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**********
                                    CALPOST  Version 6.221        Level 080724
*****************************************************************************************************************
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 Internal Coordinate Transformations by  ---  COORDLIB   Version: 1.99   Level: 070921



  Run Title:
    Cleco, Brame Energy Center
    BRETON WILDERNESS AREA CALPOST 2002
    VISIBILITY METHOD 8

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

     Option to run all periods found
     in the met. file(s)  (METRUN)       Default: 0   ! METRUN =   1  !

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

     Starting date:    Year   (ISYR)  --    No default   ! ISYR  =  2002  !
                    Month  (ISMO)  --    No default   ! ISMO  =  1  !
                    Day    (ISDY)  --    No default   ! ISDY  =  1  !
     Starting time:    Hour   (ISHR)  --    No default   ! ISHR  =  0  !
                    Minute (ISMIN) --    No default   ! ISMIN =  0  !
                    Second (ISSEC) --    No default   ! ISSEC =  0  !

     Ending date:      Year   (IEYR)  --    No default   ! IEYR  =  2002  !
                    Month  (IEMO)  --    No default   ! IEMO  =  12  !
                    Day    (IEDY)  --    No default   ! IEDY  =  31  !
     Ending time:      Hour   (IEHR)  --    No default   ! IEHR  =  0  !
                    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 = 6.0 !

     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(new) = X(old) * A + B A = 0.0 ! B = 0.0 !
(NOT applied if A = B = 0.0) B = 0.0

Add Hourly Background Concentrations/Fluxes?
(LBACK) -- Default: F ! LBACK = F !

Source 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 = 1.0 !

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 = 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0,
8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0 !

NO2/NOx ratio for each NOx concentration:
(TNO2NOX) -- No default

```
! TNO2NOX = 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0,
        1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0 !


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 = 80*0, 40*1!

--Select range of GRIDDED receptors (only used when LG = T):

X index of LL corner (IBGRID) -- Default: -1 ! IBGRID = -1 !
(-1 OR 1 <= IBGRID <= NX)

Y index of LL corner (JBGRID) -- Default: -1 ! JBGRID = -1 !
(-1 OR 1 <= JBGRID <= NY)

X index of UR corner (IEGRID) -- Default: -1 ! IEGRID = -1 !
(-1 OR 1 <= IEGRID <= NX)

Y index of UR corner (JEGRID) -- Default: -1 ! JEGRID = -1 !
(-1 OR 1 <= JEGRID <= NY)

Note: Entire grid is processed if IBGRID=JBGRID=IEGRID=JEGRID=-1

--Specific gridded receptors can also be excluded from CALPOST processing by filling a processing grid array with 0s and 1s. If the processing flag for receptor index (i,j) is 1 (ON), that receptor will be processed if it lies within the range delineated by IBGRID, JBGRID,IEGRID,JEGRID and if LG=T. If it is 0 (OFF), it will not be processed in the run. By default, all array values are set to 1 (ON).

Number of gridded receptor rows provided in Subgroup (1a) to identify specific gridded receptors to process
(NGONOFF) -- Default: 0 ! NGONOFF = 0 !

!END!

Subgroup (1a) -- Specific gridded receptors included/excluded
---

Specific gridded receptors are excluded from CALPOST processing by filling a processing grid array with 0s and 1s. A total of NGONOFF lines are read here. Each line corresponds to one 'row' in the sampling grid, starting with the NORTHERNMOST row that contains receptors that you wish to exclude, and finishing with row 1 to the SOUTH (no intervening rows may be skipped). Within a row, each receptor position is assigned either a 0 or 1, starting with the westernmost receptor.
0 = gridded receptor not processed
1 = gridded receptor processed

Repeated value notation may be used to select blocks of receptors:
23*1, 15*0, 12*1

Because all values are initially set to 1, any receptors north of the first row entered, or east of the last value provided in a row, remain ON.

(NGXRECP) -- Default: 1

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

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 = BRET !

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 = PMF !

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

MODELED particulate species:
PM COARSE (EEPMC) -- Default: 0.6 ! EEPMC = 0.6 !
PM FINE (EEPMF) -- Default: 1.0 ! EEPMF = 1 !
BACKGROUND particulate species:
PM COARSE (EEPMCBK) -- Default: 0.6 ! EEPMCBK = 0.6 !
Other species:
AMMONIUM SULFATE (EESO4) -- Default: 3.0 ! EESO4 = 3 !
AMMONIUM NITRATE (EENO3) -- Default: 3.0 ! EENO3 = 3 !
ORGANIC CARBON (EEOC) -- Default: 4.0 ! EEOC = 4 !
SOIL (EESOIL)-- Default: 1.0 ! EESOIL = 1 !
ELEMENTAL CARBON (EEEC) -- Default: 10. ! EEEC = 10 !
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 = 12 !
Percentage of particles affected by relative humidity
(RHFRAC) -- No default ! RHFRAC = 10 !

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 = 3.5, 3.3, 3.3, 3.3,
                             3.4, 3.6, 3.8, 3.8,
                             3.6, 3.4, 3.4, 3.5 !
```

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 = 000000 *
(TZONE)    -- No default   * TZONE =      0. *
```

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 = 0.23, 0.23, 0.23, 0.23,
                             0.23, 0.23, 0.23, 0.23,
                             0.23, 0.23, 0.23, 0.23 !
(BKNO3)  -- No default     ! BKNO3 = 0.10, 0.10, 0.10, 0.10,
                             0.10, 0.10, 0.10, 0.10,
                             0.10, 0.10, 0.10, 0.10 !
(BKPMC)  -- No default     ! BKPMC = 3.01, 3.01, 3.01, 3.01,
                             3.01, 3.01, 3.01, 3.01,
                             3.01, 3.01, 3.01, 3.01 !
(BKOC)   -- No default     ! BKOC  = 1.78, 1.78, 1.78, 1.78,
                             1.78, 1.78, 1.78, 1.78,
                             1.78, 1.78, 1.78, 1.78 !
(BKSOIL) -- No default     ! BKSOIL= 0.48, 0.48, 0.48, 0.48,
                             0.48, 0.48, 0.48, 0.48,
                             0.48, 0.48, 0.48, 0.48 !
(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 !
```

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 RHFSML, 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= 0.19, 0.19, 0.19, 0.19,
0.19, 0.19, 0.19, 0.19,
0.19, 0.19, 0.19, 0.19 !

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= 4.08, 3.82, 3.79, 3.74,
3.94, 4.12, 4.41, 4.37,
4.18, 3.92, 3.93, 4.06 !

Large ammonium sulfate and ammonium nitrate particle sizes
(RHFLRG) -- No default ! RHFLRG= 2.91, 2.76, 2.74, 2.72,
2.83, 2.94, 3.10, 3.07,
2.97, 2.82, 2.83, 2.90 !

Sea salt particles
(RHFSEA) -- No default ! RHFSEA= 4.10, 3.89, 3.87, 3.85,
4.02, 4.21, 4.44, 4.38,

4.23, 3.99, 4.01, 4.11 !

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 = 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	

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 = F !

3) Top 'N' table for each averaging time selected
[List file or Plot file]
(LTOPN) -- Default: F ! LTOPN = F !

-- Number of 'Top-N' values at each receptor
selected (NTOP must be <= 4)
(NTOP) -- Default: 4 ! NTOP = 4 !

-- Specific ranks of 'Top-N' values reported
(NTOP values must be entered)
(ITOP(4) array) -- Default: ! ITOP = 1,2,3,4 !
1,2,3,4

4) Threshold exceedance counts for each receptor and each averaging
time selected
[List file or Plot file]
(LEXCD) -- Default: F ! LEXCD = F !

-- Identify the threshold for each averaging time by assigning a
non-negative value (output units).

-- Default: -1.0
Threshold for 1-hr averages (THRESH1) ! THRESH1 = -1.0 !
Threshold for 3-hr averages (THRESH3) ! THRESH3 = -1.0 !
Threshold for 24-hr averages (THRESH24) ! THRESH24 = -1.0 !
Threshold for NAVG-hr averages (THRESHN) ! THRESHN = -1.0 !

-- Counts for the shortest averaging period selected can be
tallied daily, and receptors that experience more than NCOUNT
counts over any NDAY period will be reported. This type of
exceedance violation output is triggered only if NDAY > 0.

Accumulation period(Days)
(NDAY) -- Default: 0 ! NDAY = 0 !
Number of exceedances allowed
(NCOUNT) -- Default: 1 ! NCOUNT = 1 !

5) Selected day table(s)

Echo Option -- Many records are written each averaging period
selected and output is grouped by day
[List file or Plot file]
(LECHO) -- Default: F ! LECHO = F !

Timeseries Option -- Averages at all selected receptors for
each selected averaging period are written to timeseries files.
Each file contains one averaging period, and all receptors are
written to a single record each averaging time.
[TSERIES_ASPEC_ttHR_CONC_TSUNAM.DAT files]
(LTIME) -- Default: F ! LTIME = F !

Peak Value Option -- Averages at all selected receptors for
each selected averaging period are screened and the peak value
each period is written to timeseries files.
Each file contains one averaging period.
[PEAKVAL_ASPEC_ttHR_CONC_TSUNAM.DAT files]
(LPEAK) -- Default: F ! LPEAK = F !

-- Days selected for output
(IECHO(366)) -- Default: 366*0
! IECHO = 366*0 !
(366 values must be entered)

Plot output options

Plot files can be created for the Top-N, Exceedance, and Echo
tables selected above. Two formats for these files are available,
DATA and GRID. In the DATA format, results at all receptors are
listed along with the receptor location [x,y,val1,val2,...].
In the GRID format, results at only gridded receptors are written,
using a compact representation. The gridded values are written in
rows (x varies), starting with the most southern row of the grid.
The GRID format is given the .GRD extension, and includes headers
compatible with the SURFER(R) plotting software.

A plotting and analysis file can also be created for the daily
peak visibility summary output, in DATA format only.

