!	!END!

253 ! X =	-330.571,	410.820,	825.0,	0.0 !	!END!
254 ! X =	-329.316,	410.757,	814.0,	0.0 !	!END!
255 ! X =	-328.061,	410.694,	807.0,	0.0 !	!END!
256 ! X =	-326.807,	410.632,	846.0,	0.0 !	!END!
257 ! X =	-325.552,	410.569,	852.0,	0.0 !	!END!
258 ! X =	-324.298,	410.507,	853.0,	0.0 !	!END!
259 ! X =	-323.043,	410.446,	853.0,	0.0 !	!END!
260 ! X =	-321.788,	410.384,	853.0,	0.0 !	!END!
261 ! X =	-320.533,	410.323,	853.0,	0.0 !	!END!
262 ! X =	-319.279,	410.261,	911.0,	0.0 !	!END!
263 ! X =	-318.024,	410.201,	853.0,	0.0 !	!END!
264 ! X =	-334.246,	412.751,	847.0,	0.0 !	!END!
265 ! X =	-332.992,	412.687,	792.0,	0.0 !	!END!
266 ! X =	-331.738,	412.623,	792.0,	0.0 !	!END!
267 ! X =	-330.483,	412.560,	803.0,	0.0 !	!END!
268 ! X =	-329.229,	412.497,	794.0,	0.0 !	!END!
269 ! X =	-327.975,	412.434,	796.0,	0.0 !	!END!
270 ! X =	-326.720,	412.372,	828.0,	0.0 !	!END!
271 ! X =	-325.466,	412.309,	851.0,	0.0 !	!END!
272 ! X =	-324.212,	412.247,	853.0,	0.0 !	!END!
273 ! X =	-322.957,	412.186,	853.0,	0.0 !	!END!
274 ! X =	-321.703,	412.124,	853.0,	0.0 !	!END!
275 ! X =	-320.448,	412.063,	914.0,	0.0 !	!END!
276 ! X =	-319.194,	412.001,	924.0,	0.0 !	!END!
277 ! X =	-332.904,	414.427,	809.0,	0.0 !	!END!
278 ! X =	-331.650,	414.363,	792.0,	0.0 !	!END!
279 ! X =	-330.396,	414.300,	792.0,	0.0 !	!END!
280 ! X =	-329.142,	414.237,	792.0,	0.0 !	!END!
281 ! X =	-327.888,	414.174,	792.0,	0.0 !	!END!
282 ! X =	-326.634,	414.112,	841.0,	0.0 !	!END!
283 ! X =	-325.380,	414.049,	853.0,	0.0 !	!END!
284 ! X =	-324.126,	413.987,	853.0,	0.0 !	!END!
285 ! X =	-322.871,	413.926,	869.0,	0.0 !	!END!
286 ! X =	-330.308,	416.040,	796.0,	0.0 !	!END!
287 ! X =	-329.055,	415.977,	829.0,	0.0 !	!END!
288 ! X =	-327.801,	415.914,	853.0,	0.0 !	!END!
289 ! X =	-326.547,	415.852,	860.0,	0.0 !	!END!

\*\*\*\* CONFIRMATION OF CONTROL DATA \*\*\*\*

----- INPUT GROUP 1 -----

```

metrun = 0
ibyr   = 2007
ibmo   = 1
ibdy   = 1
ibhr   = 1
irlg   = 8736
xbtz   = 7.00000000
nspec  = 10
nse    = 8
itest  = 2
metfm  = 1
mprffm = 1
mrestart= 0
nrespd = 500
avet   = 60.0000000

```

pgtime = 60.0000000

----- INPUT GROUP 2 -----

mgauss = 1  
mctadj = 3  
mctsg = 0  
mslug = 0  
mtrans = 1  
mchem = 1  
maqchem = 0  
mwet = 1  
mdry = 1  
mtilt = 0  
mdisp = 3  
mdisp2 = 3  
mturbvw = 3  
mtauly = 0.00000000E+00  
mtauadv = 0  
mcturb = 1  
mrrough = 0  
mtip = 1  
mbdw = 1  
mshear = 0  
msplit = 0  
mpartl = 1  
mtinv = 0  
mpdf = 0  
msgtibl = 0  
mbcon = 0  
msource = 1  
mfog = 0  
mreg = 1

Technical options must conform to USEPA

Long Range Transport (LRT) guidance

METFM	1 or 2
AVET	60. (min)
PGTIME	60. (min)
MGAUSS	1
MCTADJ	3
MTRANS	1
MTIP	1
MCHEM	1 or 3 (if modeling SOx, NOx)
MWET	1
MDRY	1
MDISP	2 or 3
MPDF	0 if MDISP=3 1 if MDISP=2
MROUGH	0
MPARTL	1
SYTDEP	550. (m)
MHFTSZ	0
SVMIN	0.5 (m/s)

----- INPUT GROUP 3 -----

SPECIES: SO2	j: 1	isplst(-,j) =	1	1	1	GROUP: SO2
SPECIES: SO4	j: 2	isplst(-,j) =	1	1	2	GROUP: SO4

SPECIES: NOX	j: 3	isplst(-,j) =	1	1	1	GROUP: NOX
SPECIES: HNO3	j: 4	isplst(-,j) =	1	0	1	GROUP: HNO3
SPECIES: NO3	j: 5	isplst(-,j) =	1	0	2	GROUP: NO3
SPECIES: PM800	j: 6	isplst(-,j) =	1	1	2	GROUP: PM800
SPECIES: PM425	j: 7	isplst(-,j) =	1	1	2	GROUP: PM425
SPECIES: PM187	j: 8	isplst(-,j) =	1	1	2	GROUP: PM187
SPECIES: PM081	j: 9	isplst(-,j) =	1	1	2	GROUP: PM081
SPECIES: PM056	j:10	isplst(-,j) =	1	1	2	GROUP: PM056

----- INPUT GROUP 4 -----

```

pmap      = LCC
datum     = NWS-84
daten     = 02-21-2003
feast     = 0.000000000E+00
fnorth    = 0.000000000E+00
rlat0     = 40.00000000
rlon0     = 98.00000000
xlat1     = 20.00000000
xlat2     = 60.00000000
nx        = 313
ny        = 181
nz        = 10
zface     = 0.000000000E+00 20.00000000 40.00000000 80.00000000 160.00000000 320.00000000
640.0000000 1200.000000 2000.000000 3000.000000 4000.000000
dgridkm   = 4.00000000
xorigkm   = -506.0000000
yorigkm   = 298.0000000
iutmzn    = 0
ibcomp    = 1
jbcomp    = 1
iecomp    = 120
jecomp    = 120
lsamp     = T
ibsamp    = 1
jbsamp    = 1
iesamp    = 75
jesamp    = 75
meshdn    = 1

```

----- INPUT GROUP 5 -----

```

icon      = 1
idry      = 1
iwet      = 1
ivis      = 1
lcomprs   = T
icprt     = 0
idprt     = 0
iwprt     = 0
icfrq     = 1
idfrq     = 1
iwfrq     = 1
iprtu     = 3
imesg     = 2
imflx     = 0
imbal     = 0
iqaplot   = 1

```

ldebug = F  
ipfdeb = 1  
npfdeb = 100  
nn1 = 1  
nn2 = 10

GROUP: SO2 j: 1 ioutop(-,j) = 1 1 1 1 1 1 1  
GROUP: SO4 j: 2 ioutop(-,j) = 1 1 1 1 1 1 1  
GROUP: NOX j: 3 ioutop(-,j) = 1 1 1 1 1 1 1  
GROUP: HNO3 j: 4 ioutop(-,j) = 1 1 1 1 1 1 1  
GROUP: NO3 j: 5 ioutop(-,j) = 1 1 1 1 1 1 1  
GROUP: PM800 j: 6 ioutop(-,j) = 1 1 1 1 1 1 0  
GROUP: PM425 j: 7 ioutop(-,j) = 1 1 1 1 1 1 0  
GROUP: PM187 j: 8 ioutop(-,j) = 1 1 1 1 1 1 0  
GROUP: PM081 j: 9 ioutop(-,j) = 1 1 1 1 1 1 0  
GROUP: PM056 j: 10 ioutop(-,j) = 1 1 1 1 1 1 0

----- INPUT GROUP 6 -----

----- Subgroup (6a) -----

nhill = 0  
nctrec = 0  
mhill = 2  
xhill2m= 1.00000000  
zhill2m= 1.00000000  
xctdmkm= 0.00000000E+00  
yctdmkm= 0.00000000E+00

----- Subgroup (6b) -----

----- Subgroup (6c) -----

----- INPUT GROUP 7 -----

SPECIES: SO2 j: 1 dryg(-,j) = 0.15 1000.00 8.00  
0.00 0.04  
SPECIES: SO4 j: 2 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00  
SPECIES: NOX j: 3 dryg(-,j) = 0.17 1.00 8.00  
5.00 3.50  
SPECIES: HNO3 j: 4 dryg(-,j) = 0.16 1.00 18.00  
0.00 0.00  
SPECIES: NO3 j: 5 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00  
SPECIES: PM800 j: 6 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00  
SPECIES: PM425 j: 7 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00  
SPECIES: PM187 j: 8 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00  
SPECIES: PM081 j: 9 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00  
SPECIES: PM056 j: 10 dryg(-,j) = -999.00 -999.00 -999.00 -  
999.00 -999.00



----- INPUT GROUP 8 -----

SPECIES: SO2	j: 1	dryp(-, j) =	-999.00	-999.00
SPECIES: SO4	j: 2	dryp(-, j) =	0.48	2.00
SPECIES: NOX	j: 3	dryp(-, j) =	-999.00	-999.00
SPECIES: HNO3	j: 4	dryp(-, j) =	-999.00	-999.00
SPECIES: NO3	j: 5	dryp(-, j) =	0.48	2.00
SPECIES: PM800	j: 6	dryp(-, j) =	8.00	0.00
SPECIES: PM425	j: 7	dryp(-, j) =	4.25	0.00
SPECIES: PM187	j: 8	dryp(-, j) =	1.88	0.00
SPECIES: PM081	j: 9	dryp(-, j) =	0.81	0.00
SPECIES: PM056	j: 10	dryp(-, j) =	0.56	0.00

----- INPUT GROUP 9 -----

rcutr = 30.0000000  
rgr = 10.0000000  
reactr = 8.00000000  
pconst = 2.30000001E-08  
bmin = 1.00000001E-07  
bmax = 2.49999994E-06  
qswmax = 600.000000  
dconst1 = 2.00000000  
dconst2 = 0.666666687  
dconst3 = 4.79999988E-04  
dconst4 = 0.666666687  
nint = 9  
iveg = 1

----- INPUT GROUP 10 -----

SPECIES: SO2	j: 1	wa(-, j) =	3.000E-05	0.000E+00
SPECIES: SO4	j: 2	wa(-, j) =	1.000E-04	3.000E-05
SPECIES: NOX	j: 3	wa(-, j) =	0.000E+00	0.000E+00
SPECIES: HNO3	j: 4	wa(-, j) =	6.000E-05	0.000E+00
SPECIES: NO3	j: 5	wa(-, j) =	1.000E-04	3.000E-05
SPECIES: PM800	j: 6	wa(-, j) =	1.000E-04	3.000E-05
SPECIES: PM425	j: 7	wa(-, j) =	1.000E-04	3.000E-05
SPECIES: PM187	j: 8	wa(-, j) =	1.000E-04	3.000E-05
SPECIES: PM081	j: 9	wa(-, j) =	1.000E-04	3.000E-05
SPECIES: PM056	j: 10	wa(-, j) =	1.000E-04	3.000E-05

----- INPUT GROUP 11 -----

moz = 1  
bcko3m = 80.0000000 80.0000000 80.0000000 80.0000000  
= 80.0000000 80.0000000 80.0000000 80.0000000  
= 80.0000000 80.0000000 80.0000000 80.0000000  
bcknh3m = 1.00000000 1.00000000 1.00000000 1.00000000  
= 1.00000000 1.00000000 1.00000000 1.00000000  
= 1.00000000 1.00000000 1.00000000 1.00000000  
rnite1 = 0.200000003  
rnite2 = 2.00000000  
rnite3 = 2.00000000  
mh2o2 = 1  
bckh2o2m = 1.00000000 1.00000000 1.00000000 1.00000000  
= 1.00000000 1.00000000 1.00000000 1.00000000  
= 1.00000000 1.00000000 1.00000000 1.00000000

bckpmf = 1.00000000 1.00000000 1.00000000 1.00000000  
= 1.00000000 1.00000000 1.00000000 1.00000000  
= 1.00000000 1.00000000 1.00000000 1.00000000  
ofrac = 0.150000006 0.150000006 0.200000003 0.200000003  
= 0.200000003 0.200000003 0.200000003 0.200000003  
= 0.200000003 0.200000003 0.200000003 0.150000006  
vcnx = 50.0000000 50.0000000 50.0000000 50.0000000  
= 50.0000000 50.0000000 50.0000000 50.0000000  
= 50.0000000 50.0000000 50.0000000 50.0000000

----- INPUT GROUP 12 -----

sytdep = 550.000000  
mhftsz = 0  
jsup = 5  
conk1 = 9.99999978E-03  
conk2 = 0.100000001  
iurb1 = 10  
iurb2 = 19

anemht = 10.0000000  
isigmav = 1  
imixctdm = 0  
ilanduin = 20  
z0in = 0.250000000  
xlaiin = 3.00000000  
elevin = 0.00000000E+00  
xlatin = -999.000000  
xlonin = -999.000000

mxhlen = 1.00000000  
mxnew = 99  
xsamlen = 1.00000000  
mxsam = 99  
ncount = 2  
sl2pf = 10.0000000  
wscalm = 0.499994993  
cdiv = 9.99999978E-03 9.99999978E-03

wscat = 1.53999996 top for class 1  
wscat = 3.08999991 top for class 2  
wscat = 5.13999987 top for class 3  
wscat = 8.22999954 top for class 4  
wscat = 10.8000002 top for class 5

Over LAND

svmin = 0.500000000 for stability 1  
svmin = 0.500000000 for stability 2  
svmin = 0.500000000 for stability 3  
svmin = 0.500000000 for stability 4  
svmin = 0.500000000 for stability 5  
svmin = 0.500000000 for stability 6  
swmin = 0.200000003 for stability 1  
swmin = 0.119999997 for stability 2  
swmin = 7.99999982E-02 for stability 3  
swmin = 5.99999987E-02 for stability 4  
swmin = 2.99999993E-02 for stability 5  
swmin = 1.60000008E-02 for stability 6

```

Over WATER
svmin    = 0.500000000 for stability 1
svmin    = 0.500000000 for stability 2
svmin    = 0.500000000 for stability 3
svmin    = 0.500000000 for stability 4
svmin    = 0.500000000 for stability 5
svmin    = 0.500000000 for stability 6
swmin    = 0.200000003 for stability 1
swmin    = 0.119999997 for stability 2
swmin    = 7.99999982E-02 for stability 3
swmin    = 5.99999987E-02 for stability 4
swmin    = 2.99999993E-02 for stability 5
swmin    = 1.60000008E-02 for stability 6

symin    = 1.000000000
szmin    = 1.000000000
xminzi   = 50.0000000
xmaxzi   = 3000.00000

plx0     = 7.00000003E-02 for stability 1
plx0     = 7.00000003E-02 for stability 2
plx0     = 0.100000001 for stability 3
plx0     = 0.150000006 for stability 4
plx0     = 0.349999994 for stability 5
plx0     = 0.550000012 for stability 6

ptg0     = 1.99999996E-02 for stability 5
ptg0     = 3.50000001E-02 for stability 6

ppc      = 0.500000000 for stability 1
ppc      = 0.500000000 for stability 2
ppc      = 0.500000000 for stability 3
ppc      = 0.500000000 for stability 4
ppc      = 0.349999994 for stability 5
ppc      = 0.349999994 for stability 6
tbd      = 0.500000000
tibldist = 1.00000000 10.0000000 9.00000000
nsplit   = 3
iresplit = 0 0 0 0
          = 0 0 0 0
          = 0 0 0 0
          = 0 0 0 0
          = 0 1 0 0
          = 0 0 0 0
zisplit  = 100.000000
roldmax  = 0.250000000
nsplith  = 5
sysplith = 4000.00000
shsplith = 2.22222233
cnsplith = 9.99999994E-09 9.99999994E-09 9.99999994E-09 9.99999994E-09
9.99999994E-09 9.99999994E-09 9.99999994E-09 9.99999994E-09 9.99999994E-09
9.99999994E-09
epsslug  = 9.99999975E-05
epsarea  = 1.00000001E-07
dsrise   = 1.000000000
trajincl = 20.0000000
mdepbc   = 1

```

htminbc = 500.000000  
rsampbc = 10.0000000

----- INPUT GROUP 13 -----

npt1 = 2  
iptu = 1 units = g/s  
converted to g/s by factor: 1.00000000  
nspt1 = 0  
npt2 = 0

cnampt1 = KILN4 KILN5  
xptlgrd = 27.4502487 27.4804993  
yptlgrd = 35.1380005 35.1389999  
htstak = 58.5200005 58.5200005  
elstak = 1017.00000 1017.00000  
diam = 3.10999990 3.10999990  
exitw = 6.73999977 6.73999977  
tstak = 478.000000 451.000000  
idownw = 0 0  
syipt1 = 0.00000000E+00 0.00000000E+00  
szypt1 = 0.00000000E+00 0.00000000E+00  
fmfpt1 = 1.00000000 1.00000000  
zplatpt1 = 0.00000000E+00 0.00000000E+00

pt. source: KILN4 number: 1  
qstak = 0.824999988 2.19700003 22.4326000 0.00000000E+00 0.00000000E+00  
0.344000012 1.63600004 2.24900007 0.236000001 1.50000000

pt. source: KILN5 number: 2  
qstak = 12.5983000 0.667999983 11.3414001 0.00000000E+00 0.00000000E+00  
0.104900002 0.498400003 0.681999981 7.18099996E-02 4.55799997E-02

----- INPUT GROUP 14 -----

nar1 = 0  
iaru = 1 units = g/s/m^2  
converted to g/s/m^2 by factor: 1.00000000  
nsar1 = 0  
nar2 = 0

----- INPUT GROUP 15 -----

nln2 = 0  
nlines = 0  
ilnu = 1 units = g/s  
converted to g/s by factor: 1.00000000  
nsln1 = 0  
xl = 0.00000000E+00  
hbl = 0.00000000E+00  
wbl = 0.00000000E+00  
wml = 0.00000000E+00  
dxl = 0.00000000E+00  
fprimel = 0.00000000E+00  
mxnseg = 7  
nlrise = 6

----- INPUT GROUP 16 -----

nvll = 0  
ivlu = 1 units = g/s  
converted to g/s by factor: 1.00000000  
nsvll = 0  
nvl2 = 0

----- INPUT GROUP 17 -----

nrec = 289  
xng = 22.4572525 22.6147537 22.7722473 22.1559982 22.3134995 22.4710007  
22.6285019 22.7860031 22.9434967 23.1009979 22.1697464 22.3272476 22.4844971  
22.6419983 22.7997513 22.9572525 23.1147537 23.2720032 23.4297485 22.1835022  
22.3407516 22.4982529 22.6557465 22.8132477 22.9707489 23.1282501 23.2857513  
23.4432526 22.3544998 22.5120010 22.6695023 22.8270035 22.9844971 23.1419983  
23.2992477 23.4570007 22.5257492 22.6832504 22.8407516 22.9980011 23.1555023  
23.3130035 23.4704971 22.5394974 22.6967468 22.8542480 23.0117493 23.1692505  
23.3264999 23.4840012 24.1137466 24.2712479 24.4284973 24.5862503 24.7434998  
24.9010010 25.0582504 22.5532532 22.7105026 22.8679962 23.0254974 23.1827469  
23.3402481 23.4977493 24.1272507 24.2847519 24.4420013 24.5995026 24.7570038  
24.9142532 25.0717468 22.5667496 22.7242508 22.8817520 23.0390015 23.1965027  
23.3537521 23.5112534 23.6685028 23.8259964 23.9834976 24.1407471 24.2982483  
24.4554977 24.6129990 24.7705002 24.9277496 25.0849991 22.5804977 22.7379990  
22.8952484 23.0527496 23.2099991 23.3672485 23.5247498 23.6822510 23.8395004  
23.9970016 24.1542511 24.3117523 24.4690018 24.6265030 24.7837524 24.9412537  
25.0985031 25.2559967 25.4132538 22.5942535 22.7515030 22.9089966 23.0662537  
23.2237473 23.3809967 23.5384979 23.6957474 23.8529968 24.0104980 24.1677475  
24.3249969 24.4824982 24.6399994 24.7972488 24.9544983 25.1117477 25.2692490  
25.4267502 22.6080017 22.7652512 22.9227524 23.0800018 23.2372513 23.3945007  
23.5520020 23.7092514 23.8665009 24.0240021 24.1812515 24.3385010 24.4960022  
24.6532516 24.8105011 24.9680023 25.1252518 25.2827530 25.4400024 25.5972519  
22.6217499 22.7789993 22.9362488 23.0934982 23.2509995 23.4082489 23.5654984  
23.7227478 23.8799973 24.0374985 24.1947479 24.3519974 24.5092468 24.6667480  
24.8239975 24.9812469 25.1384964 25.2959976 25.4532471 25.6104965 22.6354980  
22.7927475 22.9499969 23.1072464 23.2645035 23.4217529 23.5792465 23.7365036  
23.8937531 24.0510025 24.2082520 24.3655014 24.5227509 24.6802521 24.8375015  
24.9947510 25.1520004 25.3095016 22.8062515 22.9637527 23.1210022 23.2782516  
23.4352493 43.0975037 43.4117508 43.7259979 43.1197510 43.4337463 43.7477493  
44.0617523 44.3759995 48.4595032 48.7734985 49.0877533 49.4017487 49.7160034  
50.0299988 42.8277512 43.1417465 43.4557495 43.7697525 44.0837479 44.3977509  
44.7117462 45.0257492 45.3397522 48.1660004 48.4800034 48.7939987 49.1082535  
49.7362518 43.4777527 43.7914963 44.1054993 44.4195023 44.7332535 45.0472488  
45.3612518 47.8727493 48.1867523 43.4994965 43.8134995 44.1272507 44.4412537  
44.7549973 45.0687485 45.3827515 47.5797501 42.8939972 43.2080002 43.5214996  
43.8355026 44.1490021 44.4629974 44.7764969 45.0904999 45.4039993 45.7180023  
46.0317535 46.3454971 46.6592484 46.9729996 47.2867508 42.9162521 43.2300034  
43.5435028 43.8572464 44.1709976 44.4847488 44.7982483 45.1119995 45.4254990  
45.7392502 46.0530014 46.3667526 46.6802521 46.9940033 42.9384995 43.2519989  
43.5654984 43.8792496 44.1927490 44.5062485 44.8199997 45.1334991 45.4469986  
45.7607498 46.0742493 46.3880005 46.7014999 43.2740021 43.5875015 43.9010010  
44.2145004 44.5279999 44.8414993 45.1549988 45.4684982 45.7822495 43.9229965  
44.2362518 44.5497513 44.8632507  
yng = 20.6952515 20.6855011 20.6754990 20.9325027 20.9225006 20.9127502  
20.9027481 20.8927536 20.8830032 20.8730011 21.1497498 21.1397476 21.1299973  
21.1200027 21.1100006 21.1002502 21.0902481 21.0804977 21.0705032 21.3672485