Generate Plot file output in addition to writing tables
to List file?
(LPLT) -- Default: F ! LPLT = F !

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: 1952 2051

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CALPOST Version 6.221 Level 080724
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CALPOST Control File Input Summary ----------

Replace run data with data in Puff file 1=Y: 1
Run starting date -- year: 2002
month: 1
day: 1
Julian day: 0
Time at start of run - hour(0-23): 0
- minute: 0
- second: 0

Run ending date -- year: 2002
month: 12
day: 31
Julian day: 0
Time at end of run - hour(0-23): 0
- minute: 0
- second: 0

Base time zone (Group 1): 6.0

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
1= Contributions are summed
2= TRACEBACK mode for 1 receptor
3= Reported TOTAL is processed

Receptor information
Gridded receptors processed?: F
Discrete receptors processed?: T
CTSG Complex terrain receptors processed?: F

Discrete Receptors Processed

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Visibility Processing Selected

Visibility Options are Checked for FLAG 2008

Class I Area: BRET

Extinction Computation includes:
SULFATES
NITRATES
NO2 GAS
Fraction CALPUFF NOx used as NO2 : 1.000
ORGANIC CARBON
ELEMENTAL CARBON
COARSE PARTICLES
FINE PARTICLES
BACKGROUND
Particle f(RH) growth curve(s) : IMPROVE (2006) Tables
Max. RH % for particle growth (%): 95.000

Species name for modeled particulates
coarse: PMC
fine: PMF

Extinction Efficiency (1/Mm per ug/m**3)
ammonium sulfate S: 2.2000
ammonium sulfate L: 4.8000
ammonium nitrate S: 2.4000
ammonium nitrate L: 5.1000
organic carbon S: 2.8000
organic carbon L: 6.1000
sea salt: 1.7000
NO2 gas: 0.1755
soil: 1.0000
elemental carbon: 10.0000
MODELED coarse PM: 0.6000
MODELED fine PM: 1.0000
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 .4080E+01
2 .3820E+01
3 .3790E+01
4 .3740E+01
5 .3940E+01
6 .4120E+01
7 .4410E+01
8 .4370E+01
9 .4180E+01
10 .3920E+01
11 .3930E+01
12 .4060E+01

Monthly RH factor for large particles:
1 .2910E+01
2 .2760E+01
3 .2740E+01

4	.2720E+01
5	.2830E+01
6	.2940E+01
7	.3100E+01
8	.3070E+01
9	.2970E+01
10	.2820E+01
11	.2830E+01
12	.2900E+01

Monthly RH factor for sea salt:

1	.4100E+01
2	.3890E+01
3	.3870E+01
4	.3850E+01
5	.4020E+01
6	.4210E+01
7	.4440E+01
8	.4380E+01
9	.4230E+01
10	.3990E+01
11	.4010E+01
12	.4110E+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
1	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
2	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
3	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
4	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
5	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
6	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
7	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
8	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
9	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
10	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
11	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00
12	.2300E+00	.1000E+00	.3010E+01	.1780E+01	.4800E+00	.2000E-01	.1900E+00

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: F
Top-N values at each receptor: F
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

Plot file option
Plot files created: F

MAPSPEC: Species Mapping
Number of species-levels in file : 9
Number of species-levels processed: 10

Input ID	Processing ID	Name	
1	1	SO2	1
2	2	SO4	1
3	3	NOX	1
4	4	HNO3	1
5	5	NO3	1
6	6	PMC	1
7	7	PMF	1
8	8	EC	1
9	9	SOA	1

Visibility Species

	Processing ID	Name	
sulfate	2	SO4	1
no2gas	10	NO2	1
noxgas	3	NOX	1
nitrate	5	NO3	1
specpmf	7	PMF	1
specpmc	6	PMC	1
orgcarb	9	SOA	1
lmncarb	8	EC	1

IDENTIFICATION OF PROCESSED MODEL FILE ----------

CALPUFF 5.8.4 130731

CLECO, Brame
ALM-step1
Repartitioning of NO3/HNO3

Averaging time for values reported from model:
1 HOUR

Number of averaging periods in file from model:
8753

Chemical species names for each layer in model:
SO2 1
SO4 1
NOX 1
HNO3 1
NO3 1
PMC 1
PMF 1
EC 1
SOA 1

QA Information -- Internal Representation of Data

CONTENTS OF CONTROL FILE ----------
METRUN = 1
(so times in model output file are used)
isyr,ismo,isdy = 2001 12 31
ishr,ismin,issec = 23 0 0
ieyr,iemo,iedy = 2002 12 31
iehr,iemin,iesec = 16 0 0
nper = 8753
aspec,ilayer =VISIB 1
asplv =VISIB BOESNCFG
NO2CALC = 1
RNO2NOX = 1.00000000
MSOURCE = 0
MCALMPRO = 0
MET1FMT = 1
LG,LD,LCT,LDRING = F T F F
IBGRID,IEGRID = -1 -1
JBGRID,JEGRID = -1 -1
NDRECP =
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
a,b,LSCALE = 0.00000000E+00 0.00000000E+00 F
LBACK = F
MVISBK = 8
MVISCHECK = 1
AREANAME =BRET
MFRH = 4
RHMAX,BEXTRAY = 95.0000000 11.0000000
RHFRAC,BEXTBK = 10.0000000 12.0000000
LVSO4,LVNO3,LVNO2 = T T T
LVOC,LVEC = T T
LVPMC,LVPMF,LVBK = T T T
SPECPMC,SPECPMF =PMC PMF
EEPMC,EEPMF,EEPMCBK = 0.600000024 1.00000000 0.600000024
EESO4,EENO3,EEOC = 3.00000000 3.00000000 4.00000000
EESO4S,EENO3S,EEOCS = 2.20000005 2.40000010 2.79999995
EESO4L,EENO3L,EEOCL = 4.80000019 5.09999990 6.09999990

```
EESOIL,EEEC,EENO2   = 1.00000000 10.0000000 0.175500005
navg,ntop           = 0 4
navgh,navgm,navgs   = 0 0 0
itop = 1 2 3 4
L[1,3,24]HR         = F F T
LNAVG, LRUNL        = F F
LT50, LTOPN, LEXCD  = F F F
LECHO, LTIME, LPEAK = F F F
THRESH1             = -1.00000000
THRESH3             = -1.00000000
THRESH24            = -1.00000000
THRESHN             = -1.00000000
LPLT, LGRD          = F F
MDVIS               = 1
LDEBUG              = F
LCTSG               = F

CONTENTS OF HEADER OF MODEL OUTPUT FILE ---------
model :   CALPUFF     5.8.4       130731
msyr,mjsday      = 2001 365
mshr,mssec       = 23 0
nsecdt (period)  = 3600
xbtz             = 6.00000000
mnper,nszout,mavgpd = 8753 9 1
xorigkm,yorigkm,nssta =  -951.547058 -1646.63708 0
ielmet,jelmet = 462 376
delx,dely,nz = 4.00000000 4.00000000 1
iastar,iastop,jastar,jastop = 1 462 1 376
isastr,isastp,jsastr,jsastp = 1 462 1 376
(computed) ngx,ngy  = 462 376
meshdn,npts,nareas  = 1 2 0
nlines,nvols        = 0 0
ndrec,nctrec,LSGRID = 120 0 F

Discrete Receptors (n,x,y,z):
1 270.325867 -617.518921 365.000000
2 271.090393 -617.494019 365.000000
3 271.854797 -617.469116 368.000000
4 268.767273 -616.646362 411.000000
5 269.531677 -616.621704 462.000000
6 270.295959 -616.597046 431.000000
7 271.060364 -616.572144 518.000000
8 271.824768 -616.547241 487.000000
9 272.589050 -616.522339 396.000000
10 265.680481 -615.822632 518.000000
11 266.444763 -615.798218 523.000000
12 267.209045 -615.773682 548.000000
13 267.973328 -615.749146 579.000000
14 268.737610 -615.724487 547.000000
15 269.501892 -615.699829 538.000000
16 270.266174 -615.675049 640.000000
17 271.030334 -615.650269 608.000000
18 260.301697 -615.069458 335.000000
19 261.065857 -615.045532 431.000000
20 261.830139 -615.021606 457.000000
21 262.594299 -614.997559 414.000000
```

22 263.358459 -614.973511 426.000000
23 264.122742 -614.949341 426.000000
24 264.886902 -614.924927 388.000000
25 265.651062 -614.900635 388.000000
26 266.415344 -614.876343 365.000000
27 267.179504 -614.851807 386.000000
28 267.943665 -614.827271 396.000000
29 268.707825 -614.802612 426.000000
30 269.471985 -614.777954 446.000000
31 270.236267 -614.753174 441.000000
32 271.000427 -614.728394 457.000000
33 271.764587 -614.703491 465.000000
34 272.528748 -614.678589 442.000000
35 273.293030 -614.653442 426.000000
36 260.272888 -614.147583 304.000000
37 261.036926 -614.123657 304.000000
38 261.801086 -614.099731 319.000000
39 262.565247 -614.075684 334.000000
40 263.329407 -614.051636 370.000000
41 264.093567 -614.027344 405.000000
42 264.857605 -614.003052 409.000000
43 265.621765 -613.978760 450.000000
44 266.385803 -613.954346 518.000000
45 267.149963 -613.929932 609.000000
46 267.914124 -613.905396 534.000000
47 268.678162 -613.880737 517.000000
48 269.442200 -613.856079 575.000000
49 270.206360 -613.831299 600.000000
50 270.970520 -613.806519 609.000000
51 271.734558 -613.781616 609.000000
52 272.498596 -613.756714 561.000000
53 261.008118 -613.201782 335.000000
54 261.772156 -613.177856 432.000000
55 262.536194 -613.153809 487.000000
56 263.300232 -613.129639 499.000000
57 264.064270 -613.105469 514.000000
58 264.828308 -613.081177 442.000000
59 265.592346 -613.056885 439.000000
60 266.356384 -613.032471 395.000000
61 267.120422 -613.007935 400.000000
62 267.884460 -612.983521 426.000000
63 268.648499 -612.958862 487.000000
64 269.412415 -612.934204 548.000000
65 270.176453 -612.909424 548.000000
66 270.940491 -612.884644 548.000000
67 271.704529 -612.859741 535.000000
68 261.743225 -612.255981 304.000000
69 262.507141 -612.231812 334.000000
70 263.271179 -612.207764 396.000000
71 264.035095 -612.183594 457.000000
72 264.799011 -612.159302 457.000000
73 265.563049 -612.135010 426.000000
74 266.326965 -612.110596 411.000000
75 267.090881 -612.086182 406.000000
76 267.854797 -612.061646 396.000000
77 268.618713 -612.036987 401.000000