21.3572464 21.3472519 21.3372498 21.3274994 21.3174973 21.3075027 21.2977524  
21.2880020 21.5745010 21.5644989 21.5544968 21.5445023 21.5347519 21.5247498  
21.5149994 21.5049973 21.7817535 21.7717514 21.7620010 21.7519989 21.7422485  
21.7322464 21.7225037 21.9990005 21.9892502 21.9792480 21.9694977 21.9595032  
21.9497528 21.9397507 21.9004974 21.8907471 21.8809967 21.8712463 21.8615036  
21.8517532 21.8422470 22.2162476 22.2064972 22.1965027 22.1865005 22.1767502  
22.1669998 22.1569977 22.1177521 22.1080017 22.0982513 22.0885010 22.0787506  
22.0690002 22.0595016 22.4337463 22.4237518 22.4137497 22.4039993 22.3939972  
22.3842468 22.3742523 22.3645020 22.3547516 22.3450012 22.3352509 22.3252487  
22.3154984 22.3057480 22.2962494 22.2864990 22.2767487 22.2670010 22.2572498  
22.2475027 22.2377524 22.2280020 22.2182517 22.2085010 22.1987506 22.1890002  
22.1792502 22.1695005 22.1597506 22.1500010 22.1402513 22.1305016 22.1207521  
22.1110017 22.1012521 22.0915024 22.0817527 22.0720030 22.0622533 22.0525036  
22.0427539 22.0330042 22.0232545 22.0135048 22.0037551 21.9940054 21.9842557  
21.9745060 21.9647563 21.9550066 21.9452569 21.9355072 21.9257575 21.9160078  
21.9062581 21.8965084 21.8867587 21.8770090 21.8672593 21.8575096 21.8477599  
21.8380102 21.8282605 21.8185108 21.8087611 21.7990114 21.7892617 21.7795120  
21.7697623 21.7600126 21.7502629 21.7405132 21.7307635 21.7210138 21.7112641  
21.7015144 21.6917647 21.6820150 21.6722653 21.6625156 21.6527659 21.6430162  
21.6332665 21.6235168 21.6137671 21.6040174 21.5942677 21.5845180 21.5747683  
21.5650186 21.5552689 21.5455192 21.5357695 21.5260198 21.5162701 21.5065204  
21.4967707 21.4870210 21.4772713 21.4675216 21.4577719 21.4480222 21.4382725  
21.4285228 21.4187731 21.4090234 21.3992737 21.3895240 21.3797743 21.3700246  
21.3602749 21.3505252 21.3407755 21.3310258 21.3212761 21.3115264 21.3017767  
21.2920270 21.2822773 21.2725276 21.2627779 21.2530282 21.2432785 21.2335288  
21.2237791 21.2140294 21.2042797 21.1945300 21.1847803 21.1750306 21.1652809  
21.1555312 21.1457815 21.1360318 21.1262821 21.1165324 21.1067827 21.0970330  
21.0872833 21.0775336 21.0677839 21.0580342 21.0482845 21.0385348 21.0287851  
21.0190354 21.0092857 20.9995360 20.9897863 20.9800366 20.9702869 20.9605372  
20.9507875 20.9410378 20.9312881 20.9215384 20.9117887 20.9020390 20.8922893  
20.8825396 20.8727899 20.8630402 20.8532905 20.8435408 20.8337911 20.8240414  
20.8142917 20.8045420 20.7947923 20.7850426 20.7752929 20.7655432 20.7557935  
20.7460438 20.7362941 20.7265444 20.7167947 20.7070450 20.6972953 20.6875456  
20.6777959 20.6680462 20.6582965 20.6485468 20.6387971 20.6290474 20.6192977  
20.6095480 20.6000000 20.5905000 20.5810000 20.5715000 20.5620000 20.5525000  
20.5430000 20.5335000 20.5240000 20.5145000 20.5050000 20.4955000 20.4860000  
20.4765000 20.4670000 20.4575000 20.4480000 20.4385000 20.4290000 20.4195000  
20.4100000 20.4005000 20.3910000 20.3815000 20.3720000 20.3625000 20.3530000  
20.3435000 20.3340000 20.3245000 20.3150000 20.3055000 20.2960000 20.2865000  
20.2770000 20.2675000 20.2580000 20.2485000 20.2390000 20.2295000 20.2200000  
20.2105000 20.2010000 20.1915000 20.1820000 20.1725000 20.1630000 20.1535000  
20.1440000 20.1345000 20.1250000 20.1155000 20.1060000 20.0965000 20.0870000  
20.0775000 20.0680000 20.0585000 20.0490000 20.0395000 20.0300000 20.0205000  
20.0110000 20.0015000 19.9920000 19.9825000 19.9730000 19.9635000 19.9540000  
19.9445000 19.9350000 19.9255000 19.9160000 19.9065000 19.8970000 19.8875000  
19.8780000 19.8685000 19.8590000 19.8495000 19.8400000 19.8305000 19.8210000  
19.8115000 19.8020000 19.7925000 19.7830000 19.7735000 19.7640000 19.7545000  
19.7450000 19.7355000 19.7260000 19.7165000 19.7070000 19.6975000 19.6880000  
19.6785000 19.6690000 19.6595000 19.6500000 19.6405000 19.6310000 19.6215000  
19.6120000 19.6025000 19.5930000 19.5835000 19.5740000 19.5645000 19.5550000  
19.5455000 19.5360000 19.5265000 19.5170000 19.5075000 19.4980000 19.4885000  
19.4790000 19.4695000 19.4600000 19.4505000 19.4410000 19.4315000 19.4220000  
19.4125000 19.4030000 19.3935000 19.3840000 19.3745000 19.3650000 19.3555000  
19.3460000 19.3365000 19.3270000 19.3175000 19.3080000 19.2985000 19.2890000  
19.2795000 19.2700000 19.2605000 19.2510000 19.2415000 19.2320000 19.2225000  
19.2130000 19.2035000 19.1940000 19.1845000 19.1750000 19.1655000 19.1560000  
19.1465000 19.1370000 19.1275000 19.1180000 19.1085000 19.0990000 19.0895000  
19.0800000 19.0705000 19.0610000 19.0515000 19.0420000 19.0325000 19.0230000  
19.0135000 19.0040000 18.9945000 18.9850000 18.9755000 18.9660000 18.9565000  
18.9470000 18.9375000 18.9280000 18.9185000 18.9090000 18.8995000 18.8900000  
18.8805000 18.8710000 18.8615000 18.8520000 18.8425000 18.8330000 18.8235000  
18.8140000 18.8045000 18.7950000 18.7855000 18.7760000 18.7665000 18.7570000  
18.7475000 18.7380000 18.7285000 18.7190000 18.7095000 18.7000000 18.6905000  
18.6810000 18.6715000 18.6620000 18.6525000 18.6430000 18.6335000 18.6240000  
18.6145000 18.6050000 18.5955000 18.5860000 18.5765000 18.5670000 18.5575000  
18.5480000 18.5385000 18.5290000 18.5195000 18.5100000 18.5005000 18.4910000  
18.4815000 18.4720000 18.4625000 18.4530000 18.4435000 18.4340000 18.4245000  
18.4150000 18.4055000 18.3960000 18.3865000 18.3770000 18.3675000 18.3580000  
18.3485000 18.3390000 18.3295000 18.3200000 18.3105000 18.3010000 18.2915000  
18.2820000 18.2725000 18.2630000 18.2535000 18.2440000 18.2345000 18.2250000  
18.2155000 18.2060000 18.1965000 18.1870000 18.1775000 18.1680000 18.1585000  
18.1490000 18.1395000 18.1300000 18.1205000 18.1110000 18.1015000 18.0920000  
18.0825000 18.0730000 18.0635000 18.0540000 18.0445000 18.0350000 18.0255000  
18.0160000 18.0065000 17.9970000 17.9875000 17.9780000 17.9685000 17.9590000  
17.9495000 17.9400000 17.9305000 17.9210000 17.9115000 17.9020000 17.8925000  
17.8830000 17.8735000 17.8640000 17.8545000 17.8450000 17.8355000 17.8260000  
17.8165000 17.8070000 17.7975000 17.7880000 17.7785000 17.7690000 17.7595000  
17.7500000 17.7405000 17.7310000 17.7215000 17.7120000 17.7025000 17.6930000  
17.6835000 17.6740000 17.6645000 17.6550000 17.6455000 17.6360000 17.6265000  
17.6170000 17.6075000 17.5980000 17.5885000 17.5790000 17.5695000 17.5600000  
17.5505000 17.5410000 17.5315000 17.5220000 17.5125000 17.5030000 17.4935000  
17.4840000 17.4745000 17.4650000 17.4555000 17.4460000 17.4365000 17.4270000  
17.4175000 17.4080000 17.3985000 17.3890000 17.3795000 17.3700000 17.3605000  
17.3510000 17.3415000 17.3320000 17.3225000 17.3130000 17.3035000 17.2940000  
17.2845000 17.2750000 17.2655000 17.2560000 17.2465000 17.2370000 17.2275000  
17.2180000 17.2085000 17.1990000 17.1895000 17.1800000 17.1705000 17.1610000  
17.1515000 17.1420000 17.1325000 17.1230000 17.1135000 17.1040000 17.0945000  
17.0850000 17.0755000 17.0660000 17.0565000 17.0470000 17.0375000 17.0280000  
17.0185000 17.0090000 16.9995000 16.9900000 16.9805000 16.9710000 16.9615000  
16.9520000 16.9425000 16.9330000 16.9235000 16.9140000 16.9045000 16.8950000  
16.8855000 16.8760000 16.8665000 16.8570000 16.8475000 16.8380000 16.8285000  
16.8190000 16.8095000 16.8000000 16.7905000 16.7810000 16.7715000 16.7620000  
16.7525000 16.7430000 16.7335000 16.7240000 16.7145000 16.7050000 16.6955000  
16.6860000 16.6765000 16.6670000 16.6575000 16.6480000 16.6385000 16.6290000  
16.6195000 16.6100000 16.6005000 16.5910000 16.5815000 16.5720000 16.5625000  
16.5530000 16.5435000 16.5340000 16.5245000 16.5150000 16.5055000 16.4960000  
16.4865000 16.4770000 16.4675000 16.4580000 16.4485000 16.4390000 16.4295000  
16.4200000 16.4105000 16.4010000 16.3915000 16.3820000 16.3725000 16.3630000  
16.3535000 16.3440000 16.3345000 16.3250000 16.3155000 16.3060000 16.2965000  
16.2870000 16.2775000 16.2680000 16.2585000 16.2490000 16.2395000 16.2300000  
16.2205000 16.2110000 16.2015000 16.1920000 16.1825000 16.1730000 16.1635000  
16.1540000 16.1445000 16.1350000 16.1255000 16.1160000 16.1065000 16.0970000  
16.0875000 16.0780000 16.0685000 16.0590000 16.0495000 16.0400000 16.0305000  
16.0210000 16.0115000 16.0020000 15.9925000 15.9830000 15.9735000 15.9640000  
15.9545000 15.9450000 15.9355000 15.9260000 15.9165000 15.9070000 15.8975000  
15.8880000 15.8785000 15.8690000 15.8595000 15.8500000 15.8405000 15.8310000  
15.8215000 15.8120000 15.8025000 15.7930000 15.7835000 15.7740000 15.7645000  
15.7550000 15.7455000 15.7360000 15.7265000 15.7170000 15.7075000 15.6980000  
15.6885000 15.6790000 15.6695000 15.6600000 15.6505000 15.6410000 15.6315000  
15.6220000 15.6125000 15.6030000 15.5935000 15.5840000 15.5745000 15.5650000  
15.5555000 15.5460000 15.5365000 15.5270000 15.5175000 15.5080000 15.4985000  
15.4890000 15.4795000 15.4700000 15.4605000 15.4510000 15.4415000 15.4320000  
15.4225000 15.4130000 15.4035000 15.3940000 15.3845000 15.3750000 15.3655000  
15.3560000 15.3465000 15.3370000 15.3275000 15.3180000 15.3085000 15.2990000  
15.2895000 15.2800000 15.2705000 15.2610000 15.2515000 15.2420000 15.2325000  
15.2230000 15.2135000 15.2040000 15.1945000 15.1850000 15.1755000 15.1660000  
15.1565000 15.1470000 15.1375000 15.1280000 15.1185000 15.1090000 15.1000000  
15.0905000 15.0810000 15.0715000 15.0620000 15.0525000 15.0430000 15.0335000  
15.0240000 15.0145000 15.0050000 14.9955000 14.9860000 14.9765000 14.9670000  
14.9575000 14.9480000 14.9385000 14.9290000 14.9195000 14.9100000 14.9005000  
14.8910000 14.8815000 14.8720000 14.8625000 14.8530000 14.8435000 14.8340000  
14.8245000 14.8150000 14.8055000 14.7960000 14.7865000 14.7770000 14.7675000  
14.7580000 14.7485000 14.7390000 14.7295000 14.7200000 14.7105000 14.7010000  
14.6915000 14.6820000 14.6725000 14.6630000 14.6535000 14.6440000 14.6345000  
14.6250000 14.6155000 14.6060000 14.5965000 14.5870000 14.5775000 14.5680000  
14.5585000 14.5490000 14.5395000 14.5300000 14.5205000 14.5110000 14.5015000  
14.4920000 14.4825000 14.4730000 14.4635000 14.4540000 14.4445000 14.4350000  
14.4255000 14.4160000 14.4065000 14.3970000 14.3875000 14.3780000 14.3685000  
14.3590000 14.3495000 14.3400000 14.3305000 14.3210000 14.3115000 14.3020000  
14.2925000 14.2830000 14.2735000 14.2640000 14.2545000 14.2450000 14.2355000  
14.2260000 14.2165000 14.2070000 14.1975000 14.1880000 14.1785000 14.1690000  
14.1595000 14.1500000 14.1405000 14.1310000 14.1215000 14.1120000 14.1025000  
14.0930000 14.0835000 14.0740000 14.0645000 14.0550000 14.0455000 14.0360000  
14.0265000 14.0170000 14.0075000 13.9980000 13.9885000 13.9790000 13.9695000  
13.9600000 13.9505000 13.9410000 13.9315000 13.9220000 13.9125000 13.9030000  
13.8935000 13.8840000 13.8745000 13.8650000 13.8555000 13.8460000 13.8365000  
13.8270000 13.8175000 13.8080000 13.7985000 13.7890000 13.7795000 13.7700000  
13.7605000 13.7510000 13.7415000 13.7320000 13.7225000 13.7130000 13.7035000  
13.6940000 13.6845000 13.6750000 13.6655000 13.6560000 13.6465000 13.6370000  
13.6275000 13.6180000 13.6085000 13.5990000 13.5895000 13.5800000 13.5705000  
13.5610000 13.5515000 13.5420000 13.5325000 13.5230000 13.5135000 13.5040000  
13.4945000 13.4850000 13.4755000 13.4660000 13.4565000 13.4470000 13.4375000  
13.4280000 13.4185000 13.4090000 13.3995000 13.3900000 13.3805000 13.3710000  
13.3615000 13.3520000 13.3425000 13.3330000 13.3235000 13.3140000 13.3045000  
13.2950000 13.2855000 13.2760000 13.2665000 13.2570000 13.2475000 13.2380000  
13.2285000 13.2190000 13.2095000 13.2000000 13.1905000 13.1810000 13.1715000  
13.1620000 13.1525000 13.1430000 13.1335000 13.1240000 13.1145000 13.1050000  
13.0955000 13.0860000 13.0765000 13.0670000 13.0575000 13.0480000 13.0385000  
13.0290000 13.0195000 13.0100000 13.0005000 12.9910000 12.9815000 12.9720000  
12.9625000 12.9530000 12.9435000 12.9340000 12.9245000 12.9150000 12.9055000  
12.8960000 12.8865000 12.8770000 12.8675000 12.8580000 12.8485000 12.8390000  
12.8295000 12.8200000 12.8105000 12.8010000 12.7915000 12.7820000 12.7725000  
12.7630000 12.7535000 12.7440000 12.7345000 12.7250000 12.7155000 12.7060000  
12.6965000 12.6870000 12.6775000 12.6680000 12.6585000 12.6490000 12.6395000  
12.6300000 12.6205000 12.6110000 12.6015000 12.5920000 12.5825000 12.5730000  
12.5635000 12.5540000 12.5445000 12.5350000 12.5255000 12.5160000 12.5065000  
12.4970000 12.4875000 12.4780000 12.4685000 12.4590000 12.4495000 12.4400000  
12.4305000 12.4210000 12.4115000 12.4020000 12.3925000 12.3830000 12.3735000  
12.3640000 12.3545000 12.3450



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1341.00000 1288.00000 1280.00000 1280.00000 1280.00000 1273.00000 1280.00000
1201.00000 1211.00000 1219.00000 1219.00000 1214.00000 1170.00000 1158.00000
1402.00000 1455.00000 1402.00000 1399.00000 1390.00000 1350.00000 1341.00000
1283.00000 1289.00000 1291.00000 1291.00000 1280.00000 1280.00000 1219.00000
1218.00000 1252.00000 1219.00000 1189.00000 1158.00000 1153.00000 1445.00000
1402.00000 1462.00000 1402.00000 1441.00000 1395.00000 1341.00000 1320.00000
1322.00000 1296.00000 1280.00000 1276.00000 1274.00000 1280.00000 1269.00000
1217.00000 1210.00000 1173.00000 1402.00000 1387.00000 1346.00000 1341.00000
1341.00000 853.000000 865.000000 850.000000 853.000000 853.000000 853.000000
852.000000 853.000000 791.000000 789.000000 789.000000 792.000000 789.000000
768.000000 853.000000 853.000000 853.000000 853.000000 860.000000 910.000000
853.000000 848.000000 853.000000 792.000000 792.000000 792.000000 792.000000
792.000000 853.000000 853.000000 853.000000 853.000000 914.000000 853.000000
853.000000 810.000000 828.000000 852.000000 852.000000 851.000000 852.000000
853.000000 853.000000 853.000000 823.000000 845.000000 828.000000 835.000000
848.000000 843.000000 844.000000 851.000000 853.000000 853.000000 900.000000
853.000000 849.000000 845.000000 853.000000 841.000000 842.000000 810.000000
803.000000 825.000000 814.000000 807.000000 846.000000 852.000000 853.000000
853.000000 853.000000 853.000000 911.000000 853.000000 847.000000 792.000000
792.000000 803.000000 794.000000 796.000000 828.000000 851.000000 853.000000
853.000000 853.000000 914.000000 924.000000 809.000000 792.000000 792.000000
792.000000 792.000000 841.000000 853.000000 853.000000 869.000000 796.000000
829.000000 853.000000 860.000000

```

-----  
INPUT FILES

Default Name	Unit No.	File Name and Path
-----	-----	-----
CALPUFF.INP	1	CALPUFF.INP
CALMET.DAT	7	G:\BIGSTO~1\OCT200~1\07\MED7B6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MED7B2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MET200~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MET200~2.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MET200~3.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MET200~4.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEDBB6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEDBB2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEDBBE~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEEBBA~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEEBB6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEEBB2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEDFB6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEDFB2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEDFBE~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEEFBA~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEEFB6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEEFB2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MED3C6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MED3C2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MED3CE~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEE3CA~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEE3C6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MEE3C2~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MED7C6~1.DAT
(----)	7	G:\BIGSTO~1\OCT200~1\07\MED7C2~1.DAT



```

(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED7CE~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7CA~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7C6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7C2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDBC6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDBC2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDBCE~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBCA~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBC6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBC2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDFC6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDFC2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDFCE~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEFCA~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEFC6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEFC2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED3D6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED3D2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED3DE~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3DA~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3D6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3D2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED7D6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED7D2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED7DE~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7DA~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7D6~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7D2~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED3B0~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED3B4~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3B8~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3BC~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3B0~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE3B4~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED7B0~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MED7B4~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7B8~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7BC~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7B0~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEE7B4~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDBB0~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEDBB4~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBB8~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBBC~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBB0~1.DAT
(-----)      7      G:\BIGSTO~1\OCT200~1\07\MEEBB4~1.DAT
OZONE.DAT      22      E:\RCVIS\GCC\RUNINP~1\OZONE\OZONE2~3.DAT

```

-----  
OUTPUT FILES

Default Name	Unit No.	File Name and Path
CALPUFF.LST	2	07_ES2_CALPUFF.LST
CONC.DAT	8	CONC.DAT
DFLX.DAT	9	DFLX.DAT

WFLX.DAT	10	WFLX.DAT
VISB.DAT	11	VISB.DAT

LAST DAY/HOUR PROCESSED:

Year: 2007 Month: 12 Day: 31 Julian day: 365 Hour: 0

End of run -- Clock time: 03:21:27  
Date: 01-01-2011

Elapsed Clock Time: 10294.0 (seconds)

CPU Time: 10294.0 (seconds)

**Appendix G-2 – POSTUTIL Control File**

---

\*\*\*\*\*  
\*\*\*\*\*

POSTUTIL Version 1.58

Level 080407

\*\*\*\*\*

**GCC Dacotah 2007 MET, 2002 Emissions**

Run Title:

Generated by CALPUFF View - Version 4.0.0 - 01/06/2011

-----  
Note: provide NMET lines of the form     \* UTLMET = name \* \*END\*  
  or     \* MET1D = name \* \*END\*  
  or     \* M2DRHU = name \* \*END\*  
  (and)  \* M2DTMP = name \* \*END\*  
  (and)  \* M2DRHO = name \* \*END\*

  and NFILES lines of the form     \* MODDAT = name \* \*END\*  
  where the \* should be replaced with an exclamation point,  
  the special delimiter character.

-----  
-

INPUT GROUP: 1 -- General run control parameters

-----

Starting date:     Year (ISYR) --     No default     ! ISYR = 2007 !  
                                  Month (ISMO) --     No default     ! ISMO = 1 !  
                                  Day (ISDY) --     No default     ! ISDY = 1 !  
                                  Hour (ISHR) --     No default     ! ISHR = 2 !  
  
Number of periods to process  
                                  (NPER) -- No default     ! NPER = 8734 !  
  
Number of species to process from CALPUFF runs  
                                  (NSPECINP) -- No default     ! NSPECINP = 10 !  
  
Number of species to write to output file  
                                  (NSPECOUT) -- No default     ! NSPECOUT = 14 !  
  
Number of species to compute from those modeled  
(must be no greater than NSPECOUT)  
                                  (NSPECCMP) -- No default     ! NSPECCMP = 4 !

When multiple files are used, a species name may appear in more than one file. Data for this species will be summed (appropriate if the CALPUFF runs use different source groups). If this summing is not appropriate, remove duplicate species from the file(s).

Stop run if duplicate species names  
are found? (MDUPLCT) Default: 0 ! MDUPLCT = 0 !  
0 = no (i.e., duplicate species are summed)  
1 = yes (i.e., run is halted)

Data for each species in a CALPUFF data file may also be scaled as they are read. This can be done to alter the emission rate of all sources that were modeled in a particular CALPUFF application. The scaling factor for each species is entered in Subgroup (2d), for each file for which scaling is requested.

Number of CALPUFF data files that will be scaled  
(must be no greater than NFILES)  
(NSCALED) Default: 0 ! NSCALED = 0 !

Ammonia-Limiting Method Option to recompute the HNO<sub>3</sub>/NO<sub>3</sub> concentration partition prior to performing other actions is controlled by MNITRATE. This option will NOT alter any deposition fluxes contained in the CALPUFF file(s). Three partition selections are provided. The first two are typically used in sequence (POSTUTIL is run more than once). The first selection (MNITRATE=1) computes the partition for the TOTAL (all sources) concentration fields (SO<sub>4</sub>, NO<sub>3</sub>, HNO<sub>3</sub>; NH<sub>3</sub>), and the second (MNITRATE=2) uses this partition (from the previous application of POSTUTIL) to compute the partition for individual source groups. The third selection (MNITRATE=3) can be used instead in a single POSTUTIL application if a file of background concentrations is provided (BCKGALM in Input Group 0).

Required information for MNITRATE=1 includes:  
species NO<sub>3</sub>, HNO<sub>3</sub>, and SO<sub>4</sub>  
NH<sub>3</sub> concentration(s)  
met. data file for RH and T

Required information for MNITRATE=2 includes:  
species NO<sub>3</sub> and HNO<sub>3</sub> for a source group  
species NO<sub>3</sub>ALL and HNO<sub>3</sub>ALL for all source groups, properly  
partitioned

Required information for MNITRATE=3 includes:  
species NO<sub>3</sub>, HNO<sub>3</sub>, and SO<sub>4</sub> for a source group  
species NO<sub>3</sub>, HNO<sub>3</sub>, SO<sub>4</sub> and TNH<sub>3</sub> from the background BCKGALM file  
If TNH<sub>3</sub> is not in the background BCKGALM file, monthly TNH<sub>3</sub>  
concentrations are used (BCKTNH<sub>3</sub>)  
TNH<sub>3</sub>= total NH<sub>3</sub> = NH<sub>3</sub>gaseous+NH<sub>3</sub>particulate

Recompute the HNO<sub>3</sub>/NO<sub>3</sub> partition for concentrations?  
(MNITRATE) Default: 0 ! MNITRATE = 0 !  
0 = no  
1 = yes, for all sources combined  
2 = yes, for a source group  
3 = yes, ALM application in one step

#### SOURCE OF AMMONIA:

Ammonia may be available as a modeled species in the CALPUFF files, and it may or may not be appropriate to use it for repartitioning NO<sub>3</sub>/HNO<sub>3</sub> (in option MNITRATE=1 or MNITRATE=3). Its use is controlled by NH<sub>3</sub>TYP.

When NH3 is listed as a processed species in Subgroup (2a), as one of the NSPECINP ASPECI entries, and the right option is chosen for NH3TYP, the NH3 modeled values from the CALPUFF concentration files will be used in the chemical equilibrium calculation.

NH3TYP also controls when monthly background ammonia values are used. Both gaseous (NH3) and total (TNH3=NH3gaseous+NH3particulate) ammonia can be provided monthly as BCKNH3/BCKTNH3.

What is the input source of Ammonia?

(NH3TYP) No Default \* NH3TYP = \*

- 0 = No background will be used.  
ONLY NH3 or TNH3 from the concentration files listed in Subgroup (2a&2b) as a processed species will be used.  
(Cannot be used with MNITRATE=3)
- 1 = NH3 Monthly averaged background (BCKNH3) listed below will be added to NH3 from concentration files listed in Subgroup (2a)
- 2 = NH3 from background concentration file BCKGALM will be added to NH3 from concentration files listed in Subgroup (2a&2b)  
(ONLY possible for MNITRATE=3)
- 3 = NH3 Monthly averaged background (BCKNH3) listed below will be used alone.
- 4 = NH3 from background concentration file BCKGALM will be used alone  
(ONLY possible for MNITRATE=3)

OPTION	NH3 or TNH3 CONC	BCKNH3 or BCKTNH3	TNH3/BCKGALM or BCKTNH3
0	X	0	0
1	X	X	0
2	X	0	X
3	0	X	0
4	0	0	X

Default monthly (12 values) background ammonia concentration (ppb) used for HNO3/NO3 partition (need to choose one or the other):

Gaseous NH3 (BCKNH3) Default: -999  
! BCKNH3 = 12\*10 !

Total TNH3 (BCKTNH3) Default: -999  
! BCKTNH3 = 12\*10 !

If a single value is entered, this is used for all 12 months.  
Month 1 is JANUARY, Month 12 is DECEMBER.

!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: 1957 2056  
-----

-----  
INPUT GROUP: 2 -- Species Processing Information  
-----

-----  
Subgroup (2a)  
-----

The following NSPECINP species will be processed:

! ASPECI =	SO4 !	!END!
! ASPECI =	HNO3 !	!END!
! ASPECI =	NO3 !	!END!
! ASPECI =	PM425 !	!END!
! ASPECI =	SO2 !	!END!
! ASPECI =	NOX !	!END!
! ASPECI =	PM800 !	!END!
! ASPECI =	PM187 !	!END!
! ASPECI =	PM081 !	!END!
! ASPECI =	PM056 !	!END!

-----  
Subgroup (2b)  
-----

The following NSPECOUT species will be written:

! ASPECO =	SO4 !	!END!
! ASPECO =	HNO3 !	!END!
! ASPECO =	NO3 !	!END!
! ASPECO =	PM425 !	!END!
! ASPECO =	SO2 !	!END!
! ASPECO =	NOX !	!END!
! ASPECO =	PM800 !	!END!
! ASPECO =	PM187 !	!END!
! ASPECO =	PM081 !	!END!
! ASPECO =	PM056 !	!END!
! ASPECO =	SOIL !	!END!
! ASPECO =	SOA !	!END!
! ASPECO =	EC !	!END!
! ASPECO =	PMC !	!END!

-----  
Subgroup (2c)  
-----

The following NSPECCMP species will be computed by scaling and summing one or more of the processed input species. Identify the name(s) of the computed species and provide the scaling factors for each of the NSPECINP input species (NSPECCMP groups of NSPECINP+1 lines each):

```
! CSPECCMP=SOIL !
!   PM425 = 0 !
!   PM800 = 0 !
!   PM187 = 1 !
!   PM081 = 0 !
!   PM056 = 0 !
!END!
! CSPECCMP=SOA !
!   PM425 = 0 !
!   PM800 = 0 !
!   PM187 = 0 !
!   PM081 = 0.64 !
!   PM056 = 1 !
!END!
! CSPECCMP=EC !
!   PM425 = 0 !
!   PM800 = 0 !
!   PM187 = 0 !
!   PM081 = 0.36 !
!   PM056 = 0 !
!END!
! CSPECCMP=PMC !
!   PM425 = 1 !
!   PM800 = 1 !
!   PM187 = 0 !
!   PM081 = 0 !
!   PM056 = 0 !
!END!
```

\*\*\*\*\*  
\*\*\*\*\*

POSTUTIL Version 1.58

Level 080407

\*\*\*\*\*  
\*\*\*\*\*

POSTUTIL Control File Input Summary -----

```
Run starting date -- year: 2007
                    month: 1
                    day: 1
                    Julian day: 1
time beginning - hour(0-23): 1
                - second: 0
Run length (periods): 8734
```

Note: the length of a period is controlled by  
the averaging time selected in the model



Partition between HNO3 and NO3 is NOT computed  
and 1-step Ammonia Limiting Method is not used

Species needed from input file --

SO4  
HNO3  
NO3  
PM425  
SO2  
NOX  
PM800  
PM187  
PM081  
PM056

Species written to output file --

SO4  
HNO3  
NO3  
PM425  
SO2  
NOX  
PM800  
PM187  
PM081  
PM056  
SOIL  
SOA  
EC  
PMC

Species computed from input species --

SOIL =  
0.000000E+00 \* SO4  
0.000000E+00 \* HNO3  
0.000000E+00 \* NO3  
0.000000E+00 \* PM425  
0.000000E+00 \* SO2  
0.000000E+00 \* NOX  
0.000000E+00 \* PM800  
1.000000E+00 \* PM187  
0.000000E+00 \* PM081  
0.000000E+00 \* PM056

SOA =  
0.000000E+00 \* SO4  
0.000000E+00 \* HNO3  
0.000000E+00 \* NO3  
0.000000E+00 \* PM425  
0.000000E+00 \* SO2  
0.000000E+00 \* NOX  
0.000000E+00 \* PM800  
0.000000E+00 \* PM187  
6.400000E-01 \* PM081  
1.000000E+00 \* PM056

```
EC =
0.000000E+00 * SO4
0.000000E+00 * HNO3
0.000000E+00 * NO3
0.000000E+00 * PM425
0.000000E+00 * SO2
0.000000E+00 * NOX
0.000000E+00 * PM800
0.000000E+00 * PM187
3.600000E-01 * PM081
0.000000E+00 * PM056
```

```
PMC =
0.000000E+00 * SO4
0.000000E+00 * HNO3
0.000000E+00 * NO3
1.000000E+00 * PM425
0.000000E+00 * SO2
0.000000E+00 * NOX
1.000000E+00 * PM800
0.000000E+00 * PM187
0.000000E+00 * PM081
0.000000E+00 * PM056
```

PROCESSED MODEL FILE ----- Number 1

CALPUFF 5.8 070623

Based on Aug 2010 runs but , MSAM=99, sl2p5=10  
Calmet.dat files from BS oct2009 submittal  
Calpuff v5.8, Calpost v 6, postutil speciate

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
PM800 1
PM425 1
PM187 1
PM081 1
PM056 1
```

```
msyr,mjsday = 2007 1
mshr,mssec = 0 0
nsecdt (period) = 3600
mper,nszout,mavgpd = 8736 10 1
xorigkm,yorigkm,nstas = -506.000031 298.000000 250
ielmet,jelmet = 313 181
```

```

delx,dely,nz = 4.00000000 4.00000000 1
iastar,iastop,jastar,jastop = 1 120 1 120
isastr,isastp,jsastr,jsastp = 1 75 1 75
(computed) ngx,ngy = 75 75
meshdn,npts,nareas = 1 2 0
nlines,nvols = 0 0
ndrec,nctrec,LSGRID = 289 0 T

```

Source names stored (all files):

type: pt1 - KILN4

type: pt1 - KILN5

Chemical species names written to new file:

```

SO4          1
HNO3         1
NO3          1
PM425        1
SO2          1
NOX          1
PM800        1
PM187        1
PM081        1
PM056        1
SOIL         1
SOA          1
EC           1
PMC          1

```

---

INPUT FILES

Default Name	Unit No.	File Name and Path
POSTUTIL.INP	5	POSTUTPM.INP
CALPUFF.DAT	10	CONC.DAT

---

OUTPUT FILES

Default Name	Unit No.	File Name and Path
POSTUTIL.LST	7	POSTUTPM.LST
MODEL.DAT	8	CONCPM.DAT

Skipping periods in data files

Start Time 2007 1 1 0

Data File	---	Skipped Periods
1		1

Skipping periods in background pollutant files

Start Time 2007 1 1 0

Data File	---	Skipped Periods
2		0

\*\*\*\*\*

RUN MESSAGES EXTRACTED FROM THE DOS WINDOW

\*\*\*\*\*

Processing 8734 periods

Finished 8734 of 8734 periods

**Appendix G-3 – CALPOST Control File**

---

\*\*\*\*\*  
\*\*\*\*\*

CALPOST Version 6.221

Level 080724

\*\*\*\*\*

\*\*\*\*\* **GCC Dacotah 2007 MET, 2002 Emissions** \*\*\*\*\*

Internal Coordinate Transformations by --- COORDLIB Version: 1.99 Level:  
070921

Run Title:

Generated by CALPUFF View - Version 4.0.0 - 01/06/2011  
Visibility Run for VISIB

-----  
INPUT GROUP: 1 -- General run control parameters  
-----

Option to run all periods found  
in the met. file(s) (METRUN) Default: 0 ! METRUN = 0 !

METRUN = 0 - Run period explicitly defined below  
METRUN = 1 - Run all periods in CALPUFF data file(s)

Starting date: Year (ISYR) -- No default ! ISYR = 2007 !  
Month (ISMO) -- No default ! ISMO = 1 !  
Day (ISDY) -- No default ! ISDY = 1 !  
Starting time: Hour (ISHR) -- No default ! ISHR = 1 !  
Minute (ISMIN) -- No default ! ISMIN = 0 !  
Second (ISSEC) -- No default ! ISSEC = 0 !  
  
Ending date: Year (IEYR) -- No default ! IEYR = 2007 !  
Month (IEMO) -- No default ! IEMO = 12 !  
Day (IEDY) -- No default ! IEDY = 30 !  
Ending time: Hour (IEHR) -- No default ! IEHR = 23 !  
Minute (IEMIN) -- No default ! IEMIN = 0 !  
Second (IESEC) -- No default ! IESEC = 0 !

(These are only used if METRUN = 0)

All times are in the base time zone of the CALPUFF simulation.  
CALPUFF Dataset Version 2.1 contains the zone, but earlier versions  
do not, and the zone must be specified here. The zone is the  
number of hours that must be ADDED to the time to obtain UTC (or GMT).  
Identify the Base Time Zone for the CALPUFF simulation

(BTZONE) -- No default ! BTZONE = 7 !

Process every period of data?

(NREP) -- Default: 1 ! NREP = 1 !

(1 = every period processed,  
2 = every 2nd period processed,  
5 = every 5th period processed, etc.)

Species & Concentration/Deposition Information

-----  
Species to process (ASPEC) -- No default ! ASPEC = VISIB !  
(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 !  
 $X(\text{new}) = X(\text{old}) * A + B$  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 of NO2 when ASPEC=NO2 (above) or LVNO2=T (Group 2) may be  
from CALPUFF NO2 concentrations OR from a fraction of CALPUFF NOx  
concentrations. Specify the fraction of NOx that is treated as NO2  
either as a constant or as a table of fractions that depend on the  
magnitude of the NOx concentration:

(NO2CALC) -- Default: 1 ! NO2CALC = 1 !  
0 = Use NO2 directly (NO2 must be in file)  
1 = Specify a single NO2/NOx ratio (RNO2NOX)  
2 = Specify a table NO2/NOx ratios (TNO2NOX)  
(NOTE: Scaling Factors must NOT be used with NO2CALC=2)

Single NO2/NOx ratio (0.0 to 1.0) for treating some  
or all NOx as NO2, where [NO2] = [NOx] \* RNO2NOX  
(used only if NO2CALC = 1)  
(RNO2NOX) -- Default: 1.0 ! RNO2NOX = 1 !

Table of NO2/NOx ratios that vary with NOx concentration.  
Provide 14 NOx concentrations (ug/m\*\*3) and the corresponding  
NO2/NOx ratio, with NOx increasing in magnitude. The ratio used  
for a particular NOx concentration is interpolated from the values  
provided in the table. The ratio for the smallest tabulated NOx  
concentration (the first) is used for all NOx concentrations less  
than the smallest tabulated value, and the ratio for the largest  
tabulated NOx concentration (the last) is used for all NOx  
concentrations greater than the largest tabulated value.  
(used only if NO2CALC = 2)

NOx concentration(ug / m3)  
(CNOX) -- No default  
! CNOX = 1,2,3,4,5,6,7,8,9,10,11,12,13,14 !

NO2/NOx ratio for each NOx concentration:  
(TNO2NOX) -- No default  
! TNO2NOX = 1,1,1,1,1,1,1,1,1,1,1,1,1,1 !

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 !

#### Plume Model Output Processing Options

-----

Output from models other than CALPUFF and CALGRID can be written in the CONC.DAT format and processed by CALPOST. Plume models such as AERMOD typically do not treat CALM hours, and do not include such hours in multiple-hour averages, with specific rules about how many calm hours can be removed from an average. This treatment is known as CALM PROCESSING. Calm periods are identified from wind speeds in the meteorological data file for the application, which must be identified in Input Group 0 as the single-point meteorological data file MET1DAT.

- 0 = Option is not used for CALPUFF/CALGRID output files
  - 1 = Apply CALM processing procedures to multiple-hour averages
- (MCALMPRO) -- Default: 0 ! MCALMPRO = 0 !

Format of Single-point Met File

- 1 = AERMOD/AERMET SURFACE file
- (MET1FMT) -- Default: 1 ! MET1FMT = 1 !

#### 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 = 189\*0,100\*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  
\* NGXRECP = \*

-----  
INPUT GROUP: 2 -- Visibility Parameters (ASPEC = VISIB)  
-----

Test visibility options specified to see if they conform to FLAG 2008 configuration?

(MVISCHECK) -- Default: 1 ! MVISCHECK = 1 !  
0 = NO checks are made  
1 = Technical options must conform to FLAG 2008 visibility guidance  
ASPEC = VISIB  
LVNO2 = T  
NO2CALC = 1  
RNO2NOX = 1.0  
MVISBK = 8  
M8\_MODE = 5

Some of the data entered for use with the FLAG 2008 configuration are specific to the Class I area being evaluated. These values can be checked within the CALPOST user interface when the name of the Class I area is provided.

Name of Class I Area (used for QA purposes only)  
(AREANAME) -- Default: User ! AREANAME = Badlands

NP !

Particle growth curve f(RH) for hygroscopic species  
(MFRH) -- Default: 4 ! MFRH = 4 !

1 = IWAQM (1998) f(RH) curve (originally used with MVISBK=1)  
2 = FLAG (2000) f(RH) tabulation  
3 = EPA (2003) f(RH) tabulation  
4 = IMPROVE (2006) f(RH) tabulations for sea salt, and for small and large SULFATE and NITRATE particles;  
Used in Visibility Method 8 (MVISBK = 8 with M8\_MODE = 1, 2, or

3)

Maximum relative humidity (%) used in particle growth curve  
(RHMAX) -- Default: 98 ! RHMAX = 95 !

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 !  
Include NO2 absorption? (LVNO2) -- Default: F ! LVNO2 = T !  
With Visibility Method 8 -- Default: T  
FLAG (2008)

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 = SOIL !

Extinction Efficiency (1/Mm per ug/m\*\*3)

-----  
MODELED particulate species:  
PM COARSE (EETPMC) -- Default: 0.6 ! EETPMC = 0.6 !  
PM FINE (EETPMF) -- Default: 1.0 ! EETPMF = 1.0 !  
BACKGROUND particulate species:

PM COARSE (EPMCBK) -- Default: 0.6 ! EPMCBK = 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 !  
 NO2 GAS (EENO2) -- Default: .1755 ! EENO2 = 0.1755 !

Visibility Method 8:

AMMONIUM SULFATE (EESO4S) Set Internally (small)  
 AMMONIUM SULFATE (EESO4L) Set Internally (large)  
 AMMONIUM NITRATE (EENO3S) Set Internally (small)  
 AMMONIUM NITRATE (EENO3L) Set Internally (large)  
 ORGANIC CARBON (EEOCS) Set Internally (small)  
 ORGANIC CARBON (EEOCL) Set Internally (large)  
 SEA SALT (EESALT) Set Internally

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: 8 ! MVISBK = 8 !  
 FLAG (2008)

- 1 = Supply single light extinction and hygroscopic fraction
  - Hourly F(RH) adjustment applied to hygroscopic background and modeled sulfate and nitrate
- 2 = Background extinction from speciated PM concentrations (A)
  - Hourly F(RH) adjustment applied to observed and modeled sulfate and nitrate
  - F(RH) factor is capped at F(RHMAX)
- 3 = Background extinction from speciated PM concentrations (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 = Background extinction from speciated PM concentrations
  - FLAG (2000) monthly RH adjustment factor applied to observed

and

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

8 = Background extinction from speciated PM concentrations using the IMPROVE (2006) variable extinction efficiency formulation (MFRH must be set to 4)

- Split between small and large particle concentrations of SULFATES, NITRATES, and ORGANICS is a function of concentration and different extinction efficiencies are used for each
- Source-induced change in visibility includes the increase in extinction of the background aerosol due to the change in the extinction efficiency that now depends on total concentration.
- Fsmall(RH) and Flarge(RH) adjustments for small and large particles are applied to observed and modeled sulfate and nitrate concentrations
- Fsalt(RH) adjustment for sea salt is applied to background sea salt concentrations
- F(RH) factors are capped at F(RHMAX)
- RH for Fsmall(RH), Flarge(RH), and Fsalt(RH) may be obtained from hourly data as in Method 2 or from the FLAG monthly RH adjustment factor used for Method 6 where EPA F(RH) tabulation is used to infer RH, or monthly Fsmall, Flarge, and Fsalt RH adjustment factors can be directly entered. Furthermore, a monthly RH factor may be applied to either

hourly concentrations or daily concentrations to obtain the 24-hour extinction. These choices are made using the M8\_MODE selection.

Additional inputs used for MVISBK = 1:

```
-----
Background light extinction (1/Mm)
                (BEXTBK) -- No default      * BEXTBK = *
Percentage of particles affected by relative humidity
                (RHFRAC) -- No default      * RHFRAC = *
```

Additional inputs used for MVISBK = 6,8:

```
-----
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 =
2.8,2.8,2.8,2.6,2.8,2.7,2.4,2.4,2.3,2.3,2.9,2.8 !
```

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 = \*  
(TZONE) -- No default \* TZONE = \*

Additional inputs used for MVISBK = 2,3,6,7,8:

-----  
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 =  
0.12,0.12,0.12,0.12,0.12,0.12,0.12,0.12,0.12,0.12,0.12,0.12,0.12 !  
(BKNO3) -- No default ! BKNO3 =  
0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1,0.1 !  
(BKPMC) -- No default ! BKPMC = 3,3,3,3,3,3,3,3,3,3,3,3,3 !  
(BKOC) -- No default ! BKOC =  
0.6,0.6,0.6,0.6,0.6,0.6,0.6,0.6,0.6,0.6,0.6,0.6,0.6 !  
(BKSOIL) -- No default ! BKSOIL =  
0.5,0.5,0.5,0.5,0.5,0.5,0.5,0.5,0.5,0.5,0.5,0.5,0.5 !  
(BKEC) -- No default ! BKEC =  
0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.02,0.02 !

Additional inputs used for MVISBK = 8:

-----  
Extinction coefficients for hygroscopic species (modeled and background) may be computed using hourly RH values and hourly modeled concentrations, or using monthly RH values inferred from the RHFAC adjustment factors and either hourly or daily modeled concentrations, or using monthly RHFSQL, RHFLRG, and RHFSEA adjustment factors and either hourly or daily modeled concentrations.

(M8\_MODE) -- Default: 5 ! M8\_MODE = 5 !  
FLAG (2008)

1 = Use hourly RH values from VISB.DAT file with hourly modeled and monthly background concentrations.  
2 = Use monthly RH from monthly RHFAC and EPA (2003) f(RH) tabulation with hourly modeled and monthly background concentrations. (VISB.DAT file is NOT needed).  
3 = Use monthly RH from monthly RHFAC with EPA (2003) f(RH) tabulation with daily modeled and monthly background concentrations.

- (VISB.DAT file is NOT needed).
- 4 = Use monthly RHFSML, RHFLRG, and RHFSEA with hourly modeled and monthly background concentrations.  
(VISB.DAT file is NOT needed).
- 5 = Use monthly RHFSML, RHFLRG, and RHFSEA with daily modeled and monthly background concentrations.  
(VISB.DAT file is NOT needed).

Background extinction coefficients are computed from monthly CONCENTRATIONS of sea salt (BKSALT). Month 1 is January.  
(ug/m\*\*3)

(BKSALT) -- No default ! BKSALT =  
0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01,0.01 !

Extinction coefficients for hygroscopic species (modeled and background) can be computed using monthly RH adjustment factors in place of an hourly RH factor (VISB.DAT file is NOT needed). Enter the 12 monthly factors here (RHFSML,RHFLRG,RHFSEA). Month 1 is January. (Used if M8\_MODE = 4 or 5)

Small ammonium sulfate and ammonium nitrate particle sizes (RHFSML) -- No default ! RHFSML =  
2.94,2.96,3.01,2.87,3.1,2.91,2.64,2.59,2.56,2.58,3.11,2.98 !

Large ammonium sulfate and ammonium nitrate particle sizes (RHFLRG) -- No default ! RHFLRG =  
2.31,2.31,2.31,2.21,2.34,2.25,2.08,2.05,2.02,2.05,2.38,2.33 !

Sea salt particles (RHFSEA) -- No default ! RHFSEA =  
3.37,3.33,3.27,3.05,3.25,3.15,2.89,2.81,2.74,2.82,3.41,3.38 !

Additional inputs used for MVISBK = 2,3,5,6,7,8:

-----  
Extinction due to Rayleigh scattering is added (1/Mm)  
(BEXTRAY) -- Default: 10.0 ! BEXTRAY = 11 !

!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 = 1 !
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-pd averages (L1PD) -- Default: T ! L1PD = F !  
 (pd = averaging period of model output)

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 = F !

User-specified averaging time in hours, minutes, seconds  
 - results for this averaging time are reported if it is not zero

(NAVGH) -- Default: 0 ! NAVGH = 0 !  
 (NAVGM) -- Default: 0 ! NAVGM = 0 !  
 (NAVGS) -- Default: 0 ! NAVGS = 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 = T !

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,va11,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 = 1 !

- 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: 1957 2056

-----  
\*\*\*\*\*  
\*\*\*\*\*

CALPOST Version 6.221

Level 080724

\*\*\*\*\*  
\*\*\*\*\*

CALPOST Control File Input Summary -----

Replace run data with data in Puff file 1=Y: 0  
Run starting date -- year: 2007  
month: 1  
day: 1  
Julian day: 1  
Time at start of run - hour(0-23): 1  
- minute: 0  
- second: 0

Run ending date -- year: 2007  
month: 12  
day: 30  
Julian day: 364  
Time at end of run - hour(0-23): 23  
- minute: 0  
- second: 0

Base time zone (Group 1): 7.0

Every period of data processed -- NREP = 1

Species & Concentration/Deposition Information

Species: VISIB  
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

SAMPLER option

Processing method: 0  
0= SAMPLER option not used  
1= Report total modeled impact (list file)  
2= TRACEBACK mode (DAT files)  
3= TRACEBACK mode with sampling factor (DAT files)

Source information

Source contribution processing: 0  
0= No source contributions



BACKGRND coarse PM: 0.6000

Background Extinction Calculation Method 8

Method 8 Mode: 5  
(24-hr avg conc. with monthly F(RH) data)

Monthly RH factor for small particles:

1	.2940E+01
2	.2960E+01
3	.3010E+01
4	.2870E+01
5	.3100E+01
6	.2910E+01
7	.2640E+01
8	.2590E+01
9	.2560E+01
10	.2580E+01
11	.3110E+01
12	.2980E+01

Monthly RH factor for large particles:

1	.2310E+01
2	.2310E+01
3	.2310E+01
4	.2210E+01
5	.2340E+01
6	.2250E+01
7	.2080E+01
8	.2050E+01
9	.2020E+01
10	.2050E+01
11	.2380E+01
12	.2330E+01

Monthly RH factor for sea salt:

1	.3370E+01
2	.3330E+01
3	.3270E+01
4	.3050E+01
5	.3250E+01
6	.3150E+01
7	.2890E+01
8	.2810E+01
9	.2740E+01
10	.2820E+01
11	.3410E+01
12	.3380E+01

Rayleigh scattering extinction (1/Mm): 11.00

Monthly background conc. (ug/m\*\*3):

	(NH4)2SO4	(NH4)NO3	PM-C	OC	SOIL	EC	SEA
SALT							
01	1 .1200E+00	.1000E+00	.3000E+01	.6000E+00	.5000E+00	.2000E-01	.1000E-
	2 .1200E+00	.1000E+00	.3000E+01	.6000E+00	.5000E+00	.2000E-01	.1000E-

```

01  3  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01  4  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01  5  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01  6  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01  7  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01  8  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01  9  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01 10  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01 11  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-
01 12  .1200E+00  .1000E+00  .3000E+01  .6000E+00  .5000E+00  .2000E-01  .1000E-

```

Optional output file for visibility 1

Create file of DAILY (24 hour) Delta-Deciview

Output options

Units requested for output: (1/Mega-m)

Averaging time(s) selected

```

User-specified averaging time (hr:mm:ss): 0: 0: 0
      1-pd averages: F
      1-hr averages: F
      3-hr averages: F
      24-hr averages: T
User-specified averages: F
Length of run averages: F

```

Output components selected

```

Top-50: T
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

```

MAPSPEC: Species Mapping

Number of species-levels in file : 14

Number of species-levels processed: 15

Input ID	Processing ID	Name	
1	1	SO4	1
2	2	HNO3	1
3	3	NO3	1
4	4	PM425	1
5	5	SO2	1
6	6	NOX	1
7	7	PM800	1
8	8	PM187	1
9	9	PM081	1
10	10	PM056	1
11	11	SOIL	1
12	12	SOA	1
13	13	EC	1
14	14	PMC	1

Visibility Species

	Processing ID	Name	
sulfate	1	SO4	1
no2gas	15	NO2	1
noxgas	6	NOX	1
nitrate	3	NO3	1
specpmf	11	SOIL	1
specpmc	14	PMC	1
orgcarb	12	SOA	1
lmncarb	13	EC	1

IDENTIFICATION OF PROCESSED MODEL FILE -----

CALPUFF 5.8 070623

Generated by CALPUFF View - Version 4.0.0 - 01/06/2011

Averaging time for values reported from model:

1 HOUR

Number of averaging periods in file from model:

8734

Chemical species names for each layer in model:

SO4	1
HNO3	1
NO3	1
PM425	1
SO2	1
NOX	1
PM800	1
PM187	1
PM081	1
PM056	1



LECHO, LTIME, LPEAK = F F F  
THRESH1 = -1.00000000  
THRESH3 = -1.00000000  
THRESH24 = -1.00000000  
THRESHN = -1.00000000  
LPLT, LGRD = T F  
MDVIS = 1  
LDEBUG = F  
LCTSG = F

CONTENTS OF HEADER OF MODEL OUTPUT FILE -----

model : CALPUFF 5.8 070623  
msyr,mjsday = 2007 1  
mshr,mssec = 1 0  
nsecdt (period) = 3600  
xbtz = 7.00000000  
mnp,nszout,mavgsd = 8734 14 1  
xorigkm,yorigkm,nssta = -506.000031 298.000000 0  
ielmet,jelmet = 313 181  
delx,dely,nz = 4.00000000 4.00000000 1  
iastar,iastop,jastar,jastop = 1 120 1 120  
isastr,isastp,jsastr,jsastp = 1 75 1 75  
(computed) ngx,ngy = 75 75  
meshdn,npts,nareas = 1 2 0  
nlines,nvols = 0 0  
ndrec,nctrec,LSGRID = 289 0 T

Discrete Receptors (n,x,y,z):

1 -416.171021 380.781006 1280.00000  
2 -415.541016 380.742004 1280.00000  
3 -414.911041 380.701996 1271.00000  
4 -417.376038 381.730011 1280.00000  
5 -416.746033 381.690002 1280.00000  
6 -416.116028 381.651001 1280.00000  
7 -415.486023 381.610992 1280.00000  
8 -414.856018 381.571014 1219.00000  
9 -414.226044 381.532013 1219.00000  
10 -413.596039 381.492004 1252.00000  
11 -417.321045 382.598999 1280.00000  
12 -416.691040 382.558990 1280.00000  
13 -416.062042 382.519989 1280.00000  
14 -415.432037 382.480011 1280.00000  
15 -414.801025 382.440002 1244.00000  
16 -414.171021 382.401001 1244.00000  
17 -413.541016 382.360992 1236.00000  
18 -412.912018 382.321991 1226.00000  
19 -412.281036 382.282013 1209.00000  
20 -417.266022 383.468994 1341.00000  
21 -416.637024 383.428986 1330.00000  
22 -416.007019 383.389008 1307.00000  
23 -415.377045 383.348999 1280.00000  
24 -414.747040 383.309998 1274.00000  
25 -414.117035 383.269989 1271.00000  
26 -413.487030 383.230011 1274.00000  
27 -412.857025 383.191010 1280.00000  
28 -412.227020 383.152008 1224.00000  
29 -416.582031 384.298004 1341.00000  
30 -415.952026 384.257996 1336.00000



31	-415.322021	384.217987	1290.00000
32	-414.692017	384.178009	1256.00000
33	-414.062042	384.139008	1219.00000
34	-413.432037	384.098999	1219.00000
35	-412.803040	384.059998	1219.00000
36	-412.172028	384.019989	1177.00000
37	-415.897034	385.127014	1340.00000
38	-415.267029	385.087006	1290.00000
39	-414.637024	385.048004	1280.00000
40	-414.008026	385.007996	1280.00000
41	-413.378021	384.968994	1219.00000
42	-412.748016	384.928986	1271.00000
43	-412.118042	384.890015	1251.00000
44	-415.842041	385.996002	1334.00000
45	-415.213043	385.957001	1298.00000
46	-414.583038	385.916992	1280.00000
47	-413.953033	385.877991	1280.00000
48	-413.323029	385.838013	1280.00000
49	-412.694031	385.799011	1280.00000
50	-412.064026	385.759003	1219.00000
51	-409.545044	385.601990	1186.00000
52	-408.915039	385.562988	1158.00000
53	-408.286041	385.523987	1140.00000
54	-407.655029	385.484985	1145.00000
55	-407.026031	385.446014	1152.00000
56	-406.396027	385.407013	1158.00000
57	-405.767029	385.368988	1158.00000
58	-415.787018	386.864990	1344.00000
59	-415.158020	386.825989	1294.00000
60	-414.528046	386.786011	1280.00000
61	-413.898041	386.746002	1280.00000
62	-413.269043	386.707001	1280.00000
63	-412.639038	386.667999	1280.00000
64	-412.009033	386.627991	1220.00000
65	-409.491028	386.471008	1219.00000
66	-408.861023	386.432007	1158.00000
67	-408.232025	386.393005	1153.00000
68	-407.602020	386.354004	1156.00000
69	-406.972015	386.315002	1158.00000
70	-406.343018	386.276001	1157.00000
71	-405.713043	386.238007	1219.00000
72	-415.733032	387.734985	1341.00000
73	-415.103027	387.695007	1306.00000
74	-414.473022	387.654999	1304.00000
75	-413.844025	387.615997	1341.00000
76	-413.214020	387.575989	1289.00000
77	-412.585022	387.536987	1272.00000
78	-411.955017	387.497009	1219.00000
79	-411.326019	387.458008	1280.00000
80	-410.696045	387.419006	1280.00000
81	-410.066040	387.380005	1220.00000
82	-409.437042	387.341003	1218.00000
83	-408.807037	387.300995	1184.00000
84	-408.178040	387.261993	1158.00000
85	-407.548035	387.222992	1158.00000
86	-406.918030	387.184998	1158.00000
87	-406.289032	387.145996	1158.00000
88	-405.660034	387.106995	1212.00000

89 -415.678040 388.604004 1411.00000  
90 -415.048035 388.563995 1341.00000  
91 -414.419037 388.523987 1348.00000  
92 -413.789032 388.484985 1347.00000  
93 -413.160034 388.445007 1297.00000  
94 -412.531036 388.406006 1284.00000  
95 -411.901031 388.365997 1284.00000  
96 -411.271027 388.326996 1280.00000  
97 -410.642029 388.287994 1236.00000  
98 -410.012024 388.248993 1219.00000  
99 -409.383026 388.209991 1221.00000  
100 -408.753021 388.170013 1202.00000  
101 -408.124023 388.131012 1158.00000  
102 -407.494019 388.092010 1158.00000  
103 -406.865021 388.053986 1158.00000  
104 -406.235016 388.015015 1219.00000  
105 -405.606018 387.976013 1219.00000  
106 -404.976044 387.937012 1191.00000  
107 -404.347015 387.898987 1152.00000  
108 -415.623016 389.472992 1402.00000  
109 -414.994019 389.433014 1402.00000  
110 -414.364044 389.394012 1402.00000  
111 -413.735016 389.354004 1376.00000  
112 -413.105042 389.315002 1341.00000  
113 -412.476044 389.274994 1336.00000  
114 -411.846039 389.235992 1322.00000  
115 -411.217041 389.196991 1280.00000  
116 -410.588043 389.157013 1274.00000  
117 -409.958038 389.118011 1274.00000  
118 -409.329041 389.079010 1280.00000  
119 -408.700043 389.040009 1219.00000  
120 -408.070038 389.001007 1177.00000  
121 -407.440033 388.962006 1158.00000  
122 -406.811035 388.923004 1163.00000  
123 -406.182037 388.884003 1219.00000  
124 -405.553040 388.845001 1165.00000  
125 -404.923035 388.807007 1166.00000  
126 -404.293030 388.768005 1158.00000  
127 -415.568024 390.342010 1402.00000  
128 -414.939026 390.302002 1402.00000  
129 -414.309021 390.263000 1451.00000  
130 -413.680023 390.222992 1360.00000  
131 -413.051025 390.183990 1341.00000  
132 -412.422028 390.144012 1341.00000  
133 -411.792023 390.105011 1341.00000  
134 -411.163025 390.065002 1288.00000  
135 -410.534027 390.026001 1280.00000  
136 -409.904022 389.987000 1280.00000  
137 -409.275024 389.947998 1280.00000  
138 -408.646027 389.908997 1273.00000  
139 -408.016022 389.869995 1280.00000  
140 -407.387024 389.830994 1201.00000  
141 -406.758026 389.791992 1211.00000  
142 -406.128021 389.752991 1219.00000  
143 -405.499023 389.713989 1219.00000  
144 -404.869019 389.675995 1214.00000  
145 -404.240021 389.636993 1170.00000  
146 -403.611023 389.597992 1158.00000

147	-415.513031	391.210999	1402.00000
148	-414.884033	391.171997	1455.00000
149	-414.255035	391.131989	1402.00000
150	-413.626038	391.092010	1399.00000
151	-412.996033	391.053009	1390.00000
152	-412.367035	391.014008	1350.00000
153	-411.738037	390.973999	1341.00000
154	-411.109039	390.934998	1283.00000
155	-410.480042	390.895996	1289.00000
156	-409.850037	390.855988	1291.00000
157	-409.221039	390.816986	1291.00000
158	-408.592041	390.778015	1280.00000
159	-407.963043	390.739014	1280.00000
160	-407.333038	390.700012	1219.00000
161	-406.704041	390.661011	1218.00000
162	-406.075043	390.622986	1252.00000
163	-405.446045	390.584015	1219.00000
164	-404.816040	390.545013	1189.00000
165	-404.187042	390.506989	1158.00000
166	-403.558044	390.467987	1153.00000
167	-415.458038	392.079987	1445.00000
168	-414.829041	392.040985	1402.00000
169	-414.200043	392.001007	1462.00000
170	-413.571045	391.960999	1402.00000
171	-412.942017	391.921997	1441.00000
172	-412.313019	391.882996	1395.00000
173	-411.683044	391.842987	1341.00000
174	-411.054016	391.803986	1320.00000
175	-410.425018	391.765015	1322.00000
176	-409.796021	391.725006	1296.00000
177	-409.167023	391.686005	1280.00000
178	-408.538025	391.647003	1276.00000
179	-407.909027	391.608002	1274.00000
180	-407.279022	391.569000	1280.00000
181	-406.650024	391.529999	1269.00000
182	-406.021027	391.492004	1217.00000
183	-405.392029	391.453003	1210.00000
184	-404.762024	391.414001	1173.00000
185	-414.775024	392.910004	1402.00000
186	-414.145020	392.869995	1387.00000
187	-413.516022	392.830994	1346.00000
188	-412.887024	392.790985	1341.00000
189	-412.259033	392.752014	1341.00000
190	-333.610016	400.507996	853.000000
191	-332.353027	400.444000	865.000000
192	-331.096039	400.381012	850.000000
193	-333.521027	402.247986	853.000000
194	-332.265045	402.183990	853.000000
195	-331.009033	402.121002	853.000000
196	-329.753021	402.057007	852.000000
197	-328.496033	401.994995	853.000000
198	-312.162018	401.199005	791.000000
199	-310.906036	401.139008	789.000000
200	-309.649017	401.079987	789.000000
201	-308.393036	401.020996	792.000000
202	-307.136017	400.962006	789.000000
203	-305.880035	400.903992	768.000000
204	-334.689026	404.050995	853.000000

205	-333.433044	403.987000	853.000000
206	-332.177032	403.924011	853.000000
207	-330.921021	403.859985	853.000000
208	-329.665039	403.796997	860.000000
209	-328.409027	403.734009	910.000000
210	-327.153046	403.671997	853.000000
211	-325.897034	403.609009	848.000000
212	-324.641022	403.546997	853.000000
213	-313.336029	402.998993	792.000000
214	-312.080017	402.938995	792.000000
215	-310.824036	402.878998	792.000000
216	-309.567017	402.820007	792.000000
217	-307.055023	402.701996	792.000000
218	-332.089020	405.664001	853.000000
219	-330.834045	405.600006	853.000000
220	-329.578033	405.536987	853.000000
221	-328.322021	405.473999	853.000000
222	-327.067017	405.411987	914.000000
223	-325.811035	405.348999	853.000000
224	-324.555023	405.286987	853.000000
225	-314.509033	404.799011	810.000000
226	-313.253021	404.739014	828.000000
227	-332.002045	407.403992	852.000000
228	-330.746033	407.339996	852.000000
229	-329.491028	407.277008	851.000000
230	-328.235016	407.214996	852.000000
231	-326.980042	407.152008	853.000000
232	-325.725037	407.089996	853.000000
233	-324.469025	407.027008	853.000000
234	-315.681030	406.598999	823.000000
235	-334.424042	409.270996	845.000000
236	-333.168030	409.207001	828.000000
237	-331.914032	409.144012	835.000000
238	-330.658020	409.079987	848.000000
239	-329.404022	409.016998	843.000000
240	-328.148041	408.954010	844.000000
241	-326.894043	408.891998	851.000000
242	-325.638031	408.829010	853.000000
243	-324.384033	408.766998	853.000000
244	-323.128021	408.705994	900.000000
245	-321.873016	408.644012	853.000000
246	-320.618042	408.583008	849.000000
247	-319.363037	408.520996	845.000000
248	-318.108032	408.460999	853.000000
249	-316.853027	408.399994	841.000000
250	-334.335022	411.010986	842.000000
251	-333.080017	410.946991	810.000000
252	-331.826019	410.882996	803.000000
253	-330.571045	410.820007	825.000000
254	-329.316040	410.756989	814.000000
255	-328.061035	410.694000	807.000000
256	-326.807037	410.631989	846.000000
257	-325.552032	410.569000	852.000000
258	-324.298035	410.506989	853.000000
259	-323.043030	410.446014	853.000000
260	-321.788025	410.384003	853.000000
261	-320.533020	410.322998	853.000000
262	-319.279022	410.260986	911.000000

263 -318.024017 410.200989 853.000000  
 264 -334.246033 412.751007 847.000000  
 265 -332.992035 412.687012 792.000000  
 266 -331.738037 412.622986 792.000000  
 267 -330.483032 412.559998 803.000000  
 268 -329.229034 412.497009 794.000000  
 269 -327.975037 412.433990 796.000000  
 270 -326.720032 412.372009 828.000000  
 271 -325.466034 412.308990 851.000000  
 272 -324.212036 412.247009 853.000000  
 273 -322.957031 412.186005 853.000000  
 274 -321.703033 412.123993 853.000000  
 275 -320.448029 412.062988 914.000000  
 276 -319.194031 412.001007 924.000000  
 277 -332.904022 414.427002 809.000000  
 278 -331.650024 414.363007 792.000000  
 279 -330.396027 414.299988 792.000000  
 280 -329.142029 414.237000 792.000000  
 281 -327.888031 414.174011 792.000000  
 282 -326.634033 414.112000 841.000000  
 283 -325.380035 414.049011 853.000000  
 284 -324.126038 413.987000 853.000000  
 285 -322.871033 413.925995 869.000000  
 286 -330.308044 416.040009 796.000000  
 287 -329.055023 415.976990 829.000000  
 288 -327.801025 415.914001 853.000000  
 289 -326.547028 415.851990 860.000000