78 269.382629 -612.012329 397.000000
79 261.714294 -611.334106 322.000000
80 262.478088 -611.309937 334.000000
81 777.710144 -1118.01306 0.00000000E+00
82 779.970764 -1115.93896 0.00000000E+00
83 780.696716 -1114.93750 0.00000000E+00
84 781.422424 -1113.93604 0.00000000E+00
85 785.606995 -1106.06689 0.00000000E+00
86 789.226868 -1101.05811 0.00000000E+00
87 789.783264 -1098.19727 0.00000000E+00
88 791.229431 -1096.19348 1.00000000
89 791.145813 -1095.26416 1.00000000
90 791.784729 -1093.33289 1.00000000
91 791.700989 -1092.40356 1.00000000
92 792.339539 -1090.47253 1.00000000
93 792.255920 -1089.54321 1.00000000
94 792.172058 -1088.61401 1.00000000
95 792.088196 -1087.68494 1.00000000
96 792.004456 -1086.75574 0.00000000E+00
97 791.920715 -1085.82666 0.00000000E+00
98 791.753235 -1083.96826 0.00000000E+00
99 792.558533 -1083.89575 1.00000000
100 792.474670 -1082.96667 1.00000000
101 791.585754 -1082.11023 0.00000000E+00
102 792.390930 -1082.03760 1.00000000
103 791.502014 -1081.18127 0.00000000E+00
104 792.307068 -1081.10864 1.00000000
105 791.418152 -1080.25220 1.00000000
106 791.334412 -1079.32324 1.00000000
107 790.445862 -1078.46667 0.00000000E+00
108 791.250549 -1078.39417 1.00000000
109 790.362244 -1077.53772 0.00000000E+00
110 791.166931 -1077.46521 1.00000000
111 790.278625 -1076.60876 0.00000000E+00
112 790.194885 -1075.67993 0.00000000E+00
113 790.111267 -1074.75098 1.00000000
114 789.223206 -1073.89453 0.00000000E+00
115 789.139709 -1072.96558 0.00000000E+00
116 788.251770 -1072.10913 0.00000000E+00
117 788.168274 -1071.18030 1.00000000
118 787.280823 -1070.32373 0.00000000E+00
119 786.393372 -1069.46704 0.00000000E+00
120 785.506165 -1068.61035 0.00000000E+00

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

UNIT 1
UNIT 2

INPUT FILES

Default Name	Unit No.	File Name and Path
CALPOST.INP	5	CT_BRAME_02B_BRET.inp
MODEL.DAT	4	pu_brame_02b.flx

OUTPUT FILES

Default Name	Unit No.	File Name and Path
CALPOST.LST	8	ct_brame_02b_bret.lst

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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) BEXT(Total)
%CHANGE bxSO4 bxNO3 bxOC bxEC bxPMC bxPMF bxNO2 F(RH) F(RH) F(RH)
2001 365 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 1 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 2 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 3 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 4 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 5 23 81 777.710 -1118.013 D 1.135 23.376 24.511 4.85 0.358 0.721 0.005
0.004 0.003 0.007 0.037 4.080 2.910 4.100
2002 6 23 81 777.710 -1118.013 D 0.730 23.376 24.107 3.12 0.222 0.479 0.004

0.004 0.003 0.006 0.013 4.080 2.910 4.100
2002 7 23 120 785.506 -1068.610 D 0.089 23.376 23.465 0.38 0.032 0.056 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 8 23 87 789.783 -1098.197 D 0.837 23.376 24.214 3.58 0.466 0.362 0.002
0.002 0.001 0.003 0.000 4.080 2.910 4.100
2002 9 23 99 792.559 -1083.896 D 0.121 23.376 23.498 0.52 0.085 0.035 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 10 23 120 785.506 -1068.610 D 0.047 23.376 23.424 0.20 0.031 0.015 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 11 23 120 785.506 -1068.610 D 0.200 23.376 23.577 0.86 0.129 0.069 0.000
0.000 0.000 0.001 0.001 4.080 2.910 4.100
2002 12 23 81 777.710 -1118.013 D 0.001 23.376 23.377 0.00 0.001 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 13 23 120 785.506 -1068.610 D 0.158 23.376 23.534 0.68 0.090 0.065 0.000
0.000 0.000 0.001 0.000 4.080 2.910 4.100
2002 14 23 81 777.710 -1118.013 D 0.089 23.376 23.466 0.38 0.046 0.041 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 15 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 16 23 120 785.506 -1068.610 D 0.004 23.376 23.381 0.02 0.004 0.001 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 17 23 120 785.506 -1068.610 D 0.026 23.376 23.403 0.11 0.022 0.004 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 18 23 90 791.785 -1093.333 D 0.138 23.376 23.515 0.59 0.065 0.065 0.000
0.000 0.000 0.000 0.008 4.080 2.910 4.100
2002 19 23 81 777.710 -1118.013 D 0.209 23.376 23.586 0.89 0.111 0.097 0.000
0.000 0.000 0.000 0.001 4.080 2.910 4.100
2002 20 23 120 785.506 -1068.610 D 0.742 23.376 24.119 3.18 0.385 0.350 0.002
0.001 0.001 0.002 0.001 4.080 2.910 4.100
2002 21 23 120 785.506 -1068.610 D 0.069 23.376 23.446 0.30 0.048 0.021 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 22 23 92 792.340 -1090.473 D 0.000 23.376 23.377 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 23 23 117 788.168 -1071.180 D 0.000 23.376 23.377 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 24 23 81 777.710 -1118.013 D 0.037 23.376 23.413 0.16 0.000 0.034 0.000
0.000 0.000 0.000 0.002 4.080 2.910 4.100
2002 25 23 81 777.710 -1118.013 D 0.007 23.376 23.383 0.03 0.000 0.006 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 26 23 81 777.710 -1118.013 D 0.021 23.376 23.397 0.09 0.001 0.020 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 27 23 120 785.506 -1068.610 D 0.009 23.376 23.386 0.04 0.000 0.009 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 28 23 120 785.506 -1068.610 D 0.001 23.376 23.377 0.00 0.000 0.001 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 29 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 30 23 81 777.710 -1118.013 D 0.000 23.376 23.376 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.080 2.910 4.100
2002 31 23 81 777.710 -1118.013 D 0.004 23.376 23.381 0.02 0.000 0.003 0.000
0.000 0.000 0.000 0.001 4.080 2.910 4.100
2002 32 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 33 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 34 23 81 777.710 -1118.013 D 0.006 23.114 23.120 0.03 0.004 0.002 0.000

0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 35 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 36 23 81 777.710 -1118.013 D 0.001 23.114 23.115 0.00 0.001 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 37 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 38 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 39 23 81 777.710 -1118.013 D 0.005 23.114 23.119 0.02 0.004 0.001 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 40 23 84 781.422 -1113.936 D 0.390 23.114 23.504 1.69 0.285 0.097 0.002
0.002 0.001 0.003 0.000 3.820 2.760 3.890
2002 41 23 81 777.710 -1118.013 D 0.002 23.114 23.116 0.01 0.002 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 42 23 81 777.710 -1118.013 D 0.050 23.114 23.164 0.21 0.024 0.025 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 43 23 81 777.710 -1118.013 D 0.142 23.114 23.256 0.61 0.074 0.066 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 44 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 45 23 120 785.506 -1068.610 D 0.083 23.114 23.197 0.36 0.063 0.019 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 46 23 120 785.506 -1068.610 D 1.114 23.114 24.228 4.82 0.897 0.206 0.003
0.002 0.002 0.004 0.000 3.820 2.760 3.890
2002 47 23 81 777.710 -1118.013 D 0.068 23.114 23.182 0.29 0.056 0.011 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 48 23 81 777.710 -1118.013 D 0.026 23.114 23.140 0.11 0.023 0.003 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 49 23 120 785.506 -1068.610 D 0.000 23.114 23.115 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 50 23 120 785.506 -1068.610 D 0.092 23.114 23.206 0.40 0.044 0.046 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 51 23 81 777.710 -1118.013 D 0.611 23.114 23.725 2.64 0.412 0.190 0.002
0.002 0.001 0.003 0.000 3.820 2.760 3.890
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0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 53 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 54 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 55 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
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0.001 0.001 0.002 0.005 3.820 2.760 3.890
2002 57 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 58 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
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2002 59 23 81 777.710 -1118.013 D 0.000 23.114 23.114 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.820 2.760 3.890
2002 60 23 120 785.506 -1068.610 D 0.232 23.085 23.317 1.00 0.149 0.080 0.001
0.001 0.000 0.001 0.000 3.790 2.740 3.870
2002 61 23 99 792.559 -1083.896 D 2.296 23.085 25.381 9.94 1.427 0.840 0.006
0.005 0.004 0.008 0.005 3.790 2.740 3.870
2002 62 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000

0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 63 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 64 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 65 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 66 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 67 23 120 785.506 -1068.610 D 0.030 23.085 23.115 0.13 0.014 0.015 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 68 23 81 777.710 -1118.013 D 0.012 23.085 23.097 0.05 0.006 0.006 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 69 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 71 23 81 777.710 -1118.013 D 0.268 23.085 23.354 1.16 0.128 0.139 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 72 23 81 777.710 -1118.013 D 0.151 23.085 23.236 0.65 0.127 0.023 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 73 23 120 785.506 -1068.610 D 0.002 23.085 23.087 0.01 0.002 0.001 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 74 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 75 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 76 23 120 785.506 -1068.610 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 77 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 78 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 79 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 80 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 81 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
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2002 82 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 83 23 81 777.710 -1118.013 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 84 23 120 785.506 -1068.610 D 0.155 23.085 23.240 0.67 0.117 0.037 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 85 23 81 777.710 -1118.013 D 0.005 23.085 23.090 0.02 0.004 0.001 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 86 23 81 777.710 -1118.013 D 0.029 23.085 23.114 0.13 0.026 0.003 0.000
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2002 87 23 120 785.506 -1068.610 D 0.034 23.085 23.120 0.15 0.028 0.006 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 88 23 111 790.279 -1076.609 D 0.000 23.085 23.085 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.790 2.740 3.870
2002 89 23 120 785.506 -1068.610 D 0.000 23.085 23.086 0.00 0.000 0.000 0.000
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2002 90 23 120 785.506 -1068.610 D 0.002 23.085 23.087 0.01 0.002 0.000 0.000

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2002 91 23 120 785.506 -1068.610 D 0.001 23.042 23.043 0.00 0.001 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
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2002 93 23 87 789.783 -1098.197 D 0.498 23.042 23.540 2.16 0.416 0.077 0.001
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2002 94 23 81 777.710 -1118.013 D 0.023 23.042 23.065 0.10 0.021 0.002 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 95 23 81 777.710 -1118.013 D 0.001 23.042 23.042 0.00 0.001 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 96 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 97 23 111 790.279 -1076.609 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 98 23 81 777.710 -1118.013 D 0.001 23.042 23.043 0.00 0.001 0.000 0.000
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2002 99 23 120 785.506 -1068.610 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 100 23 120 785.506 -1068.610 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 101 23 120 785.506 -1068.610 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 102 23 118 787.281 -1070.324 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 103 23 117 788.168 -1071.180 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 104 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 105 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 106 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 107 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 108 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 109 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 110 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 111 23 120 785.506 -1068.610 D 0.262 23.042 23.304 1.14 0.228 0.029 0.001
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2002 112 23 120 785.506 -1068.610 D 0.277 23.042 23.318 1.20 0.224 0.049 0.001
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2002 113 23 120 785.506 -1068.610 D 0.006 23.042 23.047 0.02 0.004 0.001 0.000
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2002 114 23 99 792.559 -1083.896 D 0.151 23.042 23.192 0.65 0.142 0.006 0.001
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2002 115 23 81 777.710 -1118.013 D 0.086 23.042 23.128 0.37 0.076 0.009 0.000
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2002 116 23 120 785.506 -1068.610 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 117 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 118 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000

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2002 119 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
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2002 120 23 81 777.710 -1118.013 D 0.000 23.042 23.042 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.740 2.720 3.850
2002 121 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 122 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 123 23 120 785.506 -1068.610 D 0.001 23.246 23.247 0.00 0.001 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 124 23 120 785.506 -1068.610 D 0.007 23.246 23.253 0.03 0.006 0.001 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 125 23 119 786.393 -1069.467 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 126 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 127 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 128 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 129 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 130 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 131 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 132 23 81 777.710 -1118.013 D 0.096 23.246 23.342 0.41 0.089 0.006 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 133 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 134 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 135 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 136 23 120 785.506 -1068.610 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 137 23 87 789.783 -1098.197 D 0.067 23.246 23.313 0.29 0.045 0.022 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 138 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 139 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 140 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 141 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 142 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 143 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 144 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 145 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 146 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000

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2002 147 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 148 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 149 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
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2002 150 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 151 23 81 777.710 -1118.013 D 0.000 23.246 23.246 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.940 2.830 4.020
2002 152 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 153 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 154 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 155 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 156 23 120 785.506 -1068.610 D 0.002 23.442 23.444 0.01 0.002 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
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0.000 0.000 0.000 0.000 4.120 2.940 4.210
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0.000 0.000 0.000 0.000 4.120 2.940 4.210
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0.000 0.000 0.000 0.000 4.120 2.940 4.210
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0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 161 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 162 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 163 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
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2002 170 23 120 785.506 -1068.610 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 171 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
2002 172 23 81 777.710 -1118.013 D 0.000 23.442 23.442 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.120 2.940 4.210
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0.000 0.000 0.000 0.000 4.410 3.100 4.440
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2002 188 23 81 777.710 -1118.013 D 0.000 23.733 23.733 0.00 0.000 0.000 0.000
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2002 196 23 118 787.281 -1070.324 D 0.000 23.733 23.733 0.00 0.000 0.000 0.000
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2002 197 23 86 789.227 -1101.058 D 0.000 23.733 23.733 0.00 0.000 0.000 0.000
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0.000 0.000 0.000 0.000 4.370 3.070 4.380
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0.000 0.000 0.000 0.000 4.370 3.070 4.380
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2002 216 23 81 777.710 -1118.013 D 0.000 23.684 23.684 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.370 3.070 4.380
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0.000 0.000 0.000 0.000 4.370 3.070 4.380
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0.000 0.000 0.000 0.000 4.370 3.070 4.380
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2002 227 23 81 777.710 -1118.013 D 0.000 23.684 23.684 0.00 0.000 0.000 0.000
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2002 244 23 81 777.710 -1118.013 D 0.000 23.493 23.493 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.180 2.970 4.230
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0.000 0.000 0.000 0.000 4.180 2.970 4.230
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0.000 0.000 0.000 0.000 4.180 2.970 4.230
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0.000 0.000 0.000 0.000 4.180 2.970 4.230
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0.000 0.000 0.000 0.000 4.180 2.970 4.230
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2002 274 23 81 777.710 -1118.013 D 0.000 23.221 23.221 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
2002 290 23 81 777.710 -1118.013 D 0.000 23.221 23.221 0.00 0.000 0.000 0.000
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2002 291 23 81 777.710 -1118.013 D 0.000 23.221 23.221 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.920 2.820 3.990
2002 292 23 120 785.506 -1068.610 D 0.001 23.221 23.222 0.00 0.001 0.000 0.000
0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
2002 298 23 120 785.506 -1068.610 D 0.000 23.221 23.222 0.00 0.000 0.000 0.000
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2002 299 23 118 787.281 -1070.324 D 0.000 23.221 23.222 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.002 0.002 0.003 0.002 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
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0.000 0.000 0.000 0.000 3.920 2.820 3.990
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2002 307 23 120 785.506 -1068.610 D 0.003 23.235 23.238 0.01 0.001 0.001 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 308 23 120 785.506 -1068.610 D 0.351 23.235 23.586 1.51 0.238 0.106 0.001
0.001 0.000 0.001 0.004 3.930 2.830 4.010
2002 309 23 81 777.710 -1118.013 D 0.206 23.235 23.441 0.88 0.149 0.051 0.000
0.000 0.000 0.001 0.004 3.930 2.830 4.010
2002 310 23 87 789.783 -1098.197 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 311 23 120 785.506 -1068.610 D 0.000 23.235 23.236 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 312 23 120 785.506 -1068.610 D 0.002 23.235 23.238 0.01 0.002 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 313 23 112 790.195 -1075.680 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 314 23 120 785.506 -1068.610 D 0.000 23.235 23.236 0.00 0.000 0.000 0.000

0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 315 23 81 777.710 -1118.013 D 0.003 23.235 23.238 0.01 0.002 0.001 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 316 23 81 777.710 -1118.013 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 317 23 81 777.710 -1118.013 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 318 23 120 785.506 -1068.610 D 0.147 23.235 23.382 0.63 0.107 0.037 0.001
0.001 0.000 0.001 0.000 3.930 2.830 4.010
2002 319 23 104 792.307 -1081.109 D 0.609 23.235 23.844 2.62 0.426 0.178 0.001
0.001 0.001 0.002 0.001 3.930 2.830 4.010
2002 320 23 81 777.710 -1118.013 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 321 23 120 785.506 -1068.610 D 0.002 23.235 23.237 0.01 0.001 0.001 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 322 23 120 785.506 -1068.610 D 0.002 23.235 23.237 0.01 0.001 0.001 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 323 23 120 785.506 -1068.610 D 0.037 23.235 23.272 0.16 0.028 0.008 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 324 23 120 785.506 -1068.610 D 0.414 23.235 23.649 1.78 0.331 0.079 0.001
0.001 0.001 0.001 0.000 3.930 2.830 4.010
2002 325 23 81 777.710 -1118.013 D 0.002 23.235 23.238 0.01 0.002 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 326 23 81 777.710 -1118.013 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 327 23 81 777.710 -1118.013 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 328 23 120 785.506 -1068.610 D 0.003 23.235 23.238 0.01 0.002 0.001 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 329 23 120 785.506 -1068.610 D 0.099 23.235 23.334 0.42 0.075 0.023 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 330 23 88 791.229 -1096.193 D 0.171 23.235 23.407 0.74 0.127 0.043 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 331 23 81 777.710 -1118.013 D 0.006 23.235 23.242 0.03 0.005 0.001 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 332 23 81 777.710 -1118.013 D 0.000 23.235 23.235 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 333 23 120 785.506 -1068.610 D 0.339 23.235 23.574 1.46 0.201 0.134 0.001
0.001 0.001 0.001 0.000 3.930 2.830 4.010
2002 334 23 81 777.710 -1118.013 D 0.002 23.235 23.237 0.01 0.001 0.000 0.000
0.000 0.000 0.000 0.000 3.930 2.830 4.010
2002 335 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 336 23 120 785.506 -1068.610 D 0.004 23.365 23.369 0.02 0.003 0.001 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 337 23 120 785.506 -1068.610 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 338 23 81 777.710 -1118.013 D 0.085 23.365 23.450 0.36 0.024 0.054 0.000
0.000 0.000 0.000 0.007 4.060 2.900 4.110
2002 339 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 340 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 341 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 342 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000