Surface Met Station UTMs (n,x,y):

Control-file POINT Sources : 2  
 EMARB-file POINT Sources : 0  
 Control-file AREA Sources : 0  
 EMARB-file AREA Sources : 0  
 Control-file LINE Sources : 0  
 EMARB-file LINE Sources : 0  
 Control-file VOLUME Sources: 0  
 EMARB-file VOLUME Sources : 0

Source Names

KILN4  
 KILN5

\*\*\*\*\* NOTICE \*\*\*\*\*  
 Gridded receptor range reset to NGX by NGY

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INPUT FILES

Default Name	Unit No.	File Name and Path
CALPOST.INP	5	visib.inp
MODEL.DAT	4	CONCPM.DAT

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OUTPUT FILES

Default Name	Unit No.	File Name and Path
CALPOST.LST	8	07ES2_POST\VISIB\VISIB.LST
(TOPN)	11	07ES2_POST\VISIB\RANK( )_SPECIES_ttHR_CONC_V.DAT
(VIS24)	11	
07ES2_POST\VISIB\DAILY_VISIB_VISIB.DAT		
(Delta-VIS)	34	Z:\MODELE~1\RH2011\GCC11\NEW_ES1\07_NEW~1.DAT

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Level 080724

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VISIB BOESNCFG

TOP-50	24	HOUR AVERAGE	EXTINCTION	VALUES						
STARTING			BEXT	BEXT						
YEAR DAY TIME RECEPTOR TYPE			BOESNCFG	BACKGND	%CHNG	DELTA DV	RH-FAC			
COORDINATES (km)										
2007 40 0100 ( 0, 264) D			18.445	16.793	9.835	0.938	0.000	-		
334.246 412.751										
2007 40 0100 ( 0, 277) D			18.383	16.793	9.468	0.905	0.000	-		
332.904 414.427										
2007 40 0100 ( 0, 250) D			18.355	16.793	9.300	0.889	0.000	-		
334.335 411.011										
2007 40 0100 ( 0, 288) D			18.354	16.793	9.294	0.889	0.000	-		
327.801 415.914										
2007 40 0100 ( 0, 287) D			18.338	16.793	9.199	0.880	0.000	-		
329.055 415.977										
2007 40 0100 ( 0, 286) D			18.319	16.793	9.085	0.870	0.000	-		
330.308 416.040										
2007 40 0100 ( 0, 289) D			18.304	16.793	8.996	0.861	0.000	-		
326.547 415.852										
2007 40 0100 ( 0, 235) D			18.276	16.793	8.831	0.846	0.000	-		
334.424 409.271										
2007 40 0100 ( 0, 251) D			18.244	16.793	8.635	0.828	0.000	-		
333.080 410.947										
2007 40 0100 ( 0, 236) D			18.211	16.793	8.443	0.811	0.000	-		
333.168 409.207										
2007 40 0100 ( 0, 267) D			18.210	16.793	8.433	0.810	0.000	-		
330.483 412.560										
2007 40 0100 ( 0, 278) D			18.196	16.793	8.350	0.802	0.000	-		
331.650 414.363										
2007 40 0100 ( 0, 253) D			18.192	16.793	8.326	0.800	0.000	-		
330.571 410.820										
2007 40 0100 ( 0, 252) D			18.189	16.793	8.311	0.798	0.000	-		

331.826	410.883								
2007	40	0100 ( 0, 282)	D	18.184	16.793	8.279	0.795	0.000	-
326.634	414.112								
2007	40	0100 ( 0, 237)	D	18.178	16.793	8.242	0.792	0.000	-
331.914	409.144								
2007	40	0100 ( 0, 265)	D	18.175	16.793	8.229	0.791	0.000	-
332.992	412.687								
2007	40	0100 ( 0, 283)	D	18.174	16.793	8.223	0.790	0.000	-
325.380	414.049								
2007	40	0100 ( 0, 238)	D	18.164	16.793	8.160	0.784	0.000	-
330.658	409.080								
2007	40	0100 ( 0, 227)	D	18.156	16.793	8.114	0.780	0.000	-
332.002	407.404								
2007	40	0100 ( 0, 279)	D	18.149	16.793	8.069	0.776	0.000	-
330.396	414.300								
2007	40	0100 ( 0, 266)	D	18.132	16.793	7.972	0.767	0.000	-
331.738	412.623								
2007	40	0100 ( 0, 284)	D	18.115	16.793	7.870	0.758	0.000	-
324.126	413.987								
2007	40	0100 ( 0, 228)	D	18.112	16.793	7.852	0.756	0.000	-
330.746	407.340								
2007	40	0100 ( 0, 254)	D	18.111	16.793	7.847	0.755	0.000	-
329.316	410.757								
2007	40	0100 ( 0, 270)	D	18.107	16.793	7.822	0.753	0.000	-
326.720	412.372								
2007	40	0100 ( 0, 269)	D	18.101	16.793	7.785	0.750	0.000	-
327.975	412.434								
2007	40	0100 ( 0, 280)	D	18.101	16.793	7.784	0.750	0.000	-
329.142	414.237								
2007	40	0100 ( 0, 239)	D	18.096	16.793	7.755	0.747	0.000	-
329.404	409.017								
2007	40	0100 ( 0, 271)	D	18.095	16.793	7.750	0.746	0.000	-
325.466	412.309								
2007	40	0100 ( 0, 218)	D	18.077	16.793	7.641	0.736	0.000	-
332.089	405.664								
2007	40	0100 ( 0, 285)	D	18.076	16.793	7.636	0.736	0.000	-
322.871	413.926								
2007	40	0100 ( 0, 256)	D	18.068	16.793	7.588	0.731	0.000	-
326.807	410.632								
2007	40	0100 ( 0, 204)	D	18.067	16.793	7.585	0.731	0.000	-
334.689	404.051								
2007	40	0100 ( 0, 272)	D	18.059	16.793	7.538	0.727	0.000	-
324.212	412.247								
2007	40	0100 ( 0, 255)	D	18.055	16.793	7.511	0.724	0.000	-
328.061	410.694								
2007	40	0100 ( 0, 257)	D	18.054	16.793	7.507	0.724	0.000	-
325.552	410.569								
2007	40	0100 ( 0, 281)	D	18.052	16.793	7.491	0.722	0.000	-
327.888	414.174								
2007	40	0100 ( 0, 240)	D	18.049	16.793	7.477	0.721	0.000	-
328.148	408.954								
2007	40	0100 ( 0, 229)	D	18.046	16.793	7.458	0.719	0.000	-
329.491	407.277								
2007	40	0100 ( 0, 268)	D	18.045	16.793	7.453	0.719	0.000	-
329.229	412.497								
2007	40	0100 ( 0, 219)	D	18.035	16.793	7.396	0.713	0.000	-
330.834	405.600								
2007	40	0100 ( 0, 205)	D	18.033	16.793	7.380	0.712	0.000	-

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333.433  403.987
2007 40 0100 ( 0, 241) D    18.022   16.793   7.313   0.706   0.000  -
326.894  408.892
2007 40 0100 ( 0, 230) D    18.021   16.793   7.309   0.705   0.000  -
328.235  407.215
2007 40 0100 ( 0, 273) D    18.003   16.793   7.202   0.695   0.000  -
322.957  412.186
2007 40 0100 ( 0, 258) D    18.002   16.793   7.195   0.695   0.000  -
324.298  410.507
2007 40 0100 ( 0, 206) D    17.996   16.793   7.162   0.692   0.000  -
332.177  403.924
2007 40 0100 ( 0, 220) D    17.994   16.793   7.147   0.690   0.000  -
329.578  405.537
2007 40 0100 ( 0, 242) D    17.992   16.793   7.137   0.689   0.000  -
325.638  408.829

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CALPOST Version 6.221

Level 080724

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VISIB BOESNCFG

4 RANKED 24 HOUR AVERAGE EXTINCTION VALUES AT EACH DISCRETE RECEPTOR  
(YEAR, DAY, START TIME) (1/Mega-m)

RECEPTOR	COORDINATES (km)		1 RANK	2 RANK
3 RANK	4 RANK			
190	-333.610	400.508	1.7870E+01 (2007,040,0100)	1.7592E+01 (2007,036,0100)
191	-332.353	400.444	1.7848E+01 (2007,040,0100)	1.7593E+01 (2007,036,0100)
192	-331.096	400.381	1.7789E+01 (2007,040,0100)	1.7585E+01 (2007,036,0100)
193	-333.521	402.248	1.7951E+01 (2007,040,0100)	1.7561E+01 (2007,036,0100)
194	-332.265	402.184	1.7917E+01 (2007,040,0100)	1.7559E+01 (2007,036,0100)
195	-331.009	402.121	1.7883E+01 (2007,040,0100)	1.7558E+01 (2007,036,0100)
196	-329.753	402.057	1.7847E+01 (2007,040,0100)	1.7556E+01 (2007,036,0100)
197	-328.496	401.995	1.7811E+01 (2007,040,0100)	1.7555E+01 (2007,036,0100)
198	-312.162	401.199	1.7523E+01 (2007,036,0100)	1.7357E+01 (2007,323,0100)
199	-310.906	401.139	1.7518E+01 (2007,036,0100)	1.7351E+01 (2007,323,0100)
200	-309.649	401.080	1.7513E+01 (2007,036,0100)	1.7346E+01 (2007,323,0100)
201	-308.393	401.021	1.7508E+01 (2007,036,0100)	1.7342E+01 (2007,323,0100)
202	-307.136	400.962	1.7502E+01 (2007,036,0100)	1.7334E+01 (2007,323,0100)
203	-305.880	400.904	1.7489E+01 (2007,036,0100)	1.7319E+01 (2007,323,0100)



(2007,046,0100) 1.7241E+01 (2007,362,0100) 1.7216E+01 (2007,323,0100)  
204 -334.689 404.051 1.8067E+01 (2007,040,0100) 1.7532E+01  
(2007,036,0100) 1.7451E+01 (2007,046,0100) 1.7328E+01 (2007,361,0100)  
205 -333.433 403.987 1.8033E+01 (2007,040,0100) 1.7531E+01  
(2007,036,0100) 1.7450E+01 (2007,046,0100) 1.7321E+01 (2007,361,0100)  
206 -332.177 403.924 1.7996E+01 (2007,040,0100) 1.7530E+01  
(2007,036,0100) 1.7448E+01 (2007,046,0100) 1.7314E+01 (2007,361,0100)  
207 -330.921 403.860 1.7959E+01 (2007,040,0100) 1.7530E+01  
(2007,036,0100) 1.7448E+01 (2007,046,0100) 1.7308E+01 (2007,361,0100)  
208 -329.665 403.797 1.7926E+01 (2007,040,0100) 1.7532E+01  
(2007,036,0100) 1.7457E+01 (2007,046,0100) 1.7301E+01 (2007,361,0100)  
209 -328.409 403.734 1.7928E+01 (2007,040,0100) 1.7547E+01  
(2007,036,0100) 1.7529E+01 (2007,046,0100) 1.7328E+01 (2007,019,0100)  
210 -327.153 403.672 1.7840E+01 (2007,040,0100) 1.7532E+01  
(2007,036,0100) 1.7442E+01 (2007,046,0100) 1.7289E+01 (2007,361,0100)  
211 -325.897 403.609 1.7781E+01 (2007,040,0100) 1.7532E+01  
(2007,036,0100) 1.7433E+01 (2007,046,0100) 1.7283E+01 (2007,361,0100)  
212 -324.641 403.547 1.7760E+01 (2007,040,0100) 1.7534E+01  
(2007,036,0100) 1.7436E+01 (2007,046,0100) 1.7278E+01 (2007,361,0100)  
213 -313.336 402.999 1.7514E+01 (2007,036,0100) 1.7362E+01  
(2007,046,0100) 1.7326E+01 (2007,040,0100) 1.7255E+01 (2007,362,0100)  
214 -312.080 402.939 1.7510E+01 (2007,036,0100) 1.7357E+01  
(2007,046,0100) 1.7298E+01 (2007,040,0100) 1.7263E+01 (2007,362,0100)  
215 -310.824 402.879 1.7506E+01 (2007,036,0100) 1.7352E+01  
(2007,046,0100) 1.7272E+01 (2007,040,0100) 1.7270E+01 (2007,362,0100)  
216 -309.567 402.820 1.7501E+01 (2007,036,0100) 1.7346E+01  
(2007,046,0100) 1.7277E+01 (2007,362,0100) 1.7246E+01 (2007,040,0100)  
217 -307.055 402.702 1.7490E+01 (2007,036,0100) 1.7335E+01  
(2007,046,0100) 1.7291E+01 (2007,362,0100) 1.7228E+01 (2007,326,0100)  
218 -332.089 405.664 1.8077E+01 (2007,040,0100) 1.7504E+01  
(2007,036,0100) 1.7443E+01 (2007,046,0100) 1.7317E+01 (2007,326,0100)  
219 -330.834 405.600 1.8035E+01 (2007,040,0100) 1.7506E+01  
(2007,036,0100) 1.7441E+01 (2007,046,0100) 1.7316E+01 (2007,326,0100)  
220 -329.578 405.537 1.7994E+01 (2007,040,0100) 1.7508E+01  
(2007,036,0100) 1.7438E+01 (2007,046,0100) 1.7314E+01 (2007,326,0100)  
221 -328.322 405.474 1.7951E+01 (2007,040,0100) 1.7509E+01  
(2007,036,0100) 1.7435E+01 (2007,046,0100) 1.7312E+01 (2007,326,0100)  
222 -327.067 405.412 1.7963E+01 (2007,040,0100) 1.7527E+01  
(2007,036,0100) 1.7514E+01 (2007,046,0100) 1.7346E+01 (2007,362,0100)  
223 -325.811 405.349 1.7864E+01 (2007,040,0100) 1.7514E+01  
(2007,036,0100) 1.7430E+01 (2007,046,0100) 1.7307E+01 (2007,326,0100)  
224 -324.555 405.287 1.7820E+01 (2007,040,0100) 1.7516E+01  
(2007,036,0100) 1.7427E+01 (2007,046,0100) 1.7304E+01 (2007,326,0100)  
225 -314.509 404.799 1.7509E+01 (2007,036,0100) 1.7448E+01  
(2007,040,0100) 1.7374E+01 (2007,046,0100) 1.7307E+01 (2007,362,0100)  
226 -313.253 404.739 1.7511E+01 (2007,036,0100) 1.7430E+01  
(2007,040,0100) 1.7381E+01 (2007,046,0100) 1.7336E+01 (2007,362,0100)  
227 -332.002 407.404 1.8156E+01 (2007,040,0100) 1.7480E+01  
(2007,036,0100) 1.7435E+01 (2007,046,0100) 1.7352E+01 (2007,326,0100)  
228 -330.746 407.340 1.8112E+01 (2007,040,0100) 1.7483E+01  
(2007,036,0100) 1.7432E+01 (2007,046,0100) 1.7349E+01 (2007,326,0100)  
229 -329.491 407.277 1.8046E+01 (2007,040,0100) 1.7487E+01  
(2007,036,0100) 1.7428E+01 (2007,046,0100) 1.7346E+01 (2007,326,0100)  
230 -328.235 407.215 1.8021E+01 (2007,040,0100) 1.7490E+01  
(2007,036,0100) 1.7426E+01 (2007,046,0100) 1.7344E+01 (2007,326,0100)  
231 -326.980 407.152 1.7975E+01 (2007,040,0100) 1.7494E+01  
(2007,036,0100) 1.7424E+01 (2007,046,0100) 1.7340E+01 (2007,326,0100)  
232 -325.725 407.090 1.7928E+01 (2007,040,0100) 1.7498E+01

(2007,036,0100) 1.7422E+01 (2007,046,0100) 1.7336E+01 (2007,326,0100)  
233 -324.469 407.027 1.7881E+01 (2007,040,0100) 1.7501E+01  
(2007,036,0100) 1.7420E+01 (2007,046,0100) 1.7336E+01 (2007,362,0100)  
234 -315.681 406.599 1.7526E+01 (2007,040,0100) 1.7501E+01  
(2007,036,0100) 1.7381E+01 (2007,046,0100) 1.7360E+01 (2007,362,0100)  
235 -334.424 409.271 1.8276E+01 (2007,040,0100) 1.7449E+01  
(2007,036,0100) 1.7428E+01 (2007,046,0100) 1.7390E+01 (2007,326,0100)  
236 -333.168 409.207 1.8211E+01 (2007,040,0100) 1.7451E+01  
(2007,036,0100) 1.7406E+01 (2007,046,0100) 1.7387E+01 (2007,326,0100)  
237 -331.914 409.144 1.8178E+01 (2007,040,0100) 1.7457E+01  
(2007,036,0100) 1.7410E+01 (2007,046,0100) 1.7383E+01 (2007,326,0100)  
238 -330.658 409.080 1.8164E+01 (2007,040,0100) 1.7464E+01  
(2007,036,0100) 1.7421E+01 (2007,046,0100) 1.7380E+01 (2007,326,0100)  
239 -329.404 409.017 1.8096E+01 (2007,040,0100) 1.7468E+01  
(2007,036,0100) 1.7413E+01 (2007,046,0100) 1.7376E+01 (2007,326,0100)  
240 -328.148 408.954 1.8049E+01 (2007,040,0100) 1.7473E+01  
(2007,036,0100) 1.7411E+01 (2007,046,0100) 1.7372E+01 (2007,326,0100)  
241 -326.894 408.892 1.8022E+01 (2007,040,0100) 1.7479E+01  
(2007,036,0100) 1.7416E+01 (2007,046,0100) 1.7368E+01 (2007,326,0100)  
242 -325.638 408.829 1.7992E+01 (2007,040,0100) 1.7484E+01  
(2007,036,0100) 1.7417E+01 (2007,046,0100) 1.7380E+01 (2007,362,0100)  
243 -324.384 408.767 1.7942E+01 (2007,040,0100) 1.7487E+01  
(2007,036,0100) 1.7416E+01 (2007,046,0100) 1.7391E+01 (2007,362,0100)  
244 -323.128 408.706 1.7936E+01 (2007,040,0100) 1.7502E+01  
(2007,036,0100) 1.7487E+01 (2007,362,0100) 1.7460E+01 (2007,046,0100)  
245 -321.873 408.644 1.7843E+01 (2007,040,0100) 1.7494E+01  
(2007,036,0100) 1.7413E+01 (2007,046,0100) 1.7410E+01 (2007,362,0100)  
246 -320.618 408.583 1.7776E+01 (2007,040,0100) 1.7495E+01  
(2007,036,0100) 1.7414E+01 (2007,362,0100) 1.7406E+01 (2007,046,0100)  
247 -319.363 408.521 1.7716E+01 (2007,040,0100) 1.7496E+01  
(2007,036,0100) 1.7417E+01 (2007,362,0100) 1.7400E+01 (2007,046,0100)  
248 -318.108 408.461 1.7700E+01 (2007,040,0100) 1.7498E+01  
(2007,036,0100) 1.7437E+01 (2007,362,0100) 1.7402E+01 (2007,046,0100)  
249 -316.853 408.400 1.7625E+01 (2007,040,0100) 1.7495E+01  
(2007,036,0100) 1.7425E+01 (2007,362,0100) 1.7389E+01 (2007,046,0100)  
250 -334.335 411.011 1.8355E+01 (2007,040,0100) 1.7429E+01  
(2007,036,0100) 1.7421E+01 (2007,046,0100) 1.7420E+01 (2007,326,0100)  
251 -333.080 410.947 1.8244E+01 (2007,040,0100) 1.7430E+01  
(2007,036,0100) 1.7416E+01 (2007,326,0100) 1.7389E+01 (2007,046,0100)  
252 -331.826 410.883 1.8189E+01 (2007,040,0100) 1.7435E+01  
(2007,036,0100) 1.7411E+01 (2007,326,0100) 1.7380E+01 (2007,046,0100)  
253 -330.571 410.820 1.8192E+01 (2007,040,0100) 1.7445E+01  
(2007,036,0100) 1.7406E+01 (2007,326,0100) 1.7396E+01 (2007,046,0100)  
254 -329.316 410.757 1.8111E+01 (2007,040,0100) 1.7449E+01  
(2007,036,0100) 1.7401E+01 (2007,326,0100) 1.7385E+01 (2007,046,0100)  
255 -328.061 410.694 1.8055E+01 (2007,040,0100) 1.7454E+01  
(2007,036,0100) 1.7396E+01 (2007,326,0100) 1.7379E+01 (2007,046,0100)  
256 -326.807 410.632 1.8068E+01 (2007,040,0100) 1.7465E+01  
(2007,036,0100) 1.7413E+01 (2007,362,0100) 1.7408E+01 (2007,046,0100)  
257 -325.552 410.569 1.8054E+01 (2007,040,0100) 1.7471E+01  
(2007,036,0100) 1.7432E+01 (2007,362,0100) 1.7412E+01 (2007,046,0100)  
258 -324.298 410.507 1.8002E+01 (2007,040,0100) 1.7476E+01  
(2007,036,0100) 1.7445E+01 (2007,362,0100) 1.7411E+01 (2007,046,0100)  
259 -323.043 410.446 1.7949E+01 (2007,040,0100) 1.7480E+01  
(2007,036,0100) 1.7454E+01 (2007,362,0100) 1.7408E+01 (2007,046,0100)  
260 -321.788 410.384 1.7896E+01 (2007,040,0100) 1.7483E+01  
(2007,036,0100) 1.7464E+01 (2007,362,0100) 1.7404E+01 (2007,046,0100)  
261 -320.533 410.323 1.7845E+01 (2007,040,0100) 1.7485E+01

(2007,036,0100) 1.7473E+01 (2007,362,0100) 1.7401E+01 (2007,046,0100)  
262 -319.279 410.261 1.7843E+01 (2007,040,0100) 1.7595E+01  
(2007,362,0100) 1.7500E+01 (2007,036,0100) 1.7441E+01 (2007,046,0100)  
263 -318.024 410.201 1.7745E+01 (2007,040,0100) 1.7487E+01  
(2007,036,0100) 1.7487E+01 (2007,362,0100) 1.7392E+01 (2007,046,0100)  
264 -334.246 412.751 1.8445E+01 (2007,040,0100) 1.7444E+01  
(2007,326,0100) 1.7424E+01 (2007,046,0100) 1.7413E+01 (2007,036,0100)  
265 -332.992 412.687 1.8175E+01 (2007,040,0100) 1.7438E+01  
(2007,326,0100) 1.7413E+01 (2007,036,0100) 1.7378E+01 (2007,046,0100)  
266 -331.738 412.623 1.8132E+01 (2007,040,0100) 1.7433E+01  
(2007,326,0100) 1.7420E+01 (2007,036,0100) 1.7375E+01 (2007,046,0100)  
267 -330.483 412.560 1.8210E+01 (2007,040,0100) 1.7429E+01  
(2007,036,0100) 1.7427E+01 (2007,326,0100) 1.7380E+01 (2007,046,0100)  
268 -329.229 412.497 1.8045E+01 (2007,040,0100) 1.7435E+01  
(2007,036,0100) 1.7421E+01 (2007,326,0100) 1.7374E+01 (2007,046,0100)  
269 -327.975 412.434 1.8101E+01 (2007,040,0100) 1.7441E+01  
(2007,036,0100) 1.7414E+01 (2007,326,0100) 1.7374E+01 (2007,046,0100)  
270 -326.720 412.372 1.8107E+01 (2007,040,0100) 1.7452E+01  
(2007,036,0100) 1.7428E+01 (2007,362,0100) 1.7407E+01 (2007,326,0100)  
271 -325.466 412.309 1.8095E+01 (2007,040,0100) 1.7482E+01  
(2007,362,0100) 1.7461E+01 (2007,036,0100) 1.7406E+01 (2007,046,0100)  
272 -324.212 412.247 1.8059E+01 (2007,040,0100) 1.7495E+01  
(2007,362,0100) 1.7466E+01 (2007,036,0100) 1.7404E+01 (2007,046,0100)  
273 -322.957 412.186 1.8003E+01 (2007,040,0100) 1.7503E+01  
(2007,362,0100) 1.7470E+01 (2007,036,0100) 1.7400E+01 (2007,046,0100)  
274 -321.703 412.124 1.7948E+01 (2007,040,0100) 1.7514E+01  
(2007,362,0100) 1.7473E+01 (2007,036,0100) 1.7396E+01 (2007,046,0100)  
275 -320.448 412.063 1.7956E+01 (2007,040,0100) 1.7651E+01  
(2007,362,0100) 1.7489E+01 (2007,036,0100) 1.7434E+01 (2007,046,0100)  
276 -319.194 412.001 1.7908E+01 (2007,040,0100) 1.7677E+01  
(2007,362,0100) 1.7493E+01 (2007,036,0100) 1.7435E+01 (2007,046,0100)  
277 -332.904 414.427 1.8383E+01 (2007,040,0100) 1.7455E+01  
(2007,326,0100) 1.7403E+01 (2007,036,0100) 1.7392E+01 (2007,046,0100)  
278 -331.650 414.363 1.8196E+01 (2007,040,0100) 1.7448E+01  
(2007,326,0100) 1.7409E+01 (2007,036,0100) 1.7380E+01 (2007,046,0100)  
279 -330.396 414.300 1.8149E+01 (2007,040,0100) 1.7440E+01  
(2007,326,0100) 1.7417E+01 (2007,036,0100) 1.7378E+01 (2007,046,0100)  
280 -329.142 414.237 1.8101E+01 (2007,040,0100) 1.7433E+01  
(2007,326,0100) 1.7425E+01 (2007,036,0100) 1.7386E+01 (2007,362,0100)  
281 -327.888 414.174 1.8052E+01 (2007,040,0100) 1.7432E+01  
(2007,036,0100) 1.7425E+01 (2007,326,0100) 1.7395E+01 (2007,362,0100)  
282 -326.634 414.112 1.8184E+01 (2007,040,0100) 1.7497E+01  
(2007,362,0100) 1.7445E+01 (2007,036,0100) 1.7418E+01 (2007,326,0100)  
283 -325.380 414.049 1.8174E+01 (2007,040,0100) 1.7531E+01  
(2007,362,0100) 1.7452E+01 (2007,036,0100) 1.7410E+01 (2007,326,0100)  
284 -324.126 413.987 1.8115E+01 (2007,040,0100) 1.7538E+01  
(2007,362,0100) 1.7457E+01 (2007,036,0100) 1.7401E+01 (2007,326,0100)  
285 -322.871 413.926 1.8076E+01 (2007,040,0100) 1.7582E+01  
(2007,362,0100) 1.7464E+01 (2007,036,0100) 1.7401E+01 (2007,046,0100)  
286 -330.308 416.040 1.8319E+01 (2007,040,0100) 1.7446E+01  
(2007,326,0100) 1.7423E+01 (2007,362,0100) 1.7410E+01 (2007,036,0100)  
287 -329.055 415.977 1.8338E+01 (2007,040,0100) 1.7494E+01  
(2007,362,0100) 1.7439E+01 (2007,326,0100) 1.7422E+01 (2007,036,0100)  
288 -327.801 415.914 1.8354E+01 (2007,040,0100) 1.7552E+01  
(2007,362,0100) 1.7433E+01 (2007,036,0100) 1.7431E+01 (2007,326,0100)  
289 -326.547 415.852 1.8304E+01 (2007,040,0100) 1.7576E+01  
(2007,362,0100) 1.7440E+01 (2007,036,0100) 1.7422E+01 (2007,326,0100)

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CALPOST Version 6.221

Level 080724

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24HR VISIBILITY

VISIB BOESNCFG

(1/Mega-m)

START TIME

Modeled Extinction by Species

Small Large SSalt

YEAR	DAY	HR	RECEPTOR	COORDINATES (km)			TYPE	BEXT(Model)	BEXT(BKG)	F(RH)	
			%CHANGE	bxSO4	bxNO3	bxOC	bxEC	bxPMC	bxPMF	bxNO2	F(RH)
2007	1	1	204	-334.689	404.051	D	0.318	16.784	17.102		
1.89	0.077	0.216	0.012	0.002	0.002	0.006	0.002	2.940	2.310	3.370	
2007	2	1	276	-319.194	412.001	D	0.172	16.784	16.957		
1.03	0.050	0.098	0.009	0.002	0.002	0.005	0.006	2.940	2.310	3.370	
2007	3	1	190	-333.610	400.508	D	0.266	16.784	17.050		
1.58	0.096	0.120	0.018	0.004	0.004	0.010	0.013	2.940	2.310	3.370	
2007	4	1	209	-328.409	403.734	D	0.188	16.784	16.972		
1.12	0.077	0.065	0.015	0.003	0.004	0.008	0.015	2.940	2.310	3.370	
2007	5	1	276	-319.194	412.001	D	0.164	16.784	16.948		
0.97	0.072	0.047	0.014	0.003	0.004	0.008	0.015	2.940	2.310	3.370	
2007	6	1	287	-329.055	415.977	D	0.135	16.784	16.919		
0.81	0.050	0.061	0.009	0.002	0.002	0.005	0.006	2.940	2.310	3.370	
2007	7	1	204	-334.689	404.051	D	0.104	16.784	16.888		
0.62	0.046	0.032	0.009	0.002	0.002	0.005	0.009	2.940	2.310	3.370	
2007	8	1	190	-333.610	400.508	D	0.001	16.784	16.786		
0.01	0.001	0.000	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370	
2007	9	1	190	-333.610	400.508	D	0.045	16.784	16.829		
0.27	0.017	0.017	0.003	0.001	0.001	0.002	0.003	2.940	2.310	3.370	
2007	10	1	289	-326.547	415.852	D	0.127	16.784	16.911		
0.76	0.064	0.025	0.013	0.003	0.003	0.007	0.012	2.940	2.310	3.370	
2007	11	1	190	-333.610	400.508	D	0.000	16.784	16.784		
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370	
2007	12	1	264	-334.246	412.751	D	0.005	16.784	16.789		
0.03	0.001	0.003	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370	
2007	13	1	264	-334.246	412.751	D	0.173	16.784	16.957		
1.03	0.052	0.109	0.006	0.001	0.001	0.003	0.000	2.940	2.310	3.370	
2007	14	1	203	-305.880	400.904	D	0.155	16.784	16.939		
0.92	0.038	0.109	0.004	0.001	0.001	0.002	0.000	2.940	2.310	3.370	
2007	15	1	191	-332.353	400.444	D	0.093	16.784	16.877		
0.56	0.036	0.036	0.007	0.001	0.002	0.004	0.007	2.940	2.310	3.370	
2007	16	1	276	-319.194	412.001	D	0.128	16.784	16.912		
0.76	0.047	0.053	0.009	0.002	0.003	0.005	0.009	2.940	2.310	3.370	
2007	17	1	204	-334.689	404.051	D	0.056	16.784	16.840		
0.33	0.018	0.030	0.003	0.001	0.001	0.002	0.001	2.940	2.310	3.370	
2007	18	1	191	-332.353	400.444	D	0.252	16.784	17.036		
1.50	0.106	0.081	0.021	0.004	0.006	0.012	0.022	2.940	2.310	3.370	