0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 343 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 344 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 345 23 120 785.506 -1068.610 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 346 23 120 785.506 -1068.610 D 0.780 23.365 24.145 3.34 0.357 0.383 0.004
0.004 0.003 0.006 0.023 4.060 2.900 4.110
2002 347 23 87 789.783 -1098.197 D 0.768 23.365 24.133 3.29 0.339 0.399 0.003
0.003 0.002 0.005 0.015 4.060 2.900 4.110
2002 348 23 81 777.710 -1118.013 D 0.001 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 349 23 120 785.506 -1068.610 D 0.191 23.365 23.556 0.82 0.123 0.066 0.001
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 350 23 81 777.710 -1118.013 D 0.064 23.365 23.429 0.27 0.048 0.016 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 351 23 120 785.506 -1068.610 D 0.003 23.365 23.367 0.01 0.002 0.001 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 352 23 87 789.783 -1098.197 D 0.663 23.365 24.028 2.84 0.355 0.293 0.003
0.002 0.002 0.004 0.004 4.060 2.900 4.110
2002 353 23 84 781.422 -1113.936 D 0.510 23.365 23.875 2.18 0.248 0.233 0.004
0.004 0.003 0.006 0.013 4.060 2.900 4.110
2002 354 23 81 777.710 -1118.013 D 0.616 23.365 23.981 2.64 0.423 0.182 0.003
0.003 0.002 0.004 0.000 4.060 2.900 4.110
2002 355 23 120 785.506 -1068.610 D 0.226 23.365 23.591 0.97 0.133 0.090 0.001
0.001 0.001 0.001 0.000 4.060 2.900 4.110
2002 356 23 120 785.506 -1068.610 D 0.009 23.365 23.374 0.04 0.006 0.003 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 357 23 81 777.710 -1118.013 D 1.051 23.365 24.416 4.50 0.724 0.293 0.004
0.004 0.003 0.006 0.017 4.060 2.900 4.110
2002 358 23 81 777.710 -1118.013 D 0.070 23.365 23.435 0.30 0.032 0.034 0.000
0.000 0.000 0.001 0.002 4.060 2.900 4.110
2002 359 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 360 23 120 785.506 -1068.610 D 0.162 23.365 23.527 0.69 0.103 0.058 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110
2002 361 23 120 785.506 -1068.610 D 1.445 23.365 24.809 6.18 0.786 0.645 0.003
0.003 0.002 0.005 0.000 4.060 2.900 4.110
2002 362 23 120 785.506 -1068.610 D 0.201 23.365 23.566 0.86 0.113 0.086 0.000
0.000 0.000 0.001 0.000 4.060 2.900 4.110
2002 363 23 81 777.710 -1118.013 D 0.000 23.365 23.365 0.00 0.000 0.000 0.000
0.000 0.000 0.000 0.000 4.060 2.900 4.110

--- 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) F(RH) F(RH)
2002 205 23 120 785.506 -1068.610 D 2.639 23.733 26.372 11.12 2.170 0.455 0.004
0.003 0.002 0.005 0.000 4.410 3.100 4.440 1
2002 61 23 99 792.559 -1083.896 D 2.296 23.085 25.381 9.94 1.427 0.840 0.006
0.005 0.004 0.008 0.005 3.790 2.740 3.870 2
2002 257 23 120 785.506 -1068.610 D 1.712 23.493 25.205 7.29 1.492 0.198 0.005
0.005 0.003 0.008 0.000 4.180 2.970 4.230 3

```
2002 361 23   120       785.506 -1068.610   D     1.445     23.365     24.809     6.18   0.786  0.645  0.003
0.003  0.002  0.005  0.000  4.060 2.900 4.110    4
2002 203 23    81       777.710 -1118.013   D     1.319     23.733     25.052     5.56   1.215  0.096  0.002
0.002  0.001  0.003  0.000  4.410 3.100 4.440    5
2002 164 23    81       777.710 -1118.013   D     1.257     23.442     24.699     5.36   1.189  0.049  0.005
0.005  0.003  0.007  0.000  4.120 2.940 4.210    6
2002 193 23   120       785.506 -1068.610   D     1.174     23.733     24.907     4.95   0.985  0.183  0.002
0.002  0.001  0.002  0.000  4.410 3.100 4.440    7
2002   5 23    81       777.710 -1118.013   D     1.135     23.376     24.511     4.85   0.358  0.721  0.005
0.004  0.003  0.007  0.037  4.080 2.910 4.100    8
2002  46 23   120       785.506 -1068.610   D     1.114     23.114     24.228     4.82   0.897  0.206  0.003
0.002  0.002  0.004  0.000  3.820 2.760 3.890    9
2002 357 23    81       777.710 -1118.013   D     1.051     23.365     24.416     4.50   0.724  0.293  0.004
0.004  0.003  0.006  0.017  4.060 2.900 4.110   10
2002 231 23   120       785.506 -1068.610   D     0.881     23.684     24.565     3.72   0.848  0.026  0.002
0.002  0.001  0.003  0.000  4.370 3.070 4.380   11
2002   8 23    87       789.783 -1098.197   D     0.837     23.376     24.214     3.58   0.466  0.362  0.002
0.002  0.001  0.003  0.000  4.080 2.910 4.100   12
2002 346 23   120       785.506 -1068.610   D     0.780     23.365     24.145     3.34   0.357  0.383  0.004
0.004  0.003  0.006  0.023  4.060 2.900 4.110   13
2002 202 23    81       777.710 -1118.013   D     0.792     23.733     24.525     3.34   0.713  0.074  0.001
0.001  0.001  0.002  0.000  4.410 3.100 4.440   14
2002 347 23    87       789.783 -1098.197   D     0.768     23.365     24.133     3.29   0.339  0.399  0.003
0.003  0.002  0.005  0.015  4.060 2.900 4.110   15
2002  20 23   120       785.506 -1068.610   D     0.742     23.376     24.119     3.18   0.385  0.350  0.002
0.001  0.001  0.002  0.001  4.080 2.910 4.100   16
2002   6 23    81       777.710 -1118.013   D     0.730     23.376     24.107     3.12   0.222  0.479  0.004
0.004  0.003  0.006  0.013  4.080 2.910 4.100   17
2002 204 23   120       785.506 -1068.610   D     0.715     23.733     24.448     3.01   0.648  0.062  0.001
0.001  0.001  0.002  0.000  4.410 3.100 4.440   18
2002 352 23    87       789.783 -1098.197   D     0.663     23.365     24.028     2.84   0.355  0.293  0.003
0.002  0.002  0.004  0.004  4.060 2.900 4.110   19
2002 236 23   120       785.506 -1068.610   D     0.673     23.684     24.357     2.84   0.598  0.068  0.002
0.002  0.001  0.003  0.000  4.370 3.070 4.380   20
2002 302 23    86       789.227 -1101.058   D     0.651     23.221     23.873     2.80   0.508  0.132  0.003
0.002  0.002  0.003  0.002  3.920 2.820 3.990   21
2002  92 23   120       785.506 -1068.610   D     0.639     23.042     23.681     2.77   0.590  0.040  0.002
0.002  0.001  0.003  0.000  3.740 2.720 3.850   22

 --- Number of days with Extinction Change  =>   5.0 % :        6
 --- Number of days with Extinction Change  =>  10.0 % :        1
 ---            Largest Extinction Change  =              11.12 %

*****************************************************************************************************************************
**********
                                    CALPOST  Version 6.221        Level 080724
*****************************************************************************************************************************
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                                    Run-Length VISIBILITY


                                      VISIB  BOESNCFG
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(1/Mega-m)

RECEPTOR COORDINATES (km) TYPE BEXT(Model) BEXT(BKG) BEXT(Total) %CHANGE

120 785.506 -1068.610 D 0.083 23.339 23.421 0.36

--- Number of recs with Extinction Change > 1.0 % : 0
--- Largest Extinction Change = 0.36 %

****
****
CALPOST Version 6.221 Level 080724
****
****

24HR VISIBILITY

VISIB BOESNCFG

(deciview)

START TIME % of Modeled Extinction by Species
Small Large SSalt
YEAR DAY HR RECEPTOR COORDINATES (km) TYPE DV(Total) DV(BKG) DELTA DV %_SO4 %_NO3 %_OC %_EC %_PMC %_PMF %_NO2 F(RH) F(RH) F(RH)
2001 365 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.060 2.900 4.110
2002 1 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.080 2.910 4.100
2002 2 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.080 2.910 4.100
2002 3 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.080 2.910 4.100
2002 4 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4.080 2.910 4.100
2002 5 23 81 777.710 -1118.013 D 8.965 8.491 0.474 31.58 63.51 0.41 0.39 0.26 0.61 3.24 4.080 2.910 4.100
2002 6 23 81 777.710 -1118.013 D 8.799 8.491 0.308 30.36 65.62 0.56 0.53 0.36 0.82 1.73 4.080 2.910 4.100
2002 7 23 120 785.506 -1068.610 D 8.529 8.491 0.038 36.43 62.68 0.28 0.12 0.16 0.25 0.07 4.080 2.910 4.100
2002 8 23 87 789.783 -1098.197 D 8.843 8.491 0.352 55.64 43.24 0.27 0.25 0.17 0.39 0.03 4.080 2.910 4.100
2002 9 23 99 792.559 -1083.896 D 8.543 8.491 0.052 69.93 29.06 0.23 0.25 0.15 0.37 0.00 4.080 2.910 4.100
2002 10 23 120 785.506 -1068.610 D 8.512 8.491 0.020 66.41 32.27 0.29 0.28 0.19 0.44 0.11 4.080 2.910 4.100
2002 11 23 120 785.506 -1068.610 D 8.577 8.491 0.085 64.63 34.27 0.19 0.16 0.12 0.25 0.37 4.080 2.910 4.100
2002 12 23 81 777.710 -1118.013 D 8.492 8.491 0.000 70.88 28.68 0.11 0.04 0.04

0.08 0.21 4.080 2.910 4.100
2002 13 23 120 785.506 -1068.610 D 8.559 8.491 0.067 57.26 41.48 0.30 0.29
0.20 0.45 0.01 4.080 2.910 4.100
2002 14 23 81 777.710 -1118.013 D 8.529 8.491 0.038 52.04 46.44 0.36 0.36 0.23
0.55 0.02 4.080 2.910 4.100
2002 15 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.080 2.910 4.100
2002 16 23 120 785.506 -1068.610 D 8.493 8.491 0.002 82.43 16.55 0.28 0.22
0.17 0.36 0.00 4.080 2.910 4.100
2002 17 23 120 785.506 -1068.610 D 8.503 8.491 0.011 82.17 16.84 0.18 0.24
0.12 0.33 0.12 4.080 2.910 4.100
2002 18 23 90 791.785 -1093.333 D 8.550 8.491 0.059 47.02 47.25 0.03 0.03 0.02
0.04 5.62 4.080 2.910 4.100
2002 19 23 81 777.710 -1118.013 D 8.581 8.491 0.089 53.26 46.19 0.03 0.03 0.02
0.04 0.45 4.080 2.910 4.100
2002 20 23 120 785.506 -1068.610 D 8.804 8.491 0.313 51.89 47.19 0.25 0.15
0.15 0.27 0.11 4.080 2.910 4.100
2002 21 23 120 785.506 -1068.610 D 8.521 8.491 0.030 68.95 30.28 0.19 0.18
0.12 0.28 0.00 4.080 2.910 4.100
2002 22 23 92 792.340 -1090.473 D 8.491 8.491 0.000 75.00 18.75 0.00 0.14 0.09
0.21 0.00 4.080 2.910 4.100
2002 23 23 117 788.168 -1071.180 D 8.491 8.491 0.000 0.00 89.06 0.00 0.00 0.00
0.00 11.02 4.080 2.910 4.100
2002 24 23 81 777.710 -1118.013 D 8.507 8.491 0.016 0.84 92.42 0.00 0.00 0.00
0.00 6.74 4.080 2.910 4.100
2002 25 23 81 777.710 -1118.013 D 8.494 8.491 0.003 6.18 93.32 0.00 0.00 0.00
0.00 0.52 4.080 2.910 4.100
2002 26 23 81 777.710 -1118.013 D 8.500 8.491 0.009 5.53 94.41 0.00 0.00 0.00
0.00 0.07 4.080 2.910 4.100
2002 27 23 120 785.506 -1068.610 D 8.495 8.491 0.004 4.55 95.44 0.00 0.00 0.00
0.00 0.01 4.080 2.910 4.100
2002 28 23 120 785.506 -1068.610 D 8.492 8.491 0.000 0.38 99.65 0.00 0.00 0.00
0.00 0.00 4.080 2.910 4.100
2002 29 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.080 2.910 4.100
2002 30 23 81 777.710 -1118.013 D 8.491 8.491 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.080 2.910 4.100
2002 31 23 81 777.710 -1118.013 D 8.493 8.491 0.002 5.64 75.79 0.00 0.00 0.00
0.00 18.56 4.080 2.910 4.100
2002 32 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
2002 33 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
2002 34 23 81 777.710 -1118.013 D 8.381 8.379 0.003 62.47 36.27 0.34 0.27 0.21
0.44 0.02 3.820 2.760 3.890
2002 35 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
2002 36 23 81 777.710 -1118.013 D 8.379 8.379 0.000 72.76 26.81 0.13 0.04 0.08
0.10 0.03 3.820 2.760 3.890
2002 37 23 81 777.710 -1118.013 D 8.379 8.379 0.000 74.45 25.77 0.00 0.04 0.08
0.10 0.03 3.820 2.760 3.890
2002 38 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
2002 39 23 81 777.710 -1118.013 D 8.381 8.379 0.002 79.24 19.96 0.16 0.22 0.11
0.31 0.00 3.820 2.760 3.890
2002 40 23 84 781.422 -1113.936 D 8.546 8.379 0.167 73.20 24.84 0.48 0.46 0.31

0.71 0.02 3.820 2.760 3.890
2002 41 23 81 777.710 -1118.013 D 8.380 8.379 0.001 79.93 19.15 0.19 0.25 0.13
0.36 0.00 3.820 2.760 3.890
2002 42 23 81 777.710 -1118.013 D 8.400 8.379 0.021 48.52 50.47 0.30 0.20 0.18
0.34 0.00 3.820 2.760 3.890
2002 43 23 81 777.710 -1118.013 D 8.440 8.379 0.061 52.20 46.79 0.30 0.19 0.18
0.34 0.01 3.820 2.760 3.890
2002 44 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
2002 45 23 120 785.506 -1068.610 D 8.414 8.379 0.036 75.96 23.34 0.23 0.11
0.13 0.22 0.00 3.820 2.760 3.890
2002 46 23 120 785.506 -1068.610 D 8.849 8.379 0.471 80.57 18.46 0.24 0.22
0.16 0.35 0.01 3.820 2.760 3.890
2002 47 23 81 777.710 -1118.013 D 8.408 8.379 0.029 83.07 16.16 0.20 0.18 0.12
0.28 0.00 3.820 2.760 3.890
2002 48 23 81 777.710 -1118.013 D 8.390 8.379 0.011 86.71 12.59 0.19 0.15 0.12
0.25 0.00 3.820 2.760 3.890
2002 49 23 120 785.506 -1068.610 D 8.379 8.379 0.000 80.91 18.66 0.23 0.09
0.10 0.17 0.00 3.820 2.760 3.890
2002 50 23 120 785.506 -1068.610 D 8.418 8.379 0.040 48.43 50.59 0.28 0.19
0.17 0.33 0.00 3.820 2.760 3.890
2002 51 23 81 777.710 -1118.013 D 8.640 8.379 0.261 67.41 31.08 0.34 0.38 0.23
0.56 0.01 3.820 2.760 3.890
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0.26 0.00 3.820 2.760 3.890
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0.00 0.00 3.820 2.760 3.890
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0.00 0.00 3.820 2.760 3.890
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0.00 0.00 3.820 2.760 3.890
2002 56 23 81 777.710 -1118.013 D 8.475 8.379 0.097 34.98 60.67 0.57 0.54 0.37
0.84 2.03 3.820 2.760 3.890
2002 57 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
2002 58 23 81 777.710 -1118.013 D 8.379 8.379 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.820 2.760 3.890
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0.00 0.00 3.820 2.760 3.890
2002 60 23 120 785.506 -1068.610 D 8.466 8.366 0.100 64.19 34.56 0.26 0.26
0.17 0.40 0.17 3.790 2.740 3.870
2002 61 23 99 792.559 -1083.896 D 9.314 8.366 0.948 62.17 36.59 0.25 0.24 0.16
0.37 0.22 3.790 2.740 3.870
2002 62 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 63 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