2007	19	1	209	-328.409	403.734	D	0.544	16.784	17.328	
3.24	0.208	0.222	0.040	0.008	0.011	0.022	0.033	2.940	2.310	3.370
2007	20	1	287	-329.055	415.977	D	0.466	16.784	17.250	
2.78	0.124	0.293	0.020	0.004	0.005	0.011	0.008	2.940	2.310	3.370
2007	21	1	190	-333.610	400.508	D	0.008	16.784	16.793	
0.05	0.003	0.004	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370
2007	22	1	209	-328.409	403.734	D	0.407	16.784	17.191	
2.42	0.169	0.139	0.032	0.007	0.009	0.018	0.032	2.940	2.310	3.370
2007	23	1	191	-332.353	400.444	D	0.000	16.784	16.784	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370
2007	24	1	190	-333.610	400.508	D	0.018	16.784	16.802	
0.10	0.007	0.007	0.001	0.000	0.000	0.001	0.001	2.940	2.310	3.370
2007	25	1	191	-332.353	400.444	D	0.326	16.784	17.110	
1.94	0.115	0.146	0.021	0.005	0.006	0.012	0.021	2.940	2.310	3.370
2007	26	1	190	-333.610	400.508	D	0.000	16.784	16.784	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370
2007	27	1	190	-333.610	400.508	D	0.008	16.784	16.792	
0.05	0.003	0.003	0.001	0.000	0.000	0.000	0.001	2.940	2.310	3.370
2007	28	1	276	-319.194	412.001	D	0.309	16.784	17.093	
1.84	0.104	0.146	0.020	0.004	0.006	0.011	0.019	2.940	2.310	3.370
2007	29	1	190	-333.610	400.508	D	0.000	16.784	16.784	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.940	2.310	3.370
2007	30	1	190	-333.610	400.508	D	0.156	16.784	16.940	
0.93	0.060	0.064	0.011	0.002	0.003	0.006	0.010	2.940	2.310	3.370
2007	31	1	190	-333.610	400.508	D	0.017	16.784	16.801	
0.10	0.007	0.006	0.001	0.000	0.000	0.001	0.001	2.940	2.310	3.370
2007	32	1	190	-333.610	400.508	D	0.064	16.793	16.858	
0.38	0.028	0.019	0.005	0.001	0.002	0.003	0.006	2.960	2.310	3.330
2007	33	1	276	-319.194	412.001	D	0.132	16.793	16.926	
0.79	0.057	0.040	0.011	0.002	0.003	0.006	0.012	2.960	2.310	3.330
2007	34	1	190	-333.610	400.508	D	0.001	16.793	16.795	
0.01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.960	2.310	3.330
2007	35	1	222	-327.067	405.412	D	0.299	16.793	17.093	
1.78	0.095	0.154	0.018	0.004	0.005	0.010	0.014	2.960	2.310	3.330
2007	36	1	191	-332.353	400.444	D	0.800	16.793	17.593	
4.76	0.253	0.438	0.044	0.009	0.011	0.024	0.020	2.960	2.310	3.330
2007	37	1	203	-305.880	400.904	D	0.036	16.793	16.830	
0.22	0.008	0.025	0.001	0.000	0.000	0.001	0.000	2.960	2.310	3.330
2007	38	1	235	-334.424	409.271	D	0.000	16.793	16.794	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.960	2.310	3.330
2007	39	1	204	-334.689	404.051	D	0.029	16.793	16.822	
0.17	0.009	0.016	0.001	0.000	0.000	0.001	0.001	2.960	2.310	3.330
2007	40	1	264	-334.246	412.751	D	1.652	16.793	18.445	
9.83	0.439	1.075	0.057	0.012	0.014	0.031	0.025	2.960	2.310	3.330
2007	41	1	285	-322.871	413.926	D	0.020	16.793	16.813	
0.12	0.006	0.011	0.001	0.000	0.000	0.001	0.001	2.960	2.310	3.330
2007	42	1	287	-329.055	415.977	D	0.072	16.793	16.866	
0.43	0.020	0.047	0.002	0.000	0.001	0.001	0.001	2.960	2.310	3.330
2007	43	1	264	-334.246	412.751	D	0.000	16.793	16.794	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.960	2.310	3.330
2007	44	1	235	-334.424	409.271	D	0.046	16.793	16.840	
0.28	0.013	0.030	0.001	0.000	0.000	0.001	0.000	2.960	2.310	3.330
2007	45	1	204	-334.689	404.051	D	0.098	16.793	16.892	
0.58	0.034	0.059	0.003	0.001	0.000	0.001	0.000	2.960	2.310	3.330
2007	46	1	209	-328.409	403.734	D	0.736	16.793	17.529	
4.38	0.221	0.434	0.030	0.006	0.008	0.017	0.019	2.960	2.310	3.330
2007	47	1	191	-332.353	400.444	D	0.156	16.793	16.950	
0.93	0.064	0.054	0.012	0.003	0.004	0.007	0.013	2.960	2.310	3.330

2007	48	1	276	-319.194	412.001	D	0.171	16.793	16.964
1.02	0.063	0.072	0.012	0.003	0.003	0.007	0.012	2.960	2.310 3.330
2007	49	1	264	-334.246	412.751	D	0.185	16.793	16.978
1.10	0.085	0.047	0.017	0.004	0.005	0.009	0.018	2.960	2.310 3.330
2007	50	1	264	-334.246	412.751	D	0.198	16.793	16.991
1.18	0.065	0.096	0.012	0.003	0.004	0.007	0.011	2.960	2.310 3.330
2007	51	1	276	-319.194	412.001	D	0.115	16.793	16.908
0.68	0.038	0.058	0.007	0.001	0.002	0.004	0.004	2.960	2.310 3.330
2007	52	1	289	-326.547	415.852	D	0.118	16.793	16.911
0.70	0.058	0.024	0.011	0.002	0.003	0.006	0.012	2.960	2.310 3.330
2007	53	1	235	-334.424	409.271	D	0.002	16.793	16.795
0.01	0.000	0.001	0.000	0.000	0.000	0.000	0.000	2.960	2.310 3.330
2007	54	1	204	-334.689	404.051	D	0.005	16.793	16.798
0.03	0.002	0.002	0.000	0.000	0.000	0.000	0.000	2.960	2.310 3.330
2007	55	1	190	-333.610	400.508	D	0.000	16.793	16.793
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.960	2.310 3.330
2007	56	1	190	-333.610	400.508	D	0.000	16.793	16.793
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.960	2.310 3.330
2007	57	1	204	-334.689	404.051	D	0.115	16.793	16.908
0.68	0.032	0.075	0.004	0.001	0.001	0.002	0.000	2.960	2.310 3.330
2007	58	1	286	-330.308	416.040	D	0.031	16.793	16.825
0.19	0.009	0.021	0.001	0.000	0.000	0.001	0.000	2.960	2.310 3.330
2007	59	1	276	-319.194	412.001	D	0.202	16.793	16.995
1.20	0.055	0.119	0.010	0.002	0.003	0.005	0.008	2.960	2.310 3.330
2007	60	1	190	-333.610	400.508	D	0.000	16.818	16.818
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.010	2.310 3.270
2007	61	1	190	-333.610	400.508	D	0.000	16.818	16.818
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.010	2.310 3.270
2007	62	1	190	-333.610	400.508	D	0.024	16.818	16.842
0.14	0.006	0.015	0.001	0.000	0.000	0.001	0.001	3.010	2.310 3.270
2007	63	1	190	-333.610	400.508	D	0.116	16.818	16.933
0.69	0.043	0.052	0.008	0.002	0.002	0.004	0.005	3.010	2.310 3.270
2007	64	1	190	-333.610	400.508	D	0.065	16.818	16.882
0.39	0.016	0.042	0.003	0.001	0.001	0.001	0.002	3.010	2.310 3.270
2007	65	1	190	-333.610	400.508	D	0.228	16.818	17.045
1.35	0.066	0.131	0.011	0.002	0.003	0.006	0.008	3.010	2.310 3.270
2007	66	1	190	-333.610	400.508	D	0.532	16.818	17.349
3.16	0.153	0.315	0.023	0.005	0.006	0.013	0.016	3.010	2.310 3.270
2007	67	1	289	-326.547	415.852	D	0.220	16.818	17.038
1.31	0.095	0.076	0.017	0.004	0.005	0.010	0.013	3.010	2.310 3.270
2007	68	1	264	-334.246	412.751	D	0.196	16.818	17.014
1.17	0.076	0.089	0.012	0.003	0.003	0.007	0.007	3.010	2.310 3.270
2007	69	1	264	-334.246	412.751	D	0.012	16.818	16.830
0.07	0.003	0.008	0.001	0.000	0.000	0.000	0.000	3.010	2.310 3.270
2007	70	1	222	-327.067	405.412	D	0.228	16.818	17.046
1.36	0.099	0.073	0.018	0.004	0.005	0.010	0.018	3.010	2.310 3.270
2007	71	1	276	-319.194	412.001	D	0.128	16.818	16.945
0.76	0.061	0.033	0.011	0.002	0.003	0.006	0.011	3.010	2.310 3.270
2007	72	1	264	-334.246	412.751	D	0.012	16.818	16.830
0.07	0.006	0.005	0.001	0.000	0.000	0.000	0.000	3.010	2.310 3.270
2007	73	1	286	-330.308	416.040	D	0.027	16.818	16.844
0.16	0.010	0.015	0.001	0.000	0.000	0.000	0.000	3.010	2.310 3.270
2007	74	1	190	-333.610	400.508	D	0.008	16.818	16.825
0.05	0.002	0.005	0.000	0.000	0.000	0.000	0.000	3.010	2.310 3.270
2007	75	1	204	-334.689	404.051	D	0.176	16.818	16.993
1.05	0.058	0.102	0.007	0.002	0.002	0.004	0.001	3.010	2.310 3.270
2007	76	1	264	-334.246	412.751	D	0.422	16.818	17.240
2.51	0.149	0.227	0.021	0.004	0.005	0.011	0.005	3.010	2.310 3.270

2007	77	1	204	-334.689	404.051	D	0.009	16.818	16.826
0.05	0.005	0.001	0.001	0.000	0.000	0.000	3.010	2.310	3.270
2007	78	1	190	-333.610	400.508	D	0.000	16.818	16.818
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.010	2.310	3.270
2007	79	1	264	-334.246	412.751	D	0.015	16.818	16.833
0.09	0.008	0.002	0.002	0.000	0.000	0.001	3.010	2.310	3.270
2007	80	1	191	-332.353	400.444	D	0.012	16.818	16.829
0.07	0.006	0.002	0.001	0.000	0.000	0.001	3.010	2.310	3.270
2007	81	1	264	-334.246	412.751	D	0.044	16.818	16.861
0.26	0.013	0.026	0.002	0.000	0.000	0.001	3.010	2.310	3.270
2007	82	1	285	-322.871	413.926	D	0.008	16.818	16.826
0.05	0.005	0.002	0.001	0.000	0.000	0.000	3.010	2.310	3.270
2007	83	1	204	-334.689	404.051	D	0.006	16.818	16.823
0.03	0.002	0.003	0.000	0.000	0.000	0.000	3.010	2.310	3.270
2007	84	1	264	-334.246	412.751	D	0.178	16.818	16.996
1.06	0.104	0.036	0.015	0.003	0.004	0.009	3.010	2.310	3.270
2007	85	1	195	-331.009	402.121	D	0.037	16.818	16.854
0.22	0.021	0.004	0.004	0.001	0.001	0.002	3.010	2.310	3.270
2007	86	1	190	-333.610	400.508	D	0.000	16.818	16.818
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.010	2.310	3.270
2007	87	1	190	-333.610	400.508	D	0.000	16.818	16.818
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.010	2.310	3.270
2007	88	1	190	-333.610	400.508	D	0.000	16.818	16.818
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.010	2.310	3.270
2007	89	1	190	-333.610	400.508	D	0.126	16.818	16.944
0.75	0.042	0.074	0.005	0.001	0.001	0.002	3.010	2.310	3.270
2007	90	1	264	-334.246	412.751	D	0.095	16.818	16.912
0.56	0.030	0.059	0.003	0.001	0.001	0.001	3.010	2.310	3.270
2007	91	1	203	-305.880	400.904	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	92	1	203	-305.880	400.904	D	0.001	16.743	16.744
0.01	0.000	0.001	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	93	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	94	1	264	-334.246	412.751	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	95	1	264	-334.246	412.751	D	0.303	16.743	17.046
1.81	0.101	0.168	0.014	0.003	0.004	0.008	2.870	2.210	3.050
2007	96	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	97	1	190	-333.610	400.508	D	0.001	16.743	16.744
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	98	1	264	-334.246	412.751	D	0.006	16.743	16.749
0.04	0.002	0.004	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	99	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	100	1	190	-333.610	400.508	D	0.003	16.743	16.746
0.02	0.001	0.001	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	101	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	102	1	264	-334.246	412.751	D	0.062	16.743	16.805
0.37	0.018	0.039	0.002	0.000	0.001	0.001	2.870	2.210	3.050
2007	103	1	204	-334.689	404.051	D	0.151	16.743	16.894
0.90	0.052	0.082	0.007	0.001	0.002	0.004	2.870	2.210	3.050
2007	104	1	190	-333.610	400.508	D	0.170	16.743	16.913
1.01	0.065	0.089	0.007	0.002	0.002	0.004	2.870	2.210	3.050
2007	105	1	203	-305.880	400.904	D	0.032	16.743	16.775
0.19	0.016	0.012	0.002	0.000	0.000	0.001	2.870	2.210	3.050

2007	106	1	203	-305.880	400.904	D	0.005	16.743	16.748
0.03	0.002	0.002	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	107	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	108	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	109	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	110	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	111	1	190	-333.610	400.508	D	0.001	16.743	16.744
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	112	1	264	-334.246	412.751	D	0.001	16.743	16.744
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	113	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	114	1	190	-333.610	400.508	D	0.000	16.743	16.743
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	115	1	264	-334.246	412.751	D	0.003	16.743	16.746
0.02	0.001	0.001	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	116	1	264	-334.246	412.751	D	0.020	16.743	16.763
0.12	0.012	0.004	0.002	0.000	0.000	0.001	2.870	2.210	3.050
2007	117	1	190	-333.610	400.508	D	0.082	16.743	16.825
0.49	0.041	0.020	0.007	0.002	0.002	0.004	2.870	2.210	3.050
2007	118	1	264	-334.246	412.751	D	0.339	16.743	17.082
2.03	0.166	0.096	0.030	0.006	0.009	0.017	2.870	2.210	3.050
2007	119	1	276	-319.194	412.001	D	0.045	16.743	16.788
0.27	0.020	0.014	0.004	0.001	0.001	0.002	2.870	2.210	3.050
2007	120	1	204	-334.689	404.051	D	0.003	16.743	16.746
0.02	0.002	0.000	0.000	0.000	0.000	0.000	2.870	2.210	3.050
2007	121	1	203	-305.880	400.904	D	0.000	16.862	16.863
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	122	1	190	-333.610	400.508	D	0.000	16.862	16.862
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	123	1	190	-333.610	400.508	D	0.000	16.862	16.862
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	124	1	190	-333.610	400.508	D	0.019	16.862	16.881
0.11	0.007	0.008	0.001	0.000	0.000	0.001	3.100	2.340	3.250
2007	125	1	190	-333.610	400.508	D	0.003	16.862	16.865
0.02	0.001	0.002	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	126	1	190	-333.610	400.508	D	0.122	16.862	16.984
0.72	0.025	0.087	0.002	0.000	0.000	0.001	3.100	2.340	3.250
2007	127	1	190	-333.610	400.508	D	0.000	16.862	16.863
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	128	1	190	-333.610	400.508	D	0.265	16.862	17.127
1.57	0.132	0.075	0.021	0.005	0.006	0.012	3.100	2.340	3.250
2007	129	1	289	-326.547	415.852	D	0.002	16.862	16.865
0.01	0.001	0.001	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	130	1	190	-333.610	400.508	D	0.011	16.862	16.873
0.06	0.007	0.003	0.001	0.000	0.000	0.000	3.100	2.340	3.250
2007	131	1	286	-330.308	416.040	D	0.001	16.862	16.863
0.01	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	132	1	190	-333.610	400.508	D	0.000	16.862	16.862
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	133	1	235	-334.424	409.271	D	0.047	16.862	16.910
0.28	0.037	0.001	0.004	0.001	0.001	0.002	3.100	2.340	3.250
2007	134	1	202	-307.136	400.962	D	0.000	16.862	16.862
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250



2007	135	1	190	-333.610	400.508	D	0.005	16.862	16.868
0.03	0.002	0.003	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	136	1	264	-334.246	412.751	D	0.135	16.862	16.997
0.80	0.050	0.066	0.007	0.002	0.002	0.004	3.100	2.340	3.250
2007	137	1	286	-330.308	416.040	D	0.002	16.862	16.864
0.01	0.001	0.001	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	138	1	190	-333.610	400.508	D	0.013	16.862	16.875
0.07	0.007	0.003	0.001	0.000	0.000	0.001	3.100	2.340	3.250
2007	139	1	203	-305.880	400.904	D	0.014	16.862	16.877
0.08	0.010	0.003	0.001	0.000	0.000	0.000	3.100	2.340	3.250
2007	140	1	289	-326.547	415.852	D	0.003	16.862	16.865
0.02	0.001	0.001	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	141	1	191	-332.353	400.444	D	0.018	16.862	16.881
0.11	0.011	0.004	0.001	0.000	0.000	0.001	3.100	2.340	3.250
2007	142	1	190	-333.610	400.508	D	0.067	16.862	16.929
0.40	0.022	0.035	0.003	0.001	0.001	0.002	3.100	2.340	3.250
2007	143	1	191	-332.353	400.444	D	0.182	16.862	17.045
1.08	0.067	0.079	0.012	0.003	0.003	0.007	3.100	2.340	3.250
2007	144	1	190	-333.610	400.508	D	0.048	16.862	16.911
0.29	0.025	0.014	0.004	0.001	0.001	0.002	3.100	2.340	3.250
2007	145	1	287	-329.055	415.977	D	0.008	16.862	16.871
0.05	0.005	0.002	0.001	0.000	0.000	0.000	3.100	2.340	3.250
2007	146	1	264	-334.246	412.751	D	0.000	16.862	16.863
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	147	1	286	-330.308	416.040	D	0.000	16.862	16.863
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	148	1	190	-333.610	400.508	D	0.003	16.862	16.866
0.02	0.002	0.001	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	149	1	203	-305.880	400.904	D	0.000	16.862	16.863
0.00	0.000	0.000	0.000	0.000	0.000	0.000	3.100	2.340	3.250
2007	150	1	204	-334.689	404.051	D	0.027	16.862	16.890
0.16	0.013	0.007	0.002	0.001	0.001	0.001	3.100	2.340	3.250
2007	151	1	198	-312.162	401.199	D	0.095	16.862	16.957
0.56	0.039	0.035	0.006	0.001	0.002	0.004	3.100	2.340	3.250
2007	152	1	203	-305.880	400.904	D	0.001	16.765	16.766
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	153	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	154	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	155	1	190	-333.610	400.508	D	0.124	16.765	16.889
0.74	0.071	0.016	0.013	0.003	0.004	0.007	2.910	2.250	3.150
2007	156	1	190	-333.610	400.508	D	0.002	16.765	16.767
0.01	0.001	0.001	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	157	1	286	-330.308	416.040	D	0.209	16.765	16.974
1.25	0.137	0.018	0.022	0.005	0.006	0.012	2.910	2.250	3.150
2007	158	1	190	-333.610	400.508	D	0.083	16.765	16.848
0.49	0.038	0.023	0.007	0.002	0.002	0.004	2.910	2.250	3.150
2007	159	1	289	-326.547	415.852	D	0.165	16.765	16.930
0.98	0.069	0.056	0.013	0.003	0.004	0.007	2.910	2.250	3.150
2007	160	1	209	-328.409	403.734	D	0.426	16.765	17.191
2.54	0.204	0.118	0.037	0.008	0.010	0.021	2.910	2.250	3.150
2007	161	1	277	-332.904	414.427	D	0.012	16.765	16.777
0.07	0.008	0.002	0.001	0.000	0.000	0.001	2.910	2.250	3.150
2007	162	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	163	1	190	-333.610	400.508	D	0.091	16.765	16.856
0.54	0.054	0.024	0.006	0.001	0.002	0.003	2.910	2.250	3.150

2007	164	1	198	-312.162	401.199	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	165	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	166	1	264	-334.246	412.751	D	0.004	16.765	16.769
0.03	0.003	0.001	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	167	1	289	-326.547	415.852	D	0.001	16.765	16.766
0.01	0.001	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	168	1	190	-333.610	400.508	D	0.013	16.765	16.778
0.07	0.010	0.001	0.001	0.000	0.000	0.001	2.910	2.250	3.150
2007	169	1	190	-333.610	400.508	D	0.086	16.765	16.851
0.51	0.044	0.015	0.009	0.002	0.002	0.005	2.910	2.250	3.150
2007	170	1	204	-334.689	404.051	D	0.062	16.765	16.827
0.37	0.038	0.009	0.006	0.001	0.002	0.003	2.910	2.250	3.150
2007	171	1	204	-334.689	404.051	D	0.013	16.765	16.778
0.08	0.008	0.003	0.001	0.000	0.000	0.000	2.910	2.250	3.150
2007	172	1	277	-332.904	414.427	D	0.058	16.765	16.823
0.34	0.031	0.020	0.003	0.001	0.001	0.002	2.910	2.250	3.150
2007	173	1	286	-330.308	416.040	D	0.002	16.765	16.767
0.01	0.001	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	174	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	175	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	176	1	190	-333.610	400.508	D	0.060	16.765	16.825
0.36	0.048	0.000	0.006	0.001	0.002	0.003	2.910	2.250	3.150
2007	177	1	204	-334.689	404.051	D	0.025	16.765	16.790
0.15	0.012	0.009	0.002	0.000	0.001	0.001	2.910	2.250	3.150
2007	178	1	204	-334.689	404.051	D	0.251	16.765	17.016
1.50	0.107	0.094	0.018	0.004	0.005	0.010	2.910	2.250	3.150
2007	179	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	180	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	181	1	190	-333.610	400.508	D	0.000	16.765	16.765
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.910	2.250	3.150
2007	182	1	235	-334.424	409.271	D	0.041	16.624	16.666
0.25	0.030	0.002	0.005	0.001	0.001	0.003	2.640	2.080	2.890
2007	183	1	192	-331.096	400.381	D	0.035	16.624	16.659
0.21	0.025	0.002	0.004	0.001	0.001	0.002	2.640	2.080	2.890
2007	184	1	264	-334.246	412.751	D	0.000	16.624	16.625
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	185	1	209	-328.409	403.734	D	0.078	16.624	16.702
0.47	0.050	0.007	0.008	0.002	0.002	0.005	2.640	2.080	2.890
2007	186	1	190	-333.610	400.508	D	0.011	16.624	16.636
0.07	0.008	0.001	0.001	0.000	0.000	0.001	2.640	2.080	2.890
2007	187	1	190	-333.610	400.508	D	0.000	16.624	16.624
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	188	1	260	-321.788	410.384	D	0.013	16.624	16.638
0.08	0.011	0.000	0.001	0.000	0.000	0.001	2.640	2.080	2.890
2007	189	1	203	-305.880	400.904	D	0.000	16.624	16.625
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	190	1	264	-334.246	412.751	D	0.002	16.624	16.626
0.01	0.001	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	191	1	198	-312.162	401.199	D	0.000	16.624	16.624
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	192	1	204	-334.689	404.051	D	0.001	16.624	16.625
0.00	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890

2007	193	1	190	-333.610	400.508	D	0.092	16.624	16.716	
0.55	0.055	0.008	0.011	0.002	0.003	0.006	0.008	2.640	2.080	2.890
2007	194	1	264	-334.246	412.751	D	0.049	16.624	16.673	
0.29	0.030	0.005	0.006	0.001	0.002	0.003	0.003	2.640	2.080	2.890
2007	195	1	190	-333.610	400.508	D	0.011	16.624	16.635	
0.07	0.007	0.000	0.001	0.000	0.000	0.001	0.001	2.640	2.080	2.890
2007	196	1	204	-334.689	404.051	D	0.016	16.624	16.640	
0.09	0.009	0.001	0.002	0.000	0.001	0.001	0.002	2.640	2.080	2.890
2007	197	1	289	-326.547	415.852	D	0.133	16.624	16.758	
0.80	0.087	0.005	0.016	0.003	0.004	0.009	0.009	2.640	2.080	2.890
2007	198	1	204	-334.689	404.051	D	0.042	16.624	16.666	
0.25	0.031	0.001	0.004	0.001	0.001	0.002	0.001	2.640	2.080	2.890
2007	199	1	190	-333.610	400.508	D	0.013	16.624	16.637	
0.08	0.010	0.001	0.001	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	200	1	250	-334.335	411.011	D	0.001	16.624	16.625	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	201	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	202	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	203	1	264	-334.246	412.751	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	204	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	205	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	206	1	190	-333.610	400.508	D	0.010	16.624	16.634	
0.06	0.006	0.001	0.001	0.000	0.000	0.001	0.001	2.640	2.080	2.890
2007	207	1	201	-308.393	401.021	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	208	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	209	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	210	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	211	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	212	1	190	-333.610	400.508	D	0.000	16.624	16.624	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.640	2.080	2.890
2007	213	1	264	-334.246	412.751	D	0.022	16.598	16.619	
0.13	0.013	0.001	0.003	0.001	0.001	0.001	0.002	2.590	2.050	2.810
2007	214	1	190	-333.610	400.508	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	215	1	264	-334.246	412.751	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	216	1	204	-334.689	404.051	D	0.027	16.598	16.624	
0.16	0.013	0.009	0.002	0.000	0.000	0.001	0.001	2.590	2.050	2.810
2007	217	1	264	-334.246	412.751	D	0.061	16.598	16.659	
0.37	0.046	0.005	0.005	0.001	0.001	0.003	0.000	2.590	2.050	2.810
2007	218	1	277	-332.904	414.427	D	0.024	16.598	16.621	
0.14	0.016	0.004	0.002	0.000	0.000	0.001	0.000	2.590	2.050	2.810
2007	219	1	277	-332.904	414.427	D	0.001	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	220	1	190	-333.610	400.508	D	0.022	16.598	16.620	
0.13	0.015	0.001	0.002	0.001	0.001	0.001	0.001	2.590	2.050	2.810
2007	221	1	264	-334.246	412.751	D	0.041	16.598	16.638	
0.24	0.026	0.006	0.004	0.001	0.001	0.002	0.001	2.590	2.050	2.810