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0.00 0.00 3.790 2.740 3.870
2002 65 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 66 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 67 23 120 785.506 -1068.610 D 8.379 8.366 0.013 48.48 50.79 0.01 0.01
0.01 0.02 0.69 3.790 2.740 3.870
2002 68 23 81 777.710 -1118.013 D 8.371 8.366 0.005 47.94 51.02 0.01 0.01 0.01

0.01 1.01 3.790 2.740 3.870
2002 69 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 70 23 81 777.710 -1118.013 D 8.552 8.366 0.186 50.58 48.86 0.12 0.11 0.08
0.17 0.08 3.790 2.740 3.870
2002 71 23 81 777.710 -1118.013 D 8.482 8.366 0.116 47.72 51.96 0.06 0.05 0.04
0.08 0.08 3.790 2.740 3.870
2002 72 23 81 777.710 -1118.013 D 8.431 8.366 0.065 83.99 15.57 0.11 0.10 0.07
0.16 0.00 3.790 2.740 3.870
2002 73 23 120 785.506 -1068.610 D 8.367 8.366 0.001 72.78 27.05 0.05 0.05
0.02 0.07 0.00 3.790 2.740 3.870
2002 74 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 75 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 76 23 120 785.506 -1068.610 D 8.366 8.366 0.000 35.94 53.12 0.00 0.00
0.00 0.00 1.56 3.790 2.740 3.870
2002 77 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 78 23 81 777.710 -1118.013 D 8.366 8.366 0.000 37.50 15.62 0.00 0.00 0.00
0.00 3.29 3.790 2.740 3.870
2002 79 23 81 777.710 -1118.013 D 8.366 8.366 0.000 21.88 59.38 0.00 0.00 0.00
0.00 4.69 3.790 2.740 3.870
2002 80 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 81 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 82 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 83 23 81 777.710 -1118.013 D 8.366 8.366 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.790 2.740 3.870
2002 84 23 120 785.506 -1068.610 D 8.433 8.366 0.067 75.76 23.60 0.10 0.12
0.07 0.18 0.16 3.790 2.740 3.870
2002 85 23 81 777.710 -1118.013 D 8.368 8.366 0.002 82.63 16.65 0.15 0.16 0.10
0.24 0.05 3.790 2.740 3.870
2002 86 23 81 777.710 -1118.013 D 8.379 8.366 0.013 88.58 10.98 0.10 0.11 0.07
0.16 0.00 3.790 2.740 3.870
2002 87 23 120 785.506 -1068.610 D 8.381 8.366 0.015 82.02 17.63 0.08 0.08
0.05 0.13 0.00 3.790 2.740 3.870
2002 88 23 111 790.279 -1076.609 D 8.366 8.366 0.000 72.92 10.42 0.00 0.15
0.10 0.23 0.00 3.790 2.740 3.870
2002 89 23 120 785.506 -1068.610 D 8.366 8.366 0.000 96.10 3.71 0.00 0.00 0.00
0.00 0.01 3.790 2.740 3.870
2002 90 23 120 785.506 -1068.610 D 8.367 8.366 0.001 96.86 3.17 0.00 0.00 0.00
0.00 0.01 3.790 2.740 3.870
2002 91 23 120 785.506 -1068.610 D 8.348 8.347 0.000 97.20 2.72 0.05 0.03 0.02
0.05 0.00 3.740 2.720 3.850
2002 92 23 120 785.506 -1068.610 D 8.621 8.347 0.274 92.40 6.34 0.32 0.29 0.20
0.45 0.00 3.740 2.720 3.850
2002 93 23 87 789.783 -1098.197 D 8.561 8.347 0.214 83.54 15.38 0.25 0.26 0.16
0.40 0.00 3.740 2.720 3.850
2002 94 23 81 777.710 -1118.013 D 8.357 8.347 0.010 92.24 7.08 0.16 0.17 0.11
0.25 0.00 3.740 2.720 3.850
2002 95 23 81 777.710 -1118.013 D 8.347 8.347 0.000 95.97 3.80 0.07 0.07 0.05
0.11 0.00 3.740 2.720 3.850
2002 96 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00

0.00 0.00 3.740 2.720 3.850
2002 97 23 111 790.279 -1076.609 D 8.347 8.347 0.000 76.56 10.94 0.00 0.06
0.04 0.09 0.00 3.740 2.720 3.850
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0.12 0.00 3.740 2.720 3.850
2002 99 23 120 785.506 -1068.610 D 8.347 8.347 0.000 92.75 6.81 0.00 0.06 0.04
0.10 0.00 3.740 2.720 3.850
2002 100 23 120 785.506 -1068.610 D 8.347 8.347 0.000 81.25 18.84 0.00 0.03
0.02 0.05 0.00 3.740 2.720 3.850
2002 101 23 120 785.506 -1068.610 D 8.347 8.347 0.000 95.58 3.98 0.00 0.08
0.05 0.12 0.00 3.740 2.720 3.850
2002 102 23 118 787.281 -1070.324 D 8.347 8.347 0.000 95.62 3.19 0.00 0.06
0.04 0.10 0.00 3.740 2.720 3.850
2002 103 23 117 788.168 -1071.180 D 8.347 8.347 0.000 89.29 4.02 0.00 0.08
0.04 0.11 0.00 3.740 2.720 3.850
2002 104 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 105 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 106 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 107 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 108 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 109 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 110 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 111 23 120 785.506 -1068.610 D 8.460 8.347 0.113 87.06 11.13 0.43 0.42
0.28 0.64 0.04 3.740 2.720 3.850
2002 112 23 120 785.506 -1068.610 D 8.467 8.347 0.119 81.09 17.58 0.33 0.31
0.21 0.48 0.00 3.740 2.720 3.850
2002 113 23 120 785.506 -1068.610 D 8.350 8.347 0.002 74.17 24.83 0.25 0.23
0.16 0.36 0.00 3.740 2.720 3.850
2002 114 23 99 792.559 -1083.896 D 8.412 8.347 0.065 94.27 3.83 0.45 0.45 0.29
0.69 0.01 3.740 2.720 3.850
2002 115 23 81 777.710 -1118.013 D 8.385 8.347 0.037 88.54 9.93 0.36 0.37 0.23
0.56 0.01 3.740 2.720 3.850
2002 116 23 120 785.506 -1068.610 D 8.347 8.347 0.000 83.88 14.93 0.26 0.29
0.16 0.42 0.00 3.740 2.720 3.850
2002 117 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 118 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 119 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 120 23 81 777.710 -1118.013 D 8.347 8.347 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.740 2.720 3.850
2002 121 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 122 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 123 23 120 785.506 -1068.610 D 8.436 8.435 0.000 93.04 6.62 0.14 0.07
0.06 0.12 0.03 3.940 2.830 4.020
2002 124 23 120 785.506 -1068.610 D 8.438 8.435 0.003 89.02 10.76 0.06 0.05

0.03 0.08 0.01 3.940 2.830 4.020
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0.02 0.05 0.00 3.940 2.830 4.020
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0.00 0.00 3.940 2.830 4.020
2002 127 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 128 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 129 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 130 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 131 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 132 23 81 777.710 -1118.013 D 8.477 8.435 0.041 92.08 6.15 0.31 0.31 0.20
0.47 0.50 3.940 2.830 4.020
2002 133 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 134 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 135 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 136 23 120 785.506 -1068.610 D 8.435 8.435 0.000 88.39 8.48 0.00 0.15
0.08 0.21 0.00 3.940 2.830 4.020
2002 137 23 87 789.783 -1098.197 D 8.464 8.435 0.029 67.08 32.25 0.01 0.02
0.01 0.03 0.59 3.940 2.830 4.020
2002 138 23 81 777.710 -1118.013 D 8.435 8.435 0.000 98.66 2.90 0.00 0.05 0.03
0.07 0.02 3.940 2.830 4.020
2002 139 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 140 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 141 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 142 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 143 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 144 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 145 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 146 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 147 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 148 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 149 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 150 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 151 23 81 777.710 -1118.013 D 8.435 8.435 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.940 2.830 4.020
2002 152 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00

0.00 0.00 4.120 2.940 4.210
2002 153 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 154 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 155 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
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2002 156 23 120 785.506 -1068.610 D 8.520 8.519 0.001 91.13 8.15 0.17 0.16
0.10 0.24 0.00 4.120 2.940 4.210
2002 157 23 120 785.506 -1068.610 D 8.542 8.519 0.023 93.09 6.23 0.17 0.16
0.11 0.25 0.00 4.120 2.940 4.210
2002 158 23 120 785.506 -1068.610 D 8.526 8.519 0.007 92.54 6.93 0.13 0.12
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2002 159 23 117 788.168 -1071.180 D 8.519 8.519 0.000 87.50 12.05 0.00 0.09
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0.00 0.00 4.120 2.940 4.210
2002 161 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 162 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 163 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
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0.57 0.00 4.120 2.940 4.210
2002 165 23 81 777.710 -1118.013 D 8.542 8.519 0.022 91.55 7.00 0.35 0.34 0.23
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2002 167 23 81 777.710 -1118.013 D 8.534 8.519 0.014 81.09 18.51 0.10 0.09
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0.07 0.17 0.00 4.120 2.940 4.210
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0.00 0.00 4.120 2.940 4.210
2002 172 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 173 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 174 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 175 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 176 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 177 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 178 23 120 785.506 -1068.610 D 8.519 8.519 0.000 93.75 1.25 0.00 0.07
0.08 0.14 0.00 4.120 2.940 4.210
2002 179 23 81 777.710 -1118.013 D 8.519 8.519 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.120 2.940 4.210
2002 180 23 120 785.506 -1068.610 D 8.537 8.519 0.017 88.89 10.65 0.13 0.09

0.08 0.16 0.00 4.120 2.940 4.210
2002 181 23 120 785.506 -1068.610 D 8.524 8.519 0.004 73.25 26.55 0.06 0.04
0.04 0.07 0.00 4.120 2.940 4.210
2002 182 23 120 785.506 -1068.610 D 8.643 8.643 0.000 93.75 2.08 0.00 0.24
0.07 0.30 0.00 4.410 3.100 4.440
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0.06 0.22 0.00 4.410 3.100 4.440
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0.05 0.20 0.00 4.410 3.100 4.440
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0.05 0.19 0.00 4.410 3.100 4.440
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0.21 0.00 4.410 3.100 4.440
2002 187 23 81 777.710 -1118.013 D 8.643 8.643 0.000 87.50 6.25 0.00 0.17 0.05
0.21 0.00 4.410 3.100 4.440
2002 188 23 81 777.710 -1118.013 D 8.643 8.643 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.410 3.100 4.440
2002 189 23 81 777.710 -1118.013 D 8.643 8.643 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.410 3.100 4.440
2002 190 23 81 777.710 -1118.013 D 8.643 8.643 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.410 3.100 4.440
2002 191 23 120 785.506 -1068.610 D 8.659 8.643 0.016 97.55 1.75 0.17 0.17
0.11 0.26 0.00 4.410 3.100 4.440
2002 192 23 81 777.710 -1118.013 D 8.778 8.643 0.135 89.18 10.27 0.13 0.13
0.09 0.20 0.00 4.410 3.100 4.440
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0.08 0.20 0.00 4.410 3.100 4.440
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0.03 0.07 0.00 4.410 3.100 4.440
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0.02 0.07 0.00 4.410 3.100 4.440