2007	222	1	277	-332.904	414.427	D	0.032	16.598	16.630	
0.20	0.023	0.001	0.004	0.001	0.001	0.002	0.001	2.590	2.050	2.810
2007	223	1	203	-305.880	400.904	D	0.002	16.598	16.600	
0.01	0.002	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	224	1	190	-333.610	400.508	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	225	1	203	-305.880	400.904	D	0.010	16.598	16.608	
0.06	0.008	0.000	0.001	0.000	0.000	0.001	0.000	2.590	2.050	2.810
2007	226	1	277	-332.904	414.427	D	0.012	16.598	16.609	
0.07	0.008	0.001	0.001	0.000	0.000	0.001	0.000	2.590	2.050	2.810
2007	227	1	190	-333.610	400.508	D	0.113	16.598	16.711	
0.68	0.066	0.015	0.012	0.003	0.003	0.007	0.008	2.590	2.050	2.810
2007	228	1	264	-334.246	412.751	D	0.018	16.598	16.615	
0.11	0.014	0.002	0.001	0.000	0.000	0.001	0.000	2.590	2.050	2.810
2007	229	1	286	-330.308	416.040	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	230	1	204	-334.689	404.051	D	0.002	16.598	16.600	
0.01	0.002	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	231	1	277	-332.904	414.427	D	0.001	16.598	16.599	
0.01	0.000	0.001	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	232	1	204	-334.689	404.051	D	0.013	16.598	16.611	
0.08	0.007	0.003	0.001	0.000	0.000	0.001	0.000	2.590	2.050	2.810
2007	233	1	190	-333.610	400.508	D	0.066	16.598	16.663	
0.40	0.038	0.013	0.007	0.001	0.002	0.004	0.001	2.590	2.050	2.810
2007	234	1	190	-333.610	400.508	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	235	1	286	-330.308	416.040	D	0.019	16.598	16.616	
0.11	0.008	0.009	0.001	0.000	0.000	0.001	0.000	2.590	2.050	2.810
2007	236	1	264	-334.246	412.751	D	0.117	16.598	16.715	
0.71	0.039	0.062	0.005	0.001	0.001	0.003	0.007	2.590	2.050	2.810
2007	237	1	264	-334.246	412.751	D	0.002	16.598	16.600	
0.01	0.001	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	238	1	286	-330.308	416.040	D	0.030	16.598	16.628	
0.18	0.021	0.001	0.004	0.001	0.001	0.002	0.001	2.590	2.050	2.810
2007	239	1	264	-334.246	412.751	D	0.041	16.598	16.638	
0.24	0.022	0.008	0.004	0.001	0.001	0.002	0.003	2.590	2.050	2.810
2007	240	1	264	-334.246	412.751	D	0.026	16.598	16.624	
0.16	0.011	0.011	0.001	0.000	0.000	0.001	0.001	2.590	2.050	2.810
2007	241	1	190	-333.610	400.508	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	242	1	190	-333.610	400.508	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	243	1	190	-333.610	400.508	D	0.000	16.598	16.598	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.590	2.050	2.810
2007	244	1	190	-333.610	400.508	D	0.004	16.581	16.585	
0.02	0.003	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	245	1	217	-307.055	402.702	D	0.001	16.581	16.582	
0.01	0.001	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	246	1	190	-333.610	400.508	D	0.000	16.581	16.581	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	247	1	235	-334.424	409.271	D	0.072	16.581	16.653	
0.44	0.045	0.008	0.008	0.002	0.002	0.004	0.003	2.560	2.020	2.740
2007	248	1	190	-333.610	400.508	D	0.029	16.581	16.611	
0.18	0.022	0.001	0.003	0.001	0.001	0.002	0.000	2.560	2.020	2.740
2007	249	1	190	-333.610	400.508	D	0.070	16.581	16.652	
0.42	0.045	0.013	0.006	0.001	0.002	0.003	0.001	2.560	2.020	2.740
2007	250	1	264	-334.246	412.751	D	0.004	16.581	16.585	
0.02	0.003	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740

2007	251	1	190	-333.610	400.508	D	0.007	16.581	16.588	
0.04	0.004	0.001	0.001	0.000	0.000	0.000	0.001	2.560	2.020	2.740
2007	252	1	264	-334.246	412.751	D	0.000	16.581	16.581	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	253	1	222	-327.067	405.412	D	0.383	16.581	16.964	
2.31	0.130	0.185	0.023	0.005	0.007	0.013	0.020	2.560	2.020	2.740
2007	254	1	191	-332.353	400.444	D	0.272	16.581	16.854	
1.64	0.118	0.085	0.024	0.005	0.007	0.014	0.020	2.560	2.020	2.740
2007	255	1	286	-330.308	416.040	D	0.020	16.581	16.601	
0.12	0.014	0.002	0.002	0.000	0.000	0.001	0.000	2.560	2.020	2.740
2007	256	1	190	-333.610	400.508	D	0.000	16.581	16.581	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	257	1	264	-334.246	412.751	D	0.062	16.581	16.643	
0.37	0.024	0.026	0.005	0.001	0.001	0.003	0.003	2.560	2.020	2.740
2007	258	1	204	-334.689	404.051	D	0.098	16.581	16.680	
0.59	0.050	0.030	0.009	0.002	0.001	0.004	0.002	2.560	2.020	2.740
2007	259	1	276	-319.194	412.001	D	0.078	16.581	16.659	
0.47	0.030	0.038	0.005	0.001	0.001	0.002	0.001	2.560	2.020	2.740
2007	260	1	190	-333.610	400.508	D	0.075	16.581	16.656	
0.45	0.043	0.009	0.008	0.002	0.002	0.005	0.005	2.560	2.020	2.740
2007	261	1	277	-332.904	414.427	D	0.007	16.581	16.589	
0.04	0.003	0.004	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	262	1	286	-330.308	416.040	D	0.001	16.581	16.582	
0.01	0.000	0.001	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	263	1	289	-326.547	415.852	D	0.032	16.581	16.613	
0.19	0.018	0.003	0.004	0.001	0.001	0.002	0.004	2.560	2.020	2.740
2007	264	1	217	-307.055	402.702	D	0.039	16.581	16.620	
0.24	0.017	0.014	0.003	0.001	0.001	0.002	0.001	2.560	2.020	2.740
2007	265	1	190	-333.610	400.508	D	0.000	16.581	16.581	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	266	1	286	-330.308	416.040	D	0.034	16.581	16.615	
0.21	0.019	0.003	0.004	0.001	0.001	0.002	0.005	2.560	2.020	2.740
2007	267	1	226	-313.253	404.739	D	0.009	16.581	16.590	
0.05	0.004	0.002	0.001	0.000	0.000	0.000	0.001	2.560	2.020	2.740
2007	268	1	276	-319.194	412.001	D	0.110	16.581	16.691	
0.66	0.042	0.047	0.008	0.002	0.002	0.004	0.006	2.560	2.020	2.740
2007	269	1	276	-319.194	412.001	D	0.145	16.581	16.726	
0.87	0.059	0.046	0.013	0.003	0.004	0.007	0.013	2.560	2.020	2.740
2007	270	1	190	-333.610	400.508	D	0.047	16.581	16.628	
0.28	0.022	0.011	0.005	0.001	0.001	0.003	0.005	2.560	2.020	2.740
2007	271	1	190	-333.610	400.508	D	0.000	16.581	16.581	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	272	1	286	-330.308	416.040	D	0.002	16.581	16.583	
0.01	0.001	0.000	0.000	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	273	1	204	-334.689	404.051	D	0.010	16.581	16.591	
0.06	0.003	0.005	0.001	0.000	0.000	0.000	0.000	2.560	2.020	2.740
2007	274	1	226	-313.253	404.739	D	0.004	16.593	16.597	
0.02	0.002	0.000	0.000	0.000	0.000	0.000	0.001	2.580	2.050	2.820
2007	275	1	264	-334.246	412.751	D	0.026	16.593	16.619	
0.16	0.014	0.005	0.003	0.001	0.001	0.002	0.002	2.580	2.050	2.820
2007	276	1	195	-331.009	402.121	D	0.003	16.593	16.596	
0.02	0.002	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050	2.820
2007	277	1	190	-333.610	400.508	D	0.000	16.593	16.593	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050	2.820
2007	278	1	190	-333.610	400.508	D	0.000	16.593	16.593	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050	2.820
2007	279	1	190	-333.610	400.508	D	0.000	16.593	16.593	
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050	2.820

2007	280	1	264	-334.246	412.751	D	0.074	16.593	16.667
0.45	0.018	0.050	0.003	0.001	0.001	0.002	0.001	2.580	2.050 2.820
2007	281	1	190	-333.610	400.508	D	0.262	16.593	16.855
1.58	0.114	0.076	0.024	0.005	0.007	0.014	0.022	2.580	2.050 2.820
2007	282	1	190	-333.610	400.508	D	0.037	16.593	16.630
0.22	0.015	0.011	0.003	0.001	0.001	0.002	0.003	2.580	2.050 2.820
2007	283	1	277	-332.904	414.427	D	0.013	16.593	16.605
0.08	0.003	0.008	0.001	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	284	1	264	-334.246	412.751	D	0.010	16.593	16.603
0.06	0.005	0.004	0.001	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	285	1	204	-334.689	404.051	D	0.251	16.593	16.843
1.51	0.089	0.110	0.018	0.004	0.005	0.010	0.015	2.580	2.050 2.820
2007	286	1	286	-330.308	416.040	D	0.000	16.593	16.593
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	287	1	190	-333.610	400.508	D	0.000	16.593	16.593
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	288	1	190	-333.610	400.508	D	0.000	16.593	16.593
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	289	1	190	-333.610	400.508	D	0.000	16.593	16.593
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	290	1	204	-334.689	404.051	D	0.000	16.593	16.593
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	291	1	190	-333.610	400.508	D	0.013	16.593	16.606
0.08	0.006	0.004	0.001	0.000	0.000	0.001	0.001	2.580	2.050 2.820
2007	292	1	209	-328.409	403.734	D	0.312	16.593	16.905
1.88	0.132	0.090	0.029	0.006	0.008	0.016	0.030	2.580	2.050 2.820
2007	293	1	191	-332.353	400.444	D	0.038	16.593	16.631
0.23	0.016	0.012	0.003	0.001	0.001	0.002	0.004	2.580	2.050 2.820
2007	294	1	190	-333.610	400.508	D	0.001	16.593	16.594
0.01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	295	1	289	-326.547	415.852	D	0.244	16.593	16.836
1.47	0.099	0.081	0.021	0.005	0.006	0.012	0.019	2.580	2.050 2.820
2007	296	1	190	-333.610	400.508	D	0.003	16.593	16.596
0.02	0.001	0.001	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	297	1	276	-319.194	412.001	D	0.101	16.593	16.694
0.61	0.031	0.052	0.006	0.001	0.002	0.003	0.005	2.580	2.050 2.820
2007	298	1	191	-332.353	400.444	D	0.242	16.593	16.834
1.46	0.128	0.045	0.025	0.005	0.007	0.014	0.017	2.580	2.050 2.820
2007	299	1	203	-305.880	400.904	D	0.001	16.593	16.594
0.01	0.000	0.001	0.000	0.000	0.000	0.000	0.000	2.580	2.050 2.820
2007	300	1	191	-332.353	400.444	D	0.367	16.593	16.960
2.21	0.112	0.194	0.022	0.005	0.006	0.012	0.016	2.580	2.050 2.820
2007	301	1	289	-326.547	415.852	D	0.061	16.593	16.654
0.37	0.019	0.036	0.003	0.001	0.001	0.002	0.000	2.580	2.050 2.820
2007	302	1	288	-327.801	415.914	D	0.247	16.593	16.839
1.49	0.093	0.122	0.015	0.003	0.003	0.008	0.003	2.580	2.050 2.820
2007	303	1	286	-330.308	416.040	D	0.035	16.593	16.627
0.21	0.020	0.005	0.004	0.001	0.001	0.002	0.002	2.580	2.050 2.820
2007	304	1	235	-334.424	409.271	D	0.175	16.593	16.768
1.05	0.067	0.071	0.014	0.003	0.004	0.008	0.008	2.580	2.050 2.820
2007	305	1	250	-334.335	411.011	D	0.050	16.870	16.920
0.30	0.029	0.012	0.004	0.001	0.001	0.002	0.001	3.110	2.380 3.410
2007	306	1	222	-327.067	405.412	D	0.240	16.870	17.111
1.42	0.081	0.119	0.014	0.003	0.004	0.008	0.011	3.110	2.380 3.410
2007	307	1	276	-319.194	412.001	D	0.145	16.870	17.015
0.86	0.060	0.051	0.011	0.002	0.003	0.006	0.011	3.110	2.380 3.410
2007	308	1	289	-326.547	415.852	D	0.170	16.870	17.040
1.01	0.080	0.046	0.015	0.003	0.004	0.008	0.013	3.110	2.380 3.410

2007	309	1	190	-333.610	400.508	D	0.000	16.870	16.870
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.110	2.380 3.410
2007	310	1	204	-334.689	404.051	D	0.048	16.870	16.918
0.28	0.012	0.031	0.002	0.000	0.001	0.001	0.001	3.110	2.380 3.410
2007	311	1	209	-328.409	403.734	D	0.091	16.870	16.962
0.54	0.031	0.044	0.005	0.001	0.002	0.003	0.005	3.110	2.380 3.410
2007	312	1	276	-319.194	412.001	D	0.312	16.870	17.183
1.85	0.121	0.127	0.021	0.005	0.006	0.012	0.020	3.110	2.380 3.410
2007	313	1	190	-333.610	400.508	D	0.124	16.870	16.994
0.73	0.038	0.068	0.006	0.001	0.002	0.004	0.005	3.110	2.380 3.410
2007	314	1	289	-326.547	415.852	D	0.082	16.870	16.953
0.49	0.045	0.017	0.008	0.002	0.002	0.004	0.005	3.110	2.380 3.410
2007	315	1	276	-319.194	412.001	D	0.023	16.870	16.893
0.13	0.011	0.005	0.002	0.000	0.001	0.001	0.002	3.110	2.380 3.410
2007	316	1	191	-332.353	400.444	D	0.238	16.870	17.109
1.41	0.068	0.141	0.011	0.002	0.003	0.006	0.007	3.110	2.380 3.410
2007	317	1	288	-327.801	415.914	D	0.073	16.870	16.943
0.43	0.042	0.009	0.008	0.002	0.002	0.004	0.007	3.110	2.380 3.410
2007	318	1	222	-327.067	405.412	D	0.075	16.870	16.946
0.45	0.030	0.028	0.005	0.001	0.002	0.003	0.006	3.110	2.380 3.410
2007	319	1	276	-319.194	412.001	D	0.081	16.870	16.951
0.48	0.032	0.031	0.006	0.001	0.002	0.003	0.006	3.110	2.380 3.410
2007	320	1	190	-333.610	400.508	D	0.357	16.870	17.227
2.11	0.169	0.105	0.030	0.006	0.008	0.016	0.022	3.110	2.380 3.410
2007	321	1	191	-332.353	400.444	D	0.260	16.870	17.131
1.54	0.093	0.129	0.015	0.003	0.004	0.008	0.009	3.110	2.380 3.410
2007	322	1	289	-326.547	415.852	D	0.452	16.870	17.323
2.68	0.186	0.181	0.030	0.006	0.008	0.017	0.024	3.110	2.380 3.410
2007	323	1	190	-333.610	400.508	D	0.410	16.870	17.280
2.43	0.129	0.244	0.018	0.004	0.004	0.010	0.003	3.110	2.380 3.410
2007	324	1	190	-333.610	400.508	D	0.000	16.870	16.871
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.110	2.380 3.410
2007	325	1	190	-333.610	400.508	D	0.000	16.870	16.870
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.110	2.380 3.410
2007	326	1	277	-332.904	414.427	D	0.584	16.870	17.455
3.46	0.168	0.359	0.026	0.005	0.006	0.014	0.006	3.110	2.380 3.410
2007	327	1	276	-319.194	412.001	D	0.494	16.870	17.364
2.93	0.169	0.234	0.030	0.006	0.009	0.017	0.028	3.110	2.380 3.410
2007	328	1	222	-327.067	405.412	D	0.238	16.870	17.109
1.41	0.082	0.111	0.015	0.003	0.004	0.008	0.015	3.110	2.380 3.410
2007	329	1	209	-328.409	403.734	D	0.043	16.870	16.914
0.26	0.013	0.024	0.002	0.000	0.001	0.001	0.002	3.110	2.380 3.410
2007	330	1	250	-334.335	411.011	D	0.141	16.870	17.011
0.83	0.048	0.074	0.008	0.002	0.002	0.004	0.003	3.110	2.380 3.410
2007	331	1	190	-333.610	400.508	D	0.010	16.870	16.881
0.06	0.003	0.006	0.000	0.000	0.000	0.000	0.000	3.110	2.380 3.410
2007	332	1	244	-323.128	408.706	D	0.329	16.870	17.200
1.95	0.131	0.124	0.024	0.005	0.007	0.013	0.025	3.110	2.380 3.410
2007	333	1	276	-319.194	412.001	D	0.158	16.870	17.029
0.94	0.046	0.094	0.007	0.001	0.002	0.004	0.004	3.110	2.380 3.410
2007	334	1	264	-334.246	412.751	D	0.012	16.870	16.882
0.07	0.003	0.007	0.000	0.000	0.000	0.000	0.000	3.110	2.380 3.410
2007	335	1	190	-333.610	400.508	D	0.000	16.804	16.804
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.980	2.330 3.380
2007	336	1	287	-329.055	415.977	D	0.165	16.804	16.969
0.98	0.052	0.090	0.008	0.002	0.002	0.005	0.005	2.980	2.330 3.380
2007	337	1	289	-326.547	415.852	D	0.471	16.804	17.275
2.80	0.163	0.239	0.029	0.006	0.006	0.015	0.012	2.980	2.330 3.380

2007	338	1	289	-326.547	415.852	D	0.111	16.804	16.916
0.66	0.048	0.036	0.009	0.002	0.003	0.005	0.008	2.980	2.330 3.380
2007	339	1	264	-334.246	412.751	D	0.044	16.804	16.849
0.26	0.014	0.026	0.002	0.000	0.000	0.001	0.001	2.980	2.330 3.380
2007	340	1	204	-334.689	404.051	D	0.283	16.804	17.088
1.69	0.096	0.154	0.011	0.002	0.003	0.006	0.010	2.980	2.330 3.380
2007	341	1	190	-333.610	400.508	D	0.305	16.804	17.109
1.81	0.086	0.189	0.010	0.002	0.003	0.006	0.008	2.980	2.330 3.380
2007	342	1	190	-333.610	400.508	D	0.000	16.804	16.804
0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.980	2.330 3.380
2007	343	1	289	-326.547	415.852	D	0.101	16.804	16.906
0.60	0.039	0.039	0.007	0.002	0.002	0.004	0.008	2.980	2.330 3.380
2007	344	1	262	-319.279	410.261	D	0.438	16.804	17.242
2.60	0.174	0.161	0.033	0.007	0.010	0.019	0.034	2.980	2.330 3.380
2007	345	1	190	-333.610	400.508	D	0.173	16.804	16.978
1.03	0.048	0.110	0.007	0.002	0.001	0.004	0.001	2.980	2.330 3.380
2007	346	1	286	-330.308	416.040	D	0.454	16.804	17.259
2.70	0.154	0.239	0.024	0.005	0.007	0.014	0.011	2.980	2.330 3.380
2007	347	1	190	-333.610	400.508	D	0.012	16.804	16.817
0.07	0.004	0.006	0.001	0.000	0.000	0.000	0.001	2.980	2.330 3.380
2007	348	1	209	-328.409	403.734	D	0.343	16.804	17.147
2.04	0.111	0.191	0.016	0.003	0.004	0.009	0.010	2.980	2.330 3.380
2007	349	1	204	-334.689	404.051	D	0.376	16.804	17.180
2.23	0.125	0.190	0.022	0.005	0.006	0.012	0.016	2.980	2.330 3.380
2007	350	1	190	-333.610	400.508	D	0.267	16.804	17.071
1.59	0.081	0.149	0.014	0.003	0.004	0.008	0.008	2.980	2.330 3.380
2007	351	1	190	-333.610	400.508	D	0.183	16.804	16.987
1.09	0.053	0.113	0.008	0.002	0.001	0.004	0.001	2.980	2.330 3.380
2007	352	1	190	-333.610	400.508	D	0.221	16.804	17.025
1.31	0.073	0.113	0.013	0.003	0.004	0.007	0.007	2.980	2.330 3.380
2007	353	1	264	-334.246	412.751	D	0.179	16.804	16.983
1.06	0.059	0.093	0.010	0.002	0.003	0.006	0.005	2.980	2.330 3.380
2007	354	1	289	-326.547	415.852	D	0.117	16.804	16.922
0.70	0.050	0.038	0.010	0.002	0.003	0.005	0.010	2.980	2.330 3.380
2007	355	1	277	-332.904	414.427	D	0.194	16.804	16.999
1.16	0.074	0.075	0.014	0.003	0.004	0.008	0.016	2.980	2.330 3.380
2007	356	1	190	-333.610	400.508	D	0.145	16.804	16.950
0.86	0.055	0.060	0.010	0.002	0.003	0.006	0.009	2.980	2.330 3.380
2007	357	1	191	-332.353	400.444	D	0.071	16.804	16.876
0.42	0.030	0.024	0.006	0.001	0.002	0.003	0.006	2.980	2.330 3.380
2007	358	1	276	-319.194	412.001	D	0.092	16.804	16.897
0.55	0.030	0.047	0.005	0.001	0.001	0.003	0.004	2.980	2.330 3.380
2007	359	1	190	-333.610	400.508	D	0.038	16.804	16.843
0.23	0.013	0.018	0.002	0.001	0.001	0.001	0.002	2.980	2.330 3.380
2007	360	1	276	-319.194	412.001	D	0.097	16.804	16.902
0.58	0.026	0.059	0.004	0.001	0.001	0.002	0.003	2.980	2.330 3.380
2007	361	1	190	-333.610	400.508	D	0.523	16.804	17.328
3.11	0.146	0.343	0.017	0.004	0.003	0.009	0.002	2.980	2.330 3.380
2007	362	1	276	-319.194	412.001	D	0.872	16.804	17.677
5.19	0.247	0.513	0.040	0.009	0.011	0.022	0.030	2.980	2.330 3.380
2007	363	1	190	-333.610	400.508	D	0.501	16.804	17.306
2.98	0.157	0.267	0.028	0.006	0.007	0.015	0.020	2.980	2.330 3.380

--- Ranked Daily Visibility Change ---

START TIME

Modeled Extinction by Species

Small Large SSalt

YEAR DAY HR RECEPTOR COORDINATES (km) TYPE BEXT(Model) BEXT(BKG)



BEXT(Total)	%CHANGE	bxSO4	bxNO3	bxOC	bxEC	bxPMC	bxPMF	bxNO2	F(RH)
2007	40	1	264	-334.246	412.751	D	1.652	16.793	18.445
9.83	0.439	1.075	0.057	0.012	0.014	0.031	0.025	2.960	2.310 3.330 1
2007	362	1	276	-319.194	412.001	D	0.872	16.804	17.677
5.19	0.247	0.513	0.040	0.009	0.011	0.022	0.030	2.980	2.330 3.380 2
2007	36	1	191	-332.353	400.444	D	0.800	16.793	17.593
4.76	0.253	0.438	0.044	0.009	0.011	0.024	0.020	2.960	2.310 3.330 3
2007	46	1	209	-328.409	403.734	D	0.736	16.793	17.529
4.38	0.221	0.434	0.030	0.006	0.008	0.017	0.019	2.960	2.310 3.330 4
2007	326	1	277	-332.904	414.427	D	0.584	16.870	17.455
3.46	0.168	0.359	0.026	0.005	0.006	0.014	0.006	3.110	2.380 3.410 5
2007	19	1	209	-328.409	403.734	D	0.544	16.784	17.328
3.24	0.208	0.222	0.040	0.008	0.011	0.022	0.033	2.940	2.310 3.370 6
2007	66	1	190	-333.610	400.508	D	0.532	16.818	17.349
3.16	0.153	0.315	0.023	0.005	0.006	0.013	0.016	3.010	2.310 3.270 7
2007	361	1	190	-333.610	400.508	D	0.523	16.804	17.328
3.11	0.146	0.343	0.017	0.004	0.003	0.009	0.002	2.980	2.330 3.380 8
2007	363	1	190	-333.610	400.508	D	0.501	16.804	17.306
2.98	0.157	0.267	0.028	0.006	0.007	0.015	0.020	2.980	2.330 3.380 9
2007	327	1	276	-319.194	412.001	D	0.494	16.870	17.364
2.93	0.169	0.234	0.030	0.006	0.009	0.017	0.028	3.110	2.380 3.410 10
2007	337	1	289	-326.547	415.852	D	0.471	16.804	17.275
2.80	0.163	0.239	0.029	0.006	0.006	0.015	0.012	2.980	2.330 3.380 11
2007	20	1	287	-329.055	415.977	D	0.466	16.784	17.250
2.78	0.124	0.293	0.020	0.004	0.005	0.011	0.008	2.940	2.310 3.370 12
2007	346	1	286	-330.308	416.040	D	0.454	16.804	17.259
2.70	0.154	0.239	0.024	0.005	0.007	0.014	0.011	2.980	2.330 3.380 13
2007	322	1	289	-326.547	415.852	D	0.452	16.870	17.323
2.68	0.186	0.181	0.030	0.006	0.008	0.017	0.024	3.110	2.380 3.410 14
2007	344	1	262	-319.279	410.261	D	0.438	16.804	17.242
2.60	0.174	0.161	0.033	0.007	0.010	0.019	0.034	2.980	2.330 3.380 15
2007	160	1	209	-328.409	403.734	D	0.426	16.765	17.191
2.54	0.204	0.118	0.037	0.008	0.010	0.021	0.029	2.910	2.250 3.150 16
2007	76	1	264	-334.246	412.751	D	0.422	16.818	17.240
2.51	0.149	0.227	0.021	0.004	0.005	0.011	0.005	3.010	2.310 3.270 17
2007	323	1	190	-333.610	400.508	D	0.410	16.870	17.280
2.43	0.129	0.244	0.018	0.004	0.004	0.010	0.003	3.110	2.380 3.410 18
2007	22	1	209	-328.409	403.734	D	0.407	16.784	17.191
2.42	0.169	0.139	0.032	0.007	0.009	0.018	0.032	2.940	2.310 3.370 19
2007	253	1	222	-327.067	405.412	D	0.383	16.581	16.964
2.31	0.130	0.185	0.023	0.005	0.007	0.013	0.020	2.560	2.020 2.740 20
2007	349	1	204	-334.689	404.051	D	0.376	16.804	17.180
2.23	0.125	0.190	0.022	0.005	0.006	0.012	0.016	2.980	2.330 3.380 21
2007	300	1	191	-332.353	400.444	D	0.367	16.593	16.960
2.21	0.112	0.194	0.022	0.005	0.006	0.012	0.016	2.580	2.050 2.820 22

--- Number of days with Extinction Change => 5.0 % : 2  
 --- Number of days with Extinction Change => 10.0 % : 0  
 --- Largest Extinction Change = 9.83 %

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CALPOST Version 6.221

Level 080724

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Run-Length VISIBILITY

VISIB BOESNCFG

(1/Mega-m)

BEXT(Total)	RECEPTOR	COORDINATES (km)	TYPE	BEXT(Model)	BEXT(BKG)	
0.42	204	-334.689 404.051	D	0.070	16.736	16.805

--- Number of recs with Extinction Change > 1.0 % : 0  
 --- Largest Extinction Change = 0.42 %

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CALPOST Version 6.221

Level 080724

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24HR VISIBILITY

VISIB BOESNCFG

(deciview)

START TIME							Small Large SSalt								
% of Modeled Extinction by Species							DV(Total)	DV(BKG)	DELTA	DV					
YEAR	DAY	HR	RECEPTOR	COORDINATES (km)	TYPE	%_SO4	%_NO3	%_OC	%_EC	%_PMC	%_PMF	%_NO2	F(RH)	F(RH)	F(RH)
2007	1	1	204	-334.689 404.051	D	5.366	5.178	0.188							
24.07	67.98	3.75	0.79	0.76	1.95	0.70	2.940	2.310	3.370						
2007	2	1	276	-319.194 412.001	D	5.281	5.178	0.102							
28.96	56.91	5.16	1.10	1.39	2.86	3.62	2.940	2.310	3.370						
2007	3	1	190	-333.610 400.508	D	5.336	5.178	0.157							
36.19	45.21	6.90	1.46	1.66	3.73	4.86	2.940	2.310	3.370						
2007	4	1	209	-328.409 403.734	D	5.290	5.178	0.111							
40.99	34.60	7.94	1.69	2.31	4.46	8.01	2.940	2.310	3.370						
2007	5	1	276	-319.194 412.001	D	5.276	5.178	0.097							
43.95	28.95	8.61	1.84	2.53	4.85	9.26	2.940	2.310	3.370						
2007	6	1	287	-329.055 415.977	D	5.259	5.178	0.080							
37.06	45.08	6.63	1.40	1.79	3.67	4.37	2.940	2.310	3.370						
2007	7	1	204	-334.689 404.051	D	5.240	5.178	0.062							
43.80	30.43	8.58	1.82	2.17	4.81	8.39	2.940	2.310	3.370						
2007	8	1	190	-333.610 400.508	D	5.179	5.178	0.001							
43.88	29.39	7.55	1.81	2.40	4.79	10.17	2.940	2.310	3.370						
2007	9	1	190	-333.610 400.508	D	5.205	5.178	0.027							

38.06	39.13	7.39	1.57	2.13	4.13	7.59	2.940	2.310	3.370	
2007	10	1	289	-326.547	415.852	D	5.254	5.178		0.075
50.58	19.80	9.89	2.10	2.68	5.54	9.41	2.940	2.310	3.370	
2007	11	1	190	-333.610	400.508	D	5.178	5.178		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.940	2.310	3.370	
2007	12	1	264	-334.246	412.751	D	5.181	5.178		0.003
28.78	63.13	4.01	0.85	0.73	2.07	0.43	2.940	2.310	3.370	
2007	13	1	264	-334.246	412.751	D	5.281	5.178		0.103
29.81	63.21	3.62	0.76	0.55	1.79	0.26	2.940	2.310	3.370	
2007	14	1	203	-305.880	400.904	D	5.270	5.178		0.092
24.34	70.11	2.81	0.59	0.49	1.41	0.25	2.940	2.310	3.370	
2007	15	1	191	-332.353	400.444	D	5.234	5.178		0.055
38.33	38.68	7.37	1.57	2.16	4.16	7.73	2.940	2.310	3.370	
2007	16	1	276	-319.194	412.001	D	5.254	5.178		0.076
36.81	41.36	7.02	1.50	2.05	3.97	7.28	2.940	2.310	3.370	
2007	17	1	204	-334.689	404.051	D	5.212	5.178		0.033
32.43	53.62	5.56	1.18	1.57	3.11	2.52	2.940	2.310	3.370	
2007	18	1	191	-332.353	400.444	D	5.327	5.178		0.149
42.22	32.20	8.24	1.75	2.39	4.63	8.56	2.940	2.310	3.370	
2007	19	1	209	-328.409	403.734	D	5.498	5.178		0.319
38.29	40.85	7.26	1.53	2.05	4.03	5.98	2.940	2.310	3.370	
2007	20	1	287	-329.055	415.977	D	5.452	5.178		0.274
26.61	62.82	4.30	0.91	1.16	2.38	1.82	2.940	2.310	3.370	
2007	21	1	190	-333.610	400.508	D	5.184	5.178		0.005
32.20	52.45	5.30	1.13	1.44	2.97	4.50	2.940	2.310	3.370	
2007	22	1	209	-328.409	403.734	D	5.418	5.178		0.239
41.58	34.05	7.97	1.70	2.31	4.48	7.89	2.940	2.310	3.370	
2007	23	1	191	-332.353	400.444	D	5.178	5.178		0.000
38.54	33.33	0.00	1.50	2.07	3.95	10.87	2.940	2.310	3.370	
2007	24	1	190	-333.610	400.508	D	5.189	5.178		0.010
38.63	42.16	6.74	1.46	1.96	3.84	5.21	2.940	2.310	3.370	
2007	25	1	191	-332.353	400.444	D	5.371	5.178		0.192
35.21	44.78	6.58	1.41	1.91	3.71	6.40	2.940	2.310	3.370	
2007	26	1	190	-333.610	400.508	D	5.178	5.178		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.940	2.310	3.370	
2007	27	1	190	-333.610	400.508	D	5.183	5.178		0.005
35.40	43.92	6.64	1.43	1.94	3.78	6.89	2.940	2.310	3.370	
2007	28	1	276	-319.194	412.001	D	5.361	5.178		0.183
33.58	47.06	6.34	1.35	1.83	3.55	6.29	2.940	2.310	3.370	
2007	29	1	190	-333.610	400.508	D	5.178	5.178		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.940	2.310	3.370	
2007	30	1	190	-333.610	400.508	D	5.271	5.178		0.093
38.23	41.12	6.94	1.48	2.02	3.90	6.31	2.940	2.310	3.370	
2007	31	1	190	-333.610	400.508	D	5.189	5.178		0.010
39.92	35.90	7.86	1.65	2.22	4.37	8.08	2.940	2.310	3.370	
2007	32	1	190	-333.610	400.508	D	5.222	5.184		0.038
43.74	29.41	8.54	1.82	2.51	4.80	9.19	2.960	2.310	3.330	
2007	33	1	276	-319.194	412.001	D	5.263	5.184		0.079
43.38	30.26	8.50	1.80	2.48	4.75	8.82	2.960	2.310	3.330	
2007	34	1	190	-333.610	400.508	D	5.185	5.184		0.001
39.93	37.74	7.34	1.57	2.16	4.15	7.14	2.960	2.310	3.330	
2007	35	1	222	-327.067	405.412	D	5.361	5.184		0.177
31.77	51.52	5.87	1.25	1.56	3.24	4.79	2.960	2.310	3.330	
2007	36	1	191	-332.353	400.444	D	5.649	5.184		0.465
31.65	54.76	5.55	1.13	1.40	2.94	2.56	2.960	2.310	3.330	
2007	37	1	203	-305.880	400.904	D	5.206	5.184		0.021
22.91	70.45	3.12	0.66	0.63	1.64	0.59	2.960	2.310	3.330	
2007	38	1	235	-334.424	409.271	D	5.184	5.184		0.000

24.35	69.07	3.07	0.63	0.66	1.61	0.28	2.960	2.310	3.330	
2007	39	1	204	-334.689	404.051	D	5.201	5.184		0.017
31.35	57.41	4.46	0.95	0.98	2.38	2.47	2.960	2.310	3.330	
2007	40	1	264	-334.246	412.751	D	6.122	5.184		0.938
26.57	65.08	3.43	0.72	0.82	1.85	1.52	2.960	2.310	3.330	
2007	41	1	285	-322.871	413.926	D	5.196	5.184		0.012
31.68	54.82	4.77	1.02	1.28	2.64	3.80	2.960	2.310	3.330	
2007	42	1	287	-329.055	415.977	D	5.227	5.184		0.043
27.47	65.44	2.97	0.63	0.73	1.62	1.14	2.960	2.310	3.330	
2007	43	1	264	-334.246	412.751	D	5.184	5.184		0.000
29.33	62.50	2.40	0.55	0.46	1.40	0.00	2.960	2.310	3.330	
2007	44	1	235	-334.424	409.271	D	5.212	5.184		0.028
28.63	64.61	3.22	0.68	0.79	1.74	0.33	2.960	2.310	3.330	
2007	45	1	204	-334.689	404.051	D	5.242	5.184		0.058
34.85	60.02	2.74	0.58	0.43	1.37	0.02	2.960	2.310	3.330	
2007	46	1	209	-328.409	403.734	D	5.613	5.184		0.429
30.07	58.97	4.14	0.88	1.09	2.27	2.59	2.960	2.310	3.330	
2007	47	1	191	-332.353	400.444	D	5.277	5.184		0.093
40.77	34.70	7.88	1.68	2.29	4.43	8.26	2.960	2.310	3.330	
2007	48	1	276	-319.194	412.001	D	5.285	5.184		0.101
36.76	41.88	6.95	1.48	1.99	3.90	7.04	2.960	2.310	3.330	
2007	49	1	264	-334.246	412.751	D	5.293	5.184		0.109
46.19	25.31	9.07	1.93	2.58	5.10	9.83	2.960	2.310	3.330	
2007	50	1	264	-334.246	412.751	D	5.301	5.184		0.117
33.07	48.34	6.26	1.32	1.78	3.48	5.75	2.960	2.310	3.330	
2007	51	1	276	-319.194	412.001	D	5.252	5.184		0.068
33.50	50.46	5.99	1.27	1.60	3.30	3.89	2.960	2.310	3.330	
2007	52	1	289	-326.547	415.852	D	5.254	5.184		0.070
49.00	20.59	9.66	2.05	2.82	5.42	10.46	2.960	2.310	3.330	
2007	53	1	235	-334.424	409.271	D	5.185	5.184		0.001
25.61	64.29	4.24	0.90	0.96	2.37	1.63	2.960	2.310	3.330	
2007	54	1	204	-334.689	404.051	D	5.187	5.184		0.003
38.43	52.90	4.03	0.86	0.31	2.20	1.28	2.960	2.310	3.330	
2007	55	1	190	-333.610	400.508	D	5.184	5.184		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.960	2.310	3.330	
2007	56	1	190	-333.610	400.508	D	5.184	5.184		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.960	2.310	3.330	
2007	57	1	204	-334.689	404.051	D	5.252	5.184		0.068
28.05	65.11	3.48	0.74	0.70	1.82	0.10	2.960	2.310	3.330	
2007	58	1	286	-330.308	416.040	D	5.203	5.184		0.019
27.83	65.93	3.30	0.70	0.51	1.65	0.09	2.960	2.310	3.330	
2007	59	1	276	-319.194	412.001	D	5.303	5.184		0.119
27.18	58.95	4.72	1.00	1.37	2.64	4.14	2.960	2.310	3.330	
2007	60	1	190	-333.610	400.508	D	5.198	5.198		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.010	2.310	3.270	
2007	61	1	190	-333.610	400.508	D	5.198	5.198		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.010	2.310	3.270	
2007	62	1	190	-333.610	400.508	D	5.213	5.198		0.014
26.80	61.10	4.66	0.99	1.16	2.59	2.71	3.010	2.310	3.270	
2007	63	1	190	-333.610	400.508	D	5.267	5.198		0.068
37.25	45.20	6.53	1.40	1.89	3.69	4.03	3.010	2.310	3.270	
2007	64	1	190	-333.610	400.508	D	5.237	5.198		0.038
25.30	64.10	3.92	0.84	1.10	2.21	2.54	3.010	2.310	3.270	
2007	65	1	190	-333.610	400.508	D	5.333	5.198		0.134
29.12	57.63	4.92	1.04	1.20	2.66	3.43	3.010	2.310	3.270	
2007	66	1	190	-333.610	400.508	D	5.510	5.198		0.311
28.77	59.22	4.39	0.93	1.15	2.45	3.09	3.010	2.310	3.270	
2007	67	1	289	-326.547	415.852	D	5.328	5.198		0.130

43.35	34.41	7.87	1.67	2.26	4.41	6.04	3.010	2.310	3.270	
2007	68	1	264	-334.246	412.751	D	5.314	5.198		0.116
38.63	45.28	6.18	1.31	1.78	3.46	3.35	3.010	2.310	3.270	
2007	69	1	264	-334.246	412.751	D	5.206	5.198		0.007
27.13	62.51	4.05	0.89	1.11	2.33	1.98	3.010	2.310	3.270	
2007	70	1	222	-327.067	405.412	D	5.333	5.198		0.135
43.24	32.13	8.08	1.73	2.29	4.53	8.00	3.010	2.310	3.270	
2007	71	1	276	-319.194	412.001	D	5.274	5.198		0.076
47.60	25.51	8.92	1.89	2.56	5.00	8.52	3.010	2.310	3.270	
2007	72	1	264	-334.246	412.751	D	5.206	5.198		0.007
50.71	36.63	6.37	1.35	1.40	3.51	0.04	3.010	2.310	3.270	
2007	73	1	286	-330.308	416.040	D	5.214	5.198		0.016
38.38	54.96	3.45	0.73	0.61	1.86	0.02	3.010	2.310	3.270	
2007	74	1	190	-333.610	400.508	D	5.203	5.198		0.005
30.74	58.62	4.07	0.83	0.93	2.19	2.62	3.010	2.310	3.270	
2007	75	1	204	-334.689	404.051	D	5.302	5.198		0.104
33.16	58.14	4.26	0.90	0.93	2.29	0.32	3.010	2.310	3.270	
2007	76	1	264	-334.246	412.751	D	5.446	5.198		0.248
35.27	53.77	4.87	1.03	1.16	2.64	1.25	3.010	2.310	3.270	
2007	77	1	204	-334.689	404.051	D	5.204	5.198		0.005
60.68	16.54	9.71	2.07	2.49	5.43	3.08	3.010	2.310	3.270	
2007	78	1	190	-333.610	400.508	D	5.198	5.198		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.010	2.310	3.270	
2007	79	1	264	-334.246	412.751	D	5.207	5.198		0.009
53.77	14.32	10.20	2.18	3.00	5.75	10.78	3.010	2.310	3.270	
2007	80	1	191	-332.353	400.444	D	5.205	5.198		0.007
52.13	17.31	9.77	2.10	2.88	5.53	10.28	3.010	2.310	3.270	
2007	81	1	264	-334.246	412.751	D	5.224	5.198		0.026
28.84	60.04	4.66	0.99	1.09	2.55	1.83	3.010	2.310	3.270	
2007	82	1	285	-322.871	413.926	D	5.203	5.198		0.005
58.85	26.40	7.46	1.57	1.48	4.10	0.12	3.010	2.310	3.270	
2007	83	1	204	-334.689	404.051	D	5.202	5.198		0.003
40.55	46.28	5.34	1.16	1.28	2.98	2.43	3.010	2.310	3.270	
2007	84	1	264	-334.246	412.751	D	5.304	5.198		0.105
58.22	20.16	8.49	1.82	2.32	4.78	4.22	3.010	2.310	3.270	
2007	85	1	195	-331.009	402.121	D	5.220	5.198		0.022
56.79	9.78	10.75	2.30	3.08	6.06	11.24	3.010	2.310	3.270	
2007	86	1	190	-333.610	400.508	D	5.198	5.198		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.010	2.310	3.270	
2007	87	1	190	-333.610	400.508	D	5.198	5.198		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.010	2.310	3.270	
2007	88	1	190	-333.610	400.508	D	5.198	5.198		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.010	2.310	3.270	
2007	89	1	190	-333.610	400.508	D	5.273	5.198		0.075
33.50	58.96	3.66	0.77	0.68	1.86	0.57	3.010	2.310	3.270	
2007	90	1	264	-334.246	412.751	D	5.254	5.198		0.056
31.84	62.31	2.75	0.58	0.60	1.47	0.44	3.010	2.310	3.270	
2007	91	1	203	-305.880	400.904	D	5.154	5.154		0.000
28.40	63.11	4.35	0.92	0.45	2.15	0.09	2.870	2.210	3.050	
2007	92	1	203	-305.880	400.904	D	5.155	5.154		0.001
32.73	60.03	4.04	0.85	0.37	1.95	0.07	2.870	2.210	3.050	
2007	93	1	190	-333.610	400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007	94	1	264	-334.246	412.751	D	5.154	5.154		0.000
26.29	67.23	3.15	0.66	0.74	1.74	0.58	2.870	2.210	3.050	
2007	95	1	264	-334.246	412.751	D	5.334	5.154		0.180
33.34	55.52	4.60	0.97	1.30	2.56	1.70	2.870	2.210	3.050	
2007	96	1	190	-333.610	400.508	D	5.154	5.154		0.000

36.28	58.51	3.12	0.73	0.78	1.91	0.24	2.870	2.210	3.050	
2007 97	1	190	-333.610		400.508	D	5.154	5.154		0.000
26.91	62.93	4.14	0.89	0.94	2.22	1.85	2.870	2.210	3.050	
2007 98	1	264	-334.246		412.751	D	5.158	5.154		0.004
27.11	66.55	3.30	0.69	0.60	1.70	0.05	2.870	2.210	3.050	
2007 99	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 100	1	190	-333.610		400.508	D	5.156	5.154		0.002
30.59	52.17	5.81	1.24	1.52	3.27	5.40	2.870	2.210	3.050	
2007 101	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 102	1	264	-334.246		412.751	D	5.191	5.154		0.037
29.15	63.31	3.42	0.73	0.89	1.88	0.62	2.870	2.210	3.050	
2007 103	1	204	-334.689		404.051	D	5.244	5.154		0.090
34.70	54.42	4.69	0.99	1.22	2.57	1.42	2.870	2.210	3.050	
2007 104	1	190	-333.610		400.508	D	5.255	5.154		0.101
38.45	52.64	4.23	0.89	1.00	2.28	0.51	2.870	2.210	3.050	
2007 105	1	203	-305.880		400.904	D	5.173	5.154		0.019
50.78	36.22	6.52	1.38	1.31	3.56	0.22	2.870	2.210	3.050	
2007 106	1	203	-305.880		400.904	D	5.157	5.154		0.003
44.38	46.21	4.81	1.03	0.96	2.62	0.00	2.870	2.210	3.050	
2007 107	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 108	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 109	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 110	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 111	1	190	-333.610		400.508	D	5.154	5.154		0.000
46.22	43.71	4.71	1.01	1.29	2.64	0.33	2.870	2.210	3.050	
2007 112	1	264	-334.246		412.751	D	5.154	5.154		0.000
53.28	39.91	3.41	0.72	0.70	1.80	0.00	2.870	2.210	3.050	
2007 113	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 114	1	190	-333.610		400.508	D	5.154	5.154		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.870	2.210	3.050	
2007 115	1	264	-334.246		412.751	D	5.156	5.154		0.002
44.68	47.26	4.06	0.87	0.88	2.24	0.00	2.870	2.210	3.050	
2007 116	1	264	-334.246		412.751	D	5.166	5.154		0.012
60.25	22.86	8.10	1.72	2.27	4.51	0.29	2.870	2.210	3.050	
2007 117	1	190	-333.610		400.508	D	5.203	5.154		0.049
49.81	24.52	9.11	1.97	2.55	5.19	6.86	2.870	2.210	3.050	
2007 118	1	264	-334.246		412.751	D	5.355	5.154		0.201
49.06	28.37	8.74	1.85	2.51	4.89	4.58	2.870	2.210	3.050	
2007 119	1	276	-319.194		412.001	D	5.181	5.154		0.027
45.27	32.12	7.88	1.68	2.17	4.40	6.47	2.870	2.210	3.050	
2007 120	1	204	-334.689		404.051	D	5.156	5.154		0.002
67.18	13.43	9.30	1.98	1.50	5.12	1.51	2.870	2.210	3.050	
2007 121	1	203	-305.880		400.904	D	5.225	5.225		0.000
68.54	27.03	1.86	0.54	0.45	1.38	0.00	3.100	2.340	3.250	
2007 122	1	190	-333.610		400.508	D	5.225	5.225		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.100	2.340	3.250	
2007 123	1	190	-333.610		400.508	D	5.225	5.225		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.100	2.340	3.250	
2007 124	1	190	-333.610		400.508	D	5.236	5.225		0.011
37.72	45.14	5.75	1.23	1.53	3.21	5.42	3.100	2.340	3.250	
2007 125	1	190	-333.610		400.508	D	5.227	5.225		0.002

21.15	70.22	2.07	0.44	0.49	1.16	4.47	3.100	2.340	3.250	
2007 126	1	190	-333.610		400.508	D	5.297		5.225	0.072
20.37	71.17	1.50	0.32	0.39	0.84	5.40	3.100	2.340	3.250	
2007 127	1	190	-333.610		400.508	D	5.225		5.225	0.000
36.20	45.41	5.55	1.32	1.78	3.49	6.24	3.100	2.340	3.250	
2007 128	1	190	-333.610		400.508	D	5.381		5.225	0.156
49.65	28.21	8.02	1.71	2.27	4.49	5.66	3.100	2.340	3.250	
2007 129	1	289	-326.547		415.852	D	5.226		5.225	0.001
45.73	46.43	4.19	0.88	0.66	2.10	0.00	3.100	2.340	3.250	
2007 130	1	190	-333.610		400.508	D	5.231		5.225	0.006
63.16	26.39	5.22	1.11	1.23	2.88	0.00	3.100	2.340	3.250	
2007 131	1	286	-330.308		416.040	D	5.226		5.225	0.001
51.99	40.83	3.61	0.77	0.74	1.98	0.00	3.100	2.340	3.250	
2007 132	1	190	-333.610		400.508	D	5.225		5.225	0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.100	2.340	3.250	
2007 133	1	235	-334.424		409.271	D	5.253		5.225	0.028
78.24	2.25	9.15	1.94	2.47	5.11	0.84	3.100	2.340	3.250	
2007 134	1	202	-307.136		400.962	D	5.225		5.225	0.000
64.84	20.31	3.91	1.09	0.89	2.83	0.49	3.100	2.340	3.250	
2007 135	1	190	-333.610		400.508	D	5.228		5.225	0.003
27.96	63.73	4.13	0.87	0.88	2.15	0.28	3.100	2.340	3.250	
2007 136	1	264	-334.246		412.751	D	5.305		5.225	0.080
36.82	49.31	5.38	1.15	1.46	3.00	2.88	3.100	2.340	3.250	
2007 137	1	286	-330.308		416.040	D	5.226		5.225	0.001
44.63	48.13	3.71	0.79	0.67	2.06	0.00	3.100	2.340	3.250	
2007 138	1	190	-333.610		400.508	D	5.233		5.225	0.007
53.88	25.00	8.47	1.81	2.27	4.77	3.80	3.100	2.340	3.250	
2007 139	1	203	-305.880		400.904	D	5.234		5.225	0.008
68.03	21.44	5.20	1.11	1.21	2.87	0.15	3.100	2.340	3.250	
2007 140	1	289	-326.547		415.852	D	5.227		5.225	0.002
42.56	51.65	2.97	0.63	0.60	1.62	0.00	3.100	2.340	3.250	
2007 141	1	191	-332.353		400.444	D	5.236		5.225	0.011
58.47	23.32	8.24	1.75	2.00	4.59	1.64	3.100	2.340	3.250	
2007 142	1	190	-333.610		400.508	D	5.265		5.225	0.040
32.99	52.73	4.72	1.00	1.17	2.63	4.76	3.100	2.340	3.250	
2007 143	1	191	-332.353		400.444	D	5.333		5.225	0.108
36.75	43.57	6.51	1.39	1.80	3.66	6.33	3.100	2.340	3.250	
2007 144	1	190	-333.610		400.508	D	5.254		5.225	0.029
52.25	27.98	7.27	1.57	2.12	4.14	4.66	3.100	2.340	3.250	
2007 145	1	287	-329.055		415.977	D	5.230		5.225	0.005
60.48	22.57	7.66	1.63	1.70	4.29	1.68	3.100	2.340	3.250	
2007 146	1	264	-334.246		412.751	D	5.225		5.225	0.000
43.69	48.36	4.35	0.92	0.54	2.12	0.00	3.100	2.340	3.250	
2007 147	1	286	-330.308		416.040	D	5.225		5.225	0.000
44.17	47.86	4.34	0.92	0.58	2.16	0.00	3.100	2.340	3.250	
2007 148	1	190	-333.610		400.508	D	5.227		5.225	0.002
67.40	19.42	6.36	1.40	1.61	3.64	0.18	3.100	2.340	3.250	
2007 149	1	203	-305.880		400.904	D	5.225		5.225	0.000
30.59	64.60	2.31	0.49	0.44	1.23	0.13	3.100	2.340	3.250	
2007 150	1	204	-334.689		404.051	D	5.241		5.225	0.016
46.95	25.73	8.80	1.86	2.54	4.90	9.22	3.100	2.340	3.250	
2007 151	1	198	-312.162		401.199	D	5.281		5.225	0.056
41.35	36.94	6.62	1.41	1.92	3.72	8.03	3.100	2.340	3.250	
2007 152	1	203	-305.880		400.904	D	5.168		5.167	0.000
38.29	54.80	1.66	0.36	0.36	0.93	3.65	2.910	2.250	3.150	
2007 153	1	190	-333.610		400.508	D	5.167		5.167	0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 154	1	190	-333.610		400.508	D	5.167		5.167	0.000

0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 155	1	190	-333.610	400.508	D	5.241	5.167			0.074
57.80	12.82	10.54	2.26	3.03	5.95	7.61	2.910	2.250	3.150	
2007 156	1	190	-333.610	400.508	D	5.168	5.167			0.001
59.34	25.72	7.02	1.47	1.76	3.88	0.76	2.910	2.250	3.150	
2007 157	1	286	-330.308	416.040	D	5.291	5.167			0.124
65.43	8.81	10.58	2.25	2.81	5.93	4.18	2.910	2.250	3.150	
2007 158	1	190	-333.610	400.508	D	5.216	5.167			0.049
45.89	28.27	8.76	1.87	2.30	4.87	8.05	2.910	2.250	3.150	
2007 159	1	289	-326.547	415.852	D	5.265	5.167			0.098
42.06	34.21	7.93	1.69	2.31	4.46	7.34	2.910	2.250	3.150	
2007 160	1	209	-328.409	403.734	D	5.418	5.167			0.251
47.75	27.64	8.65	1.84	2.44	4.85	6.82	2.910	2.250	3.150	
2007 161	1	277	-332.904	414.427	D	5.174	5.167			0.007
67.97	13.77	9.31	1.97	1.88	4.94	0.16	2.910	2.250	3.150	
2007 162	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 163	1	190	-333.610	400.508	D	5.221	5.167			0.054
59.12	26.40	6.89	1.46	1.80	3.84	0.49	2.910	2.250	3.150	
2007 164	1	198	-312.162	401.199	D	5.167	5.167			0.000
43.75	42.71	0.00	0.73	0.56	1.79	0.03	2.910	2.250	3.150	
2007 165	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 166	1	264	-334.246	412.751	D	5.170	5.167			0.003
74.89	14.47	5.51	1.17	0.94	3.01	0.00	2.910	2.250	3.150	
2007 167	1	289	-326.547	415.852	D	5.168	5.167			0.001
65.09	27.32	3.94	0.84	0.73	2.11	0.00	2.910	2.250	3.150	
2007 168	1	190	-333.610	400.508	D	5.175	5.167			0.007
76.32	5.12	9.15	1.94	2.16	5.13	0.16	2.910	2.250	3.150	
2007 169	1	190	-333.610	400.508	D	5.218	5.167			0.051
51.67	17.93	10.00	2.13	2.88	5.63	9.75	2.910	2.250	3.150	
2007 170	1	204	-334.689	404.051	D	5.204	5.167			0.037
60.46	15.15	10.00	2.12	2.82	5.59	3.86	2.910	2.250	3.150	
2007 171	1	204	-334.689	404.051	D	5.175	5.167			0.008
62.17	24.53	7.14	1.50	1.06	3.55	0.05	2.910	2.250	3.150	
2007 172	1	277	-332.904	414.427	D	5.201	5.167			0.034
53.70	35.29	5.51	1.17	1.23	3.01	0.10	2.910	2.250	3.150	
2007 173	1	286	-330.308	416.040	D	5.168	5.167			0.001
68.93	23.53	3.77	0.80	0.90	2.06	0.00	2.910	2.250	3.150	
2007 174	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 175	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 176	1	190	-333.610	400.508	D	5.203	5.167			0.036
79.35	0.53	9.84	2.08	2.56	5.47	0.16	2.910	2.250	3.150	
2007 177	1	204	-334.689	404.051	D	5.182	5.167			0.015
45.34	34.33	7.92	1.68	2.21	4.40	4.13	2.910	2.250	3.150	
2007 178	1	204	-334.689	404.051	D	5.316	5.167			0.149
42.76	37.47	7.26	1.55	2.06	4.08	4.81	2.910	2.250	3.150	
2007 179	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 180	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 181	1	190	-333.610	400.508	D	5.167	5.167			0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.910	2.250	3.150	
2007 182	1	235	-334.424	409.271	D	5.108	5.083			0.025
72.79	3.66	11.59	2.45	2.05	6.09	1.38	2.640	2.080	2.890	
2007 183	1	192	-331.096	400.381	D	5.104	5.083			0.021



72.18	5.59	10.05	2.14	2.31	5.56	2.17	2.640	2.080	2.890	
2007 184	1	264	-334.246		412.751	D	5.083	5.083		0.000
73.73	16.15	5.07	1.12	0.84	2.92	0.00	2.640	2.080	2.890	
2007 185	1	209	-328.409		403.734	D	5.130	5.083		0.047
63.56	9.41	10.86	2.31	3.03	6.07	4.76	2.640	2.080	2.890	
2007 186	1	190	-333.610		400.508	D	5.090	5.083		0.007
66.38	11.28	9.55	2.04	2.41	5.28	3.05	2.640	2.080	2.890	
2007 187	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 188	1	260	-321.788		410.384	D	5.091	5.083		0.008
79.19	0.85	10.03	2.13	2.20	5.58	0.02	2.640	2.080	2.890	
2007 189	1	203	-305.880		400.904	D	5.083	5.083		0.000
81.80	2.91	7.81	1.67	1.43	4.24	0.00	2.640	2.080	2.890	
2007 190	1	264	-334.246		412.751	D	5.084	5.083		0.001
59.91	21.32	8.98	1.91	1.78	4.98	1.15	2.640	2.080	2.890	
2007 191	1	198	-312.162		401.199	D	5.083	5.083		0.000
23.44	71.88	0.00	0.08	0.08	0.21	0.14	2.640	2.080	2.890	
2007 192	1	204	-334.689		404.051	D	5.083	5.083		0.000
61.97	23.55	7.70	1.64	1.18	3.96	0.01	2.640	2.080	2.890	
2007 193	1	190	-333.610		400.508	D	5.138	5.083		0.055
59.50	8.35	11.66	2.48	3.21	6.50	8.30	2.640	2.080	2.890	
2007 194	1	264	-334.246		412.751	D	5.112	5.083		0.029
60.59	10.20	11.43	2.45	3.09	6.42	5.82	2.640	2.080	2.890	
2007 195	1	190	-333.610		400.508	D	5.089	5.083		0.007
62.41	2.25	12.65	2.71	3.60	7.13	9.25	2.640	2.080	2.890	
2007 196	1	204	-334.689		404.051	D	5.092	5.083		0.009
58.82	4.32	12.25	2.59	3.52	6.83	11.67	2.640	2.080	2.890	
2007 197	1	289	-326.547		415.852	D	5.163	5.083		0.080
65.60	3.98	11.63	2.46	3.14	6.43	6.76	2.640	2.080	2.890	
2007 198	1	204	-334.689		404.051	D	5.108	5.083		0.025
74.72	2.52	10.07	2.11	2.45	5.45	2.67	2.640	2.080	2.890	
2007 199	1	190	-333.610		400.508	D	5.091	5.083		0.008
80.22	7.70	6.08	1.29	1.38	3.33	0.00	2.640	2.080	2.890	
2007 200	1	250	-334.335		411.011	D	5.083	5.083		0.000
74.31	18.81	3.48	0.74	0.65	1.91	0.00	2.640	2.080	2.890	
2007 201	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 202	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 203	1	264	-334.246		412.751	D	5.083	5.083		0.000
65.43	0.33	14.10	2.76	3.41	7.28	6.46	2.640	2.080	2.890	
2007 204	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 205	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 206	1	190	-333.610		400.508	D	5.089	5.083		0.006
57.53	11.28	9.53	2.02	2.00	5.29	12.36	2.640	2.080	2.890	
2007 207	1	201	-308.393		401.021	D	5.083	5.083		0.000
52.34	19.53	4.69	1.26	0.87	3.05	7.52	2.640	2.080	2.890	
2007 208	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 209	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 210	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 211	1	190	-333.610		400.508	D	5.083	5.083		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 212	1	190	-333.610		400.508	D	5.083	5.083		0.000

0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.640	2.080	2.890	
2007 213	1	264	-334.246	412.751	D	5.080	5.067		0.013	
60.38	4.17	12.01	2.58	3.36	6.79	10.73	2.590	2.050	2.810	
2007 214	1	190	-333.610	400.508	D	5.067	5.067		0.000	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.590	2.050	2.810	
2007 215	1	264	-334.246	412.751	D	5.067	5.067		0.000	
26.46	57.50	4.17	0.93	1.06	2.46	7.33	2.590	2.050	2.810	
2007 216	1	204	-334.689	404.051	D	5.083	5.067		0.016	
50.40	34.72	5.91	1.26	1.26	3.26	3.18	2.590	2.050	2.810	
2007 217	1	264	-334.246	412.751	D	5.104	5.067		0.037	
74.45	8.69	8.13	1.72	1.88	4.41	0.72	2.590	2.050	2.810	
2007 218	1	277	-332.904	414.427	D	5.081	5.067		0.014	
66.32	16.28	8.34	1.76	1.81	4.43	1.06	2.590	2.050	2.810	
2007 219	1	277	-332.904	414.427	D	5.067	5.067		0.000	
67.21	10.08	10.96	2.34	2.69	6.18	0.52	2.590	2.050	2.810	
2007 220	1	190	-333.610	400.508	D	5.080	5.067		0.013	
69.38	6.17	11.21	2.37	2.30	6.09	2.48	2.590	2.050	2.810	
2007 221	1	264	-334.246	412.751	D	5.091	5.067		0.024	
63.10	14.28	10.04	2.12	2.64	5.58	2.24	2.590	2.050	2.810	
2007 222	1	277	-332.904	414.427	D	5.086	5.067		0.020	
70.21	1.87	12.21	2.58	2.70	6.45	3.99	2.590	2.050	2.810	
2007 223	1	203	-305.880	400.904	D	5.068	5.067		0.001	
76.31	6.62	8.44	1.79	1.76	4.64	0.45	2.590	2.050	2.810	
2007 224	1	190	-333.610	400.508	D	5.067	5.067		0.000	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.590	2.050	2.810	
2007 225	1	203	-305.880	400.904	D	5.073	5.067		0.006	
78.83	1.24	10.13	2.15	1.90	5.53	0.22	2.590	2.050	2.810	
2007 226	1	277	-332.904	414.427	D	5.074	5.067		0.007	
67.10	10.43	9.86	2.09	2.11	5.41	2.98	2.590	2.050	2.810	
2007 227	1	190	-333.610	400.508	D	5.135	5.067		0.068	
58.32	12.98	10.65	2.26	2.90	5.93	6.96	2.590	2.050	2.810	
2007 228	1	264	-334.246	412.751	D	5.077	5.067		0.011	
77.30	8.94	6.88	1.46	1.43	3.79	0.21	2.590	2.050	2.810	
2007 229	1	286	-330.308	416.040	D	5.067	5.067		0.000	
77.22	14.83	4.43	1.00	0.67	2.57	0.00	2.590	2.050	2.810	
2007 230	1	204	-334.689	404.051	D	5.068	5.067		0.001	
75.47	5.16	9.47	2.04	2.44	5.34	0.06	2.590	2.050	2.810	
2007 231	1	277	-332.904	414.427	D	5.067	5.067		0.001	
42.61	49.07	4.38	0.93	0.69	2.34	0.00	2.590	2.050	2.810	
2007 232	1	204	-334.689	404.051	D	5.075	5.067		0.008	
56.58	20.48	9.56	2.03	2.32	5.33	3.69	2.590	2.050	2.810	
2007 233	1	190	-333.610	400.508	D	5.106	5.067		0.040	
57.77	20.53	9.90	2.09	2.44	5.41	1.86	2.590	2.050	2.810	
2007 234	1	190	-333.610	400.508	D	5.067	5.067		0.000	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.590	2.050	2.810	
2007 235	1	286	-330.308	416.040	D	5.078	5.067		0.011	
41.98	46.69	5.87	1.23	0.88	2.88	0.47	2.590	2.050	2.810	
2007 236	1	264	-334.246	412.751	D	5.137	5.067		0.070	
33.71	52.78	3.88	0.83	1.06	2.16	5.59	2.590	2.050	2.810	
2007 237	1	264	-334.246	412.751	D	5.068	5.067		0.001	
61.24	20.30	8.85	1.88	1.79	4.91	1.06	2.590	2.050	2.810	
2007 238	1	286	-330.308	416.040	D	5.085	5.067		0.018	
67.54	4.55	11.60	2.44	2.79	6.21	4.86	2.590	2.050	2.810	
2007 239	1	264	-334.246	412.751	D	5.091	5.067		0.024	
53.55	19.85	9.60	2.04	2.60	5.36	7.02	2.590	2.050	2.810	
2007 240	1	264	-334.246	412.751	D	5.082	5.067		0.016	
42.93	43.81	5.25	1.12	1.37	2.95	2.58	2.590	2.050	2.810	
2007 241	1	190	-333.610	400.508	D	5.067	5.067		0.000	

0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.590	2.050	2.810	
2007	242	1	190	-333.610	400.508	D	5.067	5.067		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.590	2.050	2.810	
2007	243	1	190	-333.610	400.508	D	5.067	5.067		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.590	2.050	2.810	
2007	244	1	190	-333.610	400.508	D	5.059	5.057		0.002
71.36	0.54	12.62	2.67	3.43	7.04	2.34	2.560	2.020	2.740	
2007	245	1	217	-307.055	402.702	D	5.057	5.057		0.001
72.21	10.51	8.74	1.82	1.98	4.70	0.00	2.560	2.020	2.740	
2007	246	1	190	-333.610	400.508	D	5.057	5.057		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.560	2.020	2.740	
2007	247	1	235	-334.424	409.271	D	5.100	5.057		0.043
62.65	10.54	10.75	2.31	3.05	6.08	4.62	2.560	2.020	2.740	
2007	248	1	190	-333.610	400.508	D	5.075	5.057		0.018
75.75	3.42	10.15	2.15	2.06	5.62	0.84	2.560	2.020	2.740	
2007	249	1	190	-333.610	400.508	D	5.099	5.057		0.042
64.33	17.77	8.33	1.77	2.23	4.63	0.94	2.560	2.020	2.740	
2007	250	1	264	-334.246	412.751	D	5.059	5.057		0.002
72.07	8.79	9.48	2.01	2.31	5.27	0.04	2.560	2.020	2.740	
2007	251	1	190	-333.610	400.508	D	5.061	5.057		0.004
53.20	16.46	10.63	2.24	2.61	5.89	8.96	2.560	2.020	2.740	
2007	252	1	264	-334.246	412.751	D	5.057	5.057		0.000
28.34	62.74	2.37	0.55	0.65	1.45	4.30	2.560	2.020	2.740	
2007	253	1	222	-327.067	405.412	D	5.285	5.057		0.228
34.05	48.31	5.97	1.27	1.72	3.35	5.33	2.560	2.020	2.740	
2007	254	1	191	-332.353	400.444	D	5.220	5.057		0.163
43.23	31.22	8.95	1.89	2.52	4.99	7.20	2.560	2.020	2.740	
2007	255	1	286	-330.308	416.040	D	5.069	5.057		0.012
69.69	10.37	10.01	2.13	2.18	5.47	0.16	2.560	2.020	2.740	
2007	256	1	190	-333.610	400.508	D	5.057	5.057		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.560	2.020	2.740	
2007	257	1	264	-334.246	412.751	D	5.094	5.057		0.037
38.72	41.39	7.31	1.57	2.07	4.13	4.82	2.560	2.020	2.740	
2007	258	1	204	-334.689	404.051	D	5.116	5.057		0.059
50.29	30.72	9.11	1.91	1.40	4.45	2.12	2.560	2.020	2.740	
2007	259	1	276	-319.194	412.001	D	5.104	5.057		0.047
39.07	48.89	6.24	1.31	0.86	2.98	0.66	2.560	2.020	2.740	
2007	260	1	190	-333.610	400.508	D	5.102	5.057		0.045
57.52	12.68	11.27	2.38	3.05	6.23	6.86	2.560	2.020	2.740	
2007	261	1	277	-332.904	414.427	D	5.061	5.057		0.004
34.32	54.65	5.11	1.08	1.19	2.82	0.84	2.560	2.020	2.740	
2007	262	1	286	-330.308	416.040	D	5.058	5.057		0.001
29.92	60.67	4.51	0.95	0.80	2.48	0.67	2.560	2.020	2.740	
2007	263	1	289	-326.547	415.852	D	5.076	5.057		0.019
55.45	9.16	11.82	2.52	3.34	6.64	11.07	2.560	2.020	2.740	
2007	264	1	217	-307.055	402.702	D	5.080	5.057		0.024
43.62	36.41	8.45	1.79	1.92	4.56	3.25	2.560	2.020	2.740	
2007	265	1	190	-333.610	400.508	D	5.057	5.057		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.560	2.020	2.740	
2007	266	1	286	-330.308	416.040	D	5.077	5.057		0.021
54.48	7.64	11.84	2.51	2.93	6.63	13.98	2.560	2.020	2.740	
2007	267	1	226	-313.253	404.739	D	5.062	5.057		0.005
44.27	25.78	9.78	2.08	2.80	5.49	9.79	2.560	2.020	2.740	
2007	268	1	276	-319.194	412.001	D	5.123	5.057		0.066
37.76	42.63	7.23	1.53	1.85	3.93	5.07	2.560	2.020	2.740	
2007	269	1	276	-319.194	412.001	D	5.144	5.057		0.087
40.96	31.50	9.01	1.91	2.61	5.04	8.96	2.560	2.020	2.740	
2007	270	1	190	-333.610	400.508	D	5.085	5.057		0.028

46.39	23.30	10.04	2.14	2.88	5.63	9.63	2.560	2.020	2.740	
2007 271	1	190	-333.610		400.508	D	5.057	5.057		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.560	2.020	2.740	
2007 272	1	286	-330.308		416.040	D	5.058	5.057		0.001
61.77	4.83	12.57	2.67	3.41	7.05	7.73	2.560	2.020	2.740	
2007 273	1	204	-334.689		404.051	D	5.063	5.057		0.006
34.14	54.55	5.95	1.26	0.79	3.08	0.24	2.560	2.020	2.740	
2007 274	1	226	-313.253		404.739	D	5.066	5.064		0.002
56.36	4.64	12.70	2.69	3.05	7.10	13.44	2.580	2.050	2.820	
2007 275	1	264	-334.246		412.751	D	5.079	5.064		0.015
53.54	18.07	11.24	2.37	2.84	6.08	5.85	2.580	2.050	2.820	
2007 276	1	195	-331.009		402.121	D	5.066	5.064		0.002
56.35	7.70	12.31	2.61	3.30	6.91	10.79	2.580	2.050	2.820	
2007 277	1	190	-333.610		400.508	D	5.064	5.064		0.000
47.23	41.15	6.01	1.29	0.90	3.27	0.02	2.580	2.050	2.820	
2007 278	1	190	-333.610		400.508	D	5.064	5.064		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.580	2.050	2.820	
2007 279	1	190	-333.610		400.508	D	5.064	5.064		0.000
58.82	19.12	10.29	2.17	2.08	5.70	3.88	2.580	2.050	2.820	
2007 280	1	264	-334.246		412.751	D	5.109	5.064		0.045
23.69	66.95	3.94	0.83	0.76	2.05	1.78	2.580	2.050	2.820	
2007 281	1	190	-333.610		400.508	D	5.221	5.064		0.157
43.56	29.03	9.24	1.96	2.56	5.18	8.47	2.580	2.050	2.820	
2007 282	1	190	-333.610		400.508	D	5.086	5.064		0.022
41.62	30.54	9.14	1.94	2.63	5.11	9.03	2.580	2.050	2.820	
2007 283	1	277	-332.904		414.427	D	5.071	5.064		0.008
26.47	64.34	4.14	0.87	1.00	2.30	0.87	2.580	2.050	2.820	
2007 284	1	264	-334.246		412.751	D	5.070	5.064		0.006
50.27	35.72	7.03	1.48	1.07	3.71	0.72	2.580	2.050	2.820	
2007 285	1	204	-334.689		404.051	D	5.214	5.064		0.150
35.60	43.98	7.05	1.50	1.99	3.94	5.95	2.580	2.050	2.820	
2007 286	1	286	-330.308		416.040	D	5.064	5.064		0.000
43.63	49.35	3.57	0.76	0.60	1.96	0.02	2.580	2.050	2.820	
2007 287	1	190	-333.610		400.508	D	5.064	5.064		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.580	2.050	2.820	
2007 288	1	190	-333.610		400.508	D	5.064	5.064		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.580	2.050	2.820	
2007 289	1	190	-333.610		400.508	D	5.064	5.064		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.580	2.050	2.820	
2007 290	1	204	-334.689		404.051	D	5.064	5.064		0.000
42.71	39.58	0.00	0.92	0.82	2.32	0.07	2.580	2.050	2.820	
2007 291	1	190	-333.610		400.508	D	5.072	5.064		0.008
42.27	28.30	9.24	2.00	2.75	5.30	10.12	2.580	2.050	2.820	
2007 292	1	209	-328.409		403.734	D	5.250	5.064		0.186
42.40	28.93	9.25	1.97	2.68	5.18	9.58	2.580	2.050	2.820	
2007 293	1	191	-332.353		400.444	D	5.087	5.064		0.023
40.91	30.95	8.96	1.91	2.62	5.05	9.60	2.580	2.050	2.820	
2007 294	1	190	-333.610		400.508	D	5.064	5.064		0.001
40.59	31.26	8.86	1.92	2.63	5.07	9.71	2.580	2.050	2.820	
2007 295	1	289	-326.547		415.852	D	5.210	5.064		0.146
40.74	33.33	8.79	1.87	2.51	4.93	7.84	2.580	2.050	2.820	
2007 296	1	190	-333.610		400.508	D	5.066	5.064		0.002
43.07	27.43	9.27	2.02	2.77	5.33	10.09	2.580	2.050	2.820	
2007 297	1	276	-319.194		412.001	D	5.125	5.064		0.061
30.96	51.89	5.92	1.26	1.67	3.32	4.98	2.580	2.050	2.820	
2007 298	1	191	-332.353		400.444	D	5.208	5.064		0.145
52.85	18.64	10.50	2.24	2.91	5.86	7.00	2.580	2.050	2.820	
2007 299	1	203	-305.880		400.904	D	5.065	5.064		0.001

29.42	62.59	3.93	0.86	0.79	2.22	0.20	2.580	2.050	2.820	
2007 300	1	191	-332.353		400.444	D	5.283	5.064		0.219
30.43	52.95	5.90	1.28	1.67	3.34	4.44	2.580	2.050	2.820	
2007 301	1	289	-326.547		415.852	D	5.101	5.064		0.037
31.10	58.89	5.11	1.07	0.89	2.58	0.36	2.580	2.050	2.820	
2007 302	1	288	-327.801		415.914	D	5.211	5.064		0.148
37.50	49.41	6.15	1.30	1.30	3.25	1.09	2.580	2.050	2.820	
2007 303	1	286	-330.308		416.040	D	5.085	5.064		0.021
56.86	14.18	11.60	2.46	3.17	6.49	5.25	2.580	2.050	2.820	
2007 304	1	235	-334.424		409.271	D	5.169	5.064		0.105
38.11	40.87	7.87	1.67	2.23	4.42	4.83	2.580	2.050	2.820	
2007 305	1	250	-334.335		411.011	D	5.259	5.230		0.030
57.39	23.19	8.68	1.84	2.41	4.83	1.67	3.110	2.380	3.410	
2007 306	1	222	-327.067		405.412	D	5.371	5.230		0.141
33.58	49.71	5.87	1.25	1.69	3.30	4.60	3.110	2.380	3.410	
2007 307	1	276	-319.194		412.001	D	5.315	5.230		0.085
41.68	35.04	7.60	1.62	2.22	4.27	7.58	3.110	2.380	3.410	
2007 308	1	289	-326.547		415.852	D	5.330	5.230		0.100
47.27	27.10	8.66	1.83	2.50	4.82	7.82	3.110	2.380	3.410	
2007 309	1	190	-333.610		400.508	D	5.230	5.230		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.110	2.380	3.410	
2007 310	1	204	-334.689		404.051	D	5.258	5.230		0.028
24.26	64.57	3.97	0.85	1.08	2.22	3.04	3.110	2.380	3.410	
2007 311	1	209	-328.409		403.734	D	5.284	5.230		0.054
33.63	48.08	5.98	1.27	1.74	3.36	5.94	3.110	2.380	3.410	
2007 312	1	276	-319.194		412.001	D	5.413	5.230		0.183
38.82	40.67	6.87	1.46	1.99	3.86	6.32	3.110	2.380	3.410	
2007 313	1	190	-333.610		400.508	D	5.303	5.230		0.073
31.08	54.74	5.08	1.08	1.41	2.84	3.77	3.110	2.380	3.410	
2007 314	1	289	-326.547		415.852	D	5.279	5.230		0.049
53.99	21.03	9.14	1.93	2.56	5.07	6.28	3.110	2.380	3.410	
2007 315	1	276	-319.194		412.001	D	5.243	5.230		0.013
48.59	23.47	8.87	1.90	2.63	5.03	9.51	3.110	2.380	3.410	
2007 316	1	191	-332.353		400.444	D	5.370	5.230		0.140
28.63	59.08	4.56	0.97	1.20	2.53	3.03	3.110	2.380	3.410	
2007 317	1	288	-327.801		415.914	D	5.273	5.230		0.043
57.54	11.70	10.61	2.25	2.98	5.94	8.96	3.110	2.380	3.410	
2007 318	1	222	-327.067		405.412	D	5.274	5.230		0.045
39.74	37.65	7.28	1.55	2.11	4.09	7.58	3.110	2.380	3.410	
2007 319	1	276	-319.194		412.001	D	5.277	5.230		0.048
39.28	38.91	7.11	1.51	2.06	3.98	7.15	3.110	2.380	3.410	
2007 320	1	190	-333.610		400.508	D	5.439	5.230		0.209
47.34	29.56	8.36	1.78	2.21	4.60	6.16	3.110	2.380	3.410	
2007 321	1	191	-332.353		400.444	D	5.383	5.230		0.153
35.62	49.43	5.69	1.21	1.49	3.14	3.42	3.110	2.380	3.410	
2007 322	1	289	-326.547		415.852	D	5.494	5.230		0.265
41.21	39.94	6.62	1.40	1.87	3.69	5.26	3.110	2.380	3.410	
2007 323	1	190	-333.610		400.508	D	5.470	5.230		0.240
31.41	59.43	4.30	0.91	0.88	2.34	0.73	3.110	2.380	3.410	
2007 324	1	190	-333.610		400.508	D	5.230	5.230		0.000
26.90	66.54	2.82	0.62	0.60	1.59	0.06	3.110	2.380	3.410	
2007 325	1	190	-333.610		400.508	D	5.230	5.230		0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.110	2.380	3.410	
2007 326	1	277	-332.904		414.427	D	5.570	5.230		0.341
28.73	61.50	4.45	0.94	0.94	2.33	1.11	3.110	2.380	3.410	
2007 327	1	276	-319.194		412.001	D	5.518	5.230		0.289
34.30	47.46	6.12	1.30	1.77	3.43	5.61	3.110	2.380	3.410	
2007 328	1	222	-327.067		405.412	D	5.370	5.230		0.140

34.43	46.62	6.19	1.32	1.79	3.47	6.19	3.110	2.380	3.410	
2007 329	1	209		-328.409	403.734	D	5.255		5.230	0.026
29.85	54.65	5.15	1.11	1.42	2.92	4.90	3.110	2.380	3.410	
2007 330	1	250		-334.335	411.011	D	5.313		5.230	0.083
33.98	52.64	5.48	1.16	1.55	3.07	2.12	3.110	2.380	3.410	
2007 331	1	190		-333.610	400.508	D	5.236		5.230	0.006
31.68	56.27	4.75	1.00	1.06	2.59	2.65	3.110	2.380	3.410	
2007 332	1	244		-323.128	408.706	D	5.423		5.230	0.193
39.74	37.68	7.29	1.55	2.11	4.09	7.54	3.110	2.380	3.410	
2007 333	1	276		-319.194	412.001	D	5.323		5.230	0.093
28.94	59.23	4.45	0.94	1.25	2.48	2.72	3.110	2.380	3.410	
2007 334	1	264		-334.246	412.751	D	5.237		5.230	0.007
26.36	62.59	4.06	0.86	1.00	2.27	2.87	3.110	2.380	3.410	
2007 335	1	190		-333.610	400.508	D	5.191		5.191	0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.980	2.330	3.380	
2007 336	1	287		-329.055	415.977	D	5.288		5.191	0.098
31.70	54.67	5.15	1.08	1.46	2.85	3.10	2.980	2.330	3.380	
2007 337	1	289		-326.547	415.852	D	5.467		5.191	0.276
34.66	50.75	6.13	1.29	1.38	3.24	2.55	2.980	2.330	3.380	
2007 338	1	289		-326.547	415.852	D	5.257		5.191	0.066
43.57	31.95	8.28	1.75	2.39	4.63	7.45	2.980	2.330	3.380	
2007 339	1	264		-334.246	412.751	D	5.217		5.191	0.026
31.02	57.48	4.15	0.88	1.09	2.32	3.06	2.980	2.330	3.380	
2007 340	1	204		-334.689	404.051	D	5.358		5.191	0.167
33.86	54.45	4.06	0.86	1.10	2.26	3.40	2.980	2.330	3.380	
2007 341	1	190		-333.610	400.508	D	5.370		5.191	0.180
28.19	62.06	3.44	0.73	0.92	1.91	2.74	2.980	2.330	3.380	
2007 342	1	190		-333.610	400.508	D	5.191		5.191	0.000
0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.980	2.330	3.380	
2007 343	1	289		-326.547	415.852	D	5.251		5.191	0.060
38.61	38.55	7.38	1.57	2.14	4.14	7.60	2.980	2.330	3.380	
2007 344	1	262		-319.279	410.261	D	5.448		5.191	0.257
39.70	36.77	7.61	1.62	2.21	4.26	7.83	2.980	2.330	3.380	
2007 345	1	190		-333.610	400.508	D	5.293		5.191	0.102
27.94	63.54	4.15	0.87	0.73	2.10	0.67	2.980	2.330	3.380	
2007 346	1	286		-330.308	416.040	D	5.457		5.191	0.267
33.99	52.58	5.34	1.13	1.52	2.98	2.46	2.980	2.330	3.380	
2007 347	1	190		-333.610	400.508	D	5.198		5.191	0.007
34.48	46.26	6.36	1.37	1.87	3.61	6.05	2.980	2.330	3.380	
2007 348	1	209		-328.409	403.734	D	5.393		5.191	0.202
32.44	55.54	4.65	0.98	1.09	2.49	2.80	2.980	2.330	3.380	
2007 349	1	204		-334.689	404.051	D	5.412		5.191	0.221
33.21	50.50	5.91	1.25	1.62	3.28	4.22	2.980	2.330	3.380	
2007 350	1	190		-333.610	400.508	D	5.348		5.191	0.158
30.43	55.92	5.28	1.13	1.46	2.95	2.84	2.980	2.330	3.380	
2007 351	1	190		-333.610	400.508	D	5.299		5.191	0.108
29.22	61.61	4.49	0.95	0.78	2.29	0.66	2.980	2.330	3.380	
2007 352	1	190		-333.610	400.508	D	5.321		5.191	0.130
33.04	51.45	5.91	1.26	1.65	3.31	3.38	2.980	2.330	3.380	
2007 353	1	264		-334.246	412.751	D	5.296		5.191	0.106
33.24	52.09	5.73	1.22	1.61	3.22	2.89	2.980	2.330	3.380	
2007 354	1	289		-326.547	415.852	D	5.260		5.191	0.070
42.28	32.27	8.16	1.73	2.38	4.57	8.61	2.980	2.330	3.380	
2007 355	1	277		-332.904	414.427	D	5.306		5.191	0.115
38.28	38.58	7.31	1.55	2.10	4.09	8.10	2.980	2.330	3.380	
2007 356	1	190		-333.610	400.508	D	5.277		5.191	0.086
37.82	41.11	7.04	1.51	2.06	3.99	6.48	2.980	2.330	3.380	
2007 357	1	191		-332.353	400.444	D	5.233		5.191	0.042

41.40	33.68	7.96	1.69	2.34	4.48	8.45	2.980	2.330	3.380	
2007 358	1	276	-319.194		412.001	D	5.245		5.191	0.055
32.73	51.40	5.67	1.21	1.52	3.14	4.32	2.980	2.330	3.380	
2007 359	1	190	-333.610		400.508	D	5.213		5.191	0.023
33.70	47.12	6.30	1.34	1.79	3.53	6.23	2.980	2.330	3.380	
2007 360	1	276	-319.194		412.001	D	5.248		5.191	0.058
27.20	60.56	4.44	0.94	1.13	2.43	3.30	2.980	2.330	3.380	
2007 361	1	190	-333.610		400.508	D	5.497		5.191	0.307
27.92	65.58	3.30	0.69	0.54	1.64	0.32	2.980	2.330	3.380	
2007 362	1	276	-319.194		412.001	D	5.697		5.191	0.506
28.35	58.79	4.63	0.98	1.24	2.55	3.46	2.980	2.330	3.380	
2007 363	1	190	-333.610		400.508	D	5.485		5.191	0.294
31.38	53.29	5.56	1.19	1.49	3.09	4.01	2.980	2.330	3.380	

--- Ranked Daily Visibility Change ---

START TIME

% of Modeled Extinction by Species

Small Large SSalt

YEAR	DAY	HR	RECEPTOR	COORDINATES (km)			TYPE	DV(Total) DV(BKG) F(RH)			DELTA DV
%_SO4	%_NO3	%_OC	%_EC	%_PMC	%_PMF	%_NO2	F(RH)	F(RH)	F(RH)		
2007	40	1	264	-334.246	412.751	D	6.122		5.184	0.938	
26.57	65.08	3.43	0.72	0.82	1.85	1.52	2.960	2.310	3.330	1	
2007	362	1	276	-319.194	412.001	D	5.697		5.191	0.506	
28.35	58.79	4.63	0.98	1.24	2.55	3.46	2.980	2.330	3.380	2	
2007	36	1	191	-332.353	400.444	D	5.649		5.184	0.465	
31.65	54.76	5.55	1.13	1.40	2.94	2.56	2.960	2.310	3.330	3	
2007	46	1	209	-328.409	403.734	D	5.613		5.184	0.429	
30.07	58.97	4.14	0.88	1.09	2.27	2.59	2.960	2.310	3.330	4	
2007	326	1	277	-332.904	414.427	D	5.570		5.230	0.341	
28.73	61.50	4.45	0.94	0.94	2.33	1.11	3.110	2.380	3.410	5	
2007	19	1	209	-328.409	403.734	D	5.498		5.178	0.319	
38.29	40.85	7.26	1.53	2.05	4.03	5.98	2.940	2.310	3.370	6	
2007	66	1	190	-333.610	400.508	D	5.510		5.198	0.311	
28.77	59.22	4.39	0.93	1.15	2.45	3.09	3.010	2.310	3.270	7	
2007	361	1	190	-333.610	400.508	D	5.497		5.191	0.307	
27.92	65.58	3.30	0.69	0.54	1.64	0.32	2.980	2.330	3.380	8	
2007	363	1	190	-333.610	400.508	D	5.485		5.191	0.294	
31.38	53.29	5.56	1.19	1.49	3.09	4.01	2.980	2.330	3.380	9	
2007	327	1	276	-319.194	412.001	D	5.518		5.230	0.289	
34.30	47.46	6.12	1.30	1.77	3.43	5.61	3.110	2.380	3.410	10	
2007	337	1	289	-326.547	415.852	D	5.467		5.191	0.276	
34.66	50.75	6.13	1.29	1.38	3.24	2.55	2.980	2.330	3.380	11	
2007	20	1	287	-329.055	415.977	D	5.452		5.178	0.274	
26.61	62.82	4.30	0.91	1.16	2.38	1.82	2.940	2.310	3.370	12	
2007	346	1	286	-330.308	416.040	D	5.457		5.191	0.267	
33.99	52.58	5.34	1.13	1.52	2.98	2.46	2.980	2.330	3.380	13	
2007	322	1	289	-326.547	415.852	D	5.494		5.230	0.265	
41.21	39.94	6.62	1.40	1.87	3.69	5.26	3.110	2.380	3.410	14	
2007	344	1	262	-319.279	410.261	D	5.448		5.191	0.257	
39.70	36.77	7.61	1.62	2.21	4.26	7.83	2.980	2.330	3.380	15	
2007	160	1	209	-328.409	403.734	D	5.418		5.167	0.251	
47.75	27.64	8.65	1.84	2.44	4.85	6.82	2.910	2.250	3.150	16	
2007	76	1	264	-334.246	412.751	D	5.446		5.198	0.248	
35.27	53.77	4.87	1.03	1.16	2.64	1.25	3.010	2.310	3.270	17	
2007	323	1	190	-333.610	400.508	D	5.470		5.230	0.240	
31.41	59.43	4.30	0.91	0.88	2.34	0.73	3.110	2.380	3.410	18	
2007	22	1	209	-328.409	403.734	D	5.418		5.178	0.239	
41.58	34.05	7.97	1.70	2.31	4.48	7.89	2.940	2.310	3.370	19	

2007 253 1	222	-327.067	405.412	D	5.285	5.057	0.228
34.05 48.31	5.97	1.27 1.72	3.35	5.33	2.560 2.020	2.740	20
2007 349 1	204	-334.689	404.051	D	5.412	5.191	0.221
33.21 50.50	5.91	1.25 1.62	3.28	4.22	2.980 2.330	3.380	21
2007 300 1	191	-332.353	400.444	D	5.283	5.064	0.219
30.43 52.95	5.90	1.28 1.67	3.34	4.44	2.580 2.050	2.820	22

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--- Number of days with Delta-Deciview => 0.50:      2
--- Number of days with Delta-Deciview => 1.00:      0
---           Largest Delta-Deciview   =              0.938

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CALPOST Version 6.221

Level 080724

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Run-Length VISIBILITY

VISIB BOESNCFG

(deciview)

RECEPTOR	COORDINATES (km)	TYPE	DV(Total)	DV(BKG)	DELTA DV
204	-334.689 404.051	D	5.191	5.149	0.042

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--- Number of recs with Delta-Deciview > 0.10:      0
---           Largest Delta-Deciview   =              0.042

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CALPOST Version 6.221

Level 080724

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SUMMARY SECTION

VISIB BOESNCFG

(1/Mega-m)

RECEPTOR RANK	COORDINATES (km) FOR AVERAGE PERIOD	TYPE	PEAK (YEAR, DAY, START TIME)	FOR
264 RANK 1	-334.246 412.751 24 HOUR	DISCRETE	1.8445E+01 (2007,040,0100)	



276	-319.194	412.001	DISCRETE	1.7677E+01 (2007,362,0100)
RANK 2	24	HOUR		
209	-328.409	403.734	DISCRETE	1.7529E+01 (2007,046,0100)
RANK 3	24	HOUR		
244	-323.128	408.706	DISCRETE	1.7460E+01 (2007,046,0100)
RANK 4	24	HOUR		

\*\*\*\*\*  
RUN MESSAGES EXTRACTED FROM THE DOS WINDOW  
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CALPOST Application Completed  
Last Period Processed ENDS at:  
Year: 2007 Month: 12 Day: 30 Julian day: 364 Hour: 23 Second: 0