2002 196 23 118 787.281 -1070.324 D 8.643 8.643 0.000 96.88 1.95 0.00 0.01
0.01 0.02 0.00 4.410 3.100 4.440
2002 197 23 86 789.227 -1101.058 D 8.643 8.643 0.000 91.67 0.00 0.00 0.00 0.00
0.00 0.00 4.410 3.100 4.440
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0.00 0.00 4.410 3.100 4.440
2002 199 23 81 777.710 -1118.013 D 8.643 8.643 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.410 3.100 4.440
2002 200 23 81 777.710 -1118.013 D 8.643 8.643 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.410 3.100 4.440
2002 201 23 120 785.506 -1068.610 D 8.656 8.643 0.013 88.12 11.47 0.10 0.09
0.06 0.14 0.00 4.410 3.100 4.440
2002 202 23 81 777.710 -1118.013 D 8.971 8.643 0.328 90.02 9.34 0.16 0.15 0.10
0.23 0.00 4.410 3.100 4.440
2002 203 23 81 777.710 -1118.013 D 9.184 8.643 0.541 92.11 7.27 0.16 0.14 0.10
0.22 0.00 4.410 3.100 4.440
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0.10 0.23 0.00 4.410 3.100 4.440
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0.09 0.20 0.00 4.410 3.100 4.440
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0.03 0.06 0.00 4.410 3.100 4.440
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0.01 0.02 0.00 4.410 3.100 4.440
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0.00 0.00 4.410 3.100 4.440
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0.00 0.00 4.410 3.100 4.440
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0.08 0.18 0.00 4.410 3.100 4.440
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0.09 0.20 0.00 4.410 3.100 4.440
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0.03 0.02 4.370 3.070 4.380
2002 214 23 81 777.710 -1118.013 D 8.622 8.622 0.000 88.89 5.56 0.00 0.00 0.00
0.00 0.00 4.370 3.070 4.380
2002 215 23 81 777.710 -1118.013 D 8.622 8.622 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.370 3.070 4.380
2002 216 23 81 777.710 -1118.013 D 8.622 8.622 0.000 98.20 1.63 0.00 0.01 0.01
0.01 0.00 4.370 3.070 4.380
2002 217 23 81 777.710 -1118.013 D 8.624 8.622 0.002 97.44 1.89 0.15 0.16 0.11
0.25 0.00 4.370 3.070 4.380
2002 218 23 81 777.710 -1118.013 D 8.624 8.622 0.002 95.91 3.93 0.03 0.04 0.03
0.06 0.00 4.370 3.070 4.380
2002 219 23 81 777.710 -1118.013 D 8.623 8.622 0.001 93.03 6.64 0.08 0.09 0.06
0.14 0.00 4.370 3.070 4.380
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0.00 0.00 0.00 4.370 3.070 4.380
2002 221 23 81 777.710 -1118.013 D 8.622 8.622 0.000 98.44 0.00 0.00 0.00 0.00
0.00 0.00 4.370 3.070 4.380
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0.00 0.00 0.00 4.370 3.070 4.380
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0.00 0.00 0.00 4.370 3.070 4.380
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0.00 0.00 4.370 3.070 4.380
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0.06 0.15 0.00 4.370 3.070 4.380
2002 226 23 120 785.506 -1068.610 D 8.622 8.622 0.000 96.22 3.22 0.13 0.09
0.06 0.13 0.00 4.370 3.070 4.380
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0.00 0.00 4.370 3.070 4.380
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0.00 0.00 4.370 3.070 4.380
2002 229 23 81 777.710 -1118.013 D 8.622 8.622 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.370 3.070 4.380
2002 230 23 81 777.710 -1118.013 D 8.622 8.622 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.370 3.070 4.380
2002 231 23 120 785.506 -1068.610 D 8.987 8.622 0.365 96.24 2.97 0.20 0.18
0.13 0.29 0.00 4.370 3.070 4.380
2002 232 23 120 785.506 -1068.610 D 8.640 8.622 0.018 89.58 9.78 0.16 0.15
0.10 0.23 0.00 4.370 3.070 4.380
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0.09 0.21 0.00 4.370 3.070 4.380
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2002 235 23 120 785.506 -1068.610 D 8.622 8.622 0.000 92.82 6.62 0.15 0.12
0.08 0.19 0.00 4.370 3.070 4.380
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0.17 0.39 0.00 4.370 3.070 4.380
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0.29 0.00 4.370 3.070 4.380
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0.24 0.00 4.370 3.070 4.380
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0.00 0.00 4.370 3.070 4.380
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0.00 0.00 4.370 3.070 4.380
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0.00 0.00 4.370 3.070 4.380
2002 244 23 81 777.710 -1118.013 D 8.541 8.541 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.09 0.29 0.00 4.180 2.970 4.230
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0.09 0.29 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.17 0.31 0.00 4.180 2.970 4.230
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0.20 0.46 0.00 4.180 2.970 4.230
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0.12 0.25 0.00 4.180 2.970 4.230
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0.07 0.17 0.00 4.180 2.970 4.230
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0.05 0.06 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 0.80 4.180 2.970 4.230
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0.00 0.00 0.02 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.48 1.17 4.180 2.970 4.230
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0.85 1.15 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
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0.00 0.00 4.180 2.970 4.230
2002 274 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
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0.00 0.00 3.920 2.820 3.990
2002 276 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
2002 277 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
2002 278 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
2002 279 23 120 785.506 -1068.610 D 8.441 8.425 0.016 87.00 12.81 0.03 0.03
0.02 0.05 0.06 3.920 2.820 3.990
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0.01 0.03 0.02 3.920 2.820 3.990
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0.01 0.02 0.00 3.920 2.820 3.990
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0.00 0.00 3.920 2.820 3.990
2002 283 23 120 785.506 -1068.610 D 8.434 8.425 0.009 85.34 14.33 0.06 0.07
0.04 0.10 0.06 3.920 2.820 3.990
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0.08 0.20 0.01 3.920 2.820 3.990
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0.03 0.07 0.00 3.920 2.820 3.990
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0.02 0.00 3.920 2.820 3.990
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0.00 0.00 3.920 2.820 3.990
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0.00 0.00 3.920 2.820 3.990
2002 289 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
2002 290 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
2002 291 23 81 777.710 -1118.013 D 8.425 8.425 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.920 2.820 3.990
2002 292 23 120 785.506 -1068.610 D 8.425 8.425 0.000 92.10 7.50 0.09 0.07

0.04 0.11 0.02 3.920 2.820 3.990
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0.01 0.03 0.02 3.920 2.820 3.990
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0.01 0.02 0.00 3.920 2.820 3.990
2002 296 23 120 785.506 -1068.610 D 8.428 8.425 0.003 94.82 5.11 0.02 0.02
0.01 0.03 0.00 3.920 2.820 3.990
2002 297 23 120 785.506 -1068.610 D 8.426 8.425 0.001 96.03 3.92 0.03 0.02
0.01 0.03 0.00 3.920 2.820 3.990
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0.01 0.02 0.00 3.920 2.820 3.990
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0.01 0.01 0.00 3.920 2.820 3.990
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0.01 0.01 0.00 3.920 2.820 3.990
2002 301 23 120 785.506 -1068.610 D 8.427 8.425 0.002 49.30 50.47 0.02 0.01
0.01 0.02 0.14 3.920 2.820 3.990
2002 302 23 86 789.227 -1101.058 D 8.701 8.425 0.277 77.96 20.23 0.39 0.30
0.24 0.50 0.37 3.920 2.820 3.990
2002 303 23 87 789.783 -1098.197 D 8.437 8.425 0.012 49.70 50.08 0.05 0.03
0.03 0.06 0.05 3.920 2.820 3.990
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0.03 0.00 3.920 2.820 3.990
2002 305 23 81 777.710 -1118.013 D 8.431 8.431 0.000 90.62 3.91 0.00 0.01 0.02
0.02 0.00 3.930 2.830 4.010
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0.02 0.03 0.00 3.930 2.830 4.010
2002 307 23 120 785.506 -1068.610 D 8.432 8.431 0.001 54.54 40.08 0.02 0.01
0.01 0.01 5.31 3.930 2.830 4.010
2002 308 23 120 785.506 -1068.610 D 8.581 8.431 0.150 67.90 30.32 0.17 0.17
0.11 0.26 1.06 3.930 2.830 4.010
2002 309 23 81 777.710 -1118.013 D 8.519 8.431 0.088 72.48 24.82 0.21 0.20
0.13 0.30 1.86 3.930 2.830 4.010
2002 310 23 87 789.783 -1098.197 D 8.431 8.431 0.000 81.25 14.58 0.00 0.02
0.01 0.03 0.00 3.930 2.830 4.010
2002 311 23 120 785.506 -1068.610 D 8.431 8.431 0.000 93.75 5.77 0.12 0.11
0.07 0.17 0.00 3.930 2.830 4.010
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0.04 0.09 0.00 3.930 2.830 4.010
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0.01 0.02 0.00 3.930 2.830 4.010
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0.00 0.01 0.43 3.930 2.830 4.010
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0.24 0.31 0.75 3.930 2.830 4.010
2002 316 23 81 777.710 -1118.013 D 8.431 8.431 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.930 2.830 4.010
2002 317 23 81 777.710 -1118.013 D 8.431 8.431 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.930 2.830 4.010
2002 318 23 120 785.506 -1068.610 D 8.494 8.431 0.063 73.07 25.24 0.36 0.36
0.24 0.55 0.17 3.930 2.830 4.010
2002 319 23 104 792.307 -1081.109 D 8.690 8.431 0.259 69.92 29.24 0.16 0.17
0.11 0.25 0.14 3.930 2.830 4.010
2002 320 23 81 777.710 -1118.013 D 8.431 8.431 0.000 0.00 0.00 0.00 0.00 0.00

0.00 0.00 3.930 2.830 4.010
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0.20 0.49 0.00 3.930 2.830 4.010
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0.12 0.29 0.00 3.930 2.830 4.010
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0.14 0.34 0.00 3.930 2.830 4.010
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0.15 0.39 0.00 3.930 2.830 4.010
2002 326 23 81 777.710 -1118.013 D 8.431 8.431 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.930 2.830 4.010
2002 327 23 81 777.710 -1118.013 D 8.431 8.431 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.930 2.830 4.010
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0.19 0.43 0.00 3.930 2.830 4.010
2002 329 23 120 785.506 -1068.610 D 8.473 8.431 0.042 75.65 23.33 0.24 0.23
0.16 0.36 0.03 3.930 2.830 4.010
2002 330 23 88 791.229 -1096.193 D 8.504 8.431 0.074 73.88 25.25 0.20 0.19
0.13 0.29 0.07 3.930 2.830 4.010
2002 331 23 81 777.710 -1118.013 D 8.434 8.431 0.003 84.31 15.06 0.13 0.12
0.08 0.19 0.09 3.930 2.830 4.010
2002 332 23 81 777.710 -1118.013 D 8.431 8.431 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 3.930 2.830 4.010
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0.17 0.40 0.04 3.930 2.830 4.010
2002 334 23 81 777.710 -1118.013 D 8.432 8.431 0.001 74.75 23.91 0.28 0.32
0.19 0.48 0.05 3.930 2.830 4.010
2002 335 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.060 2.900 4.110
2002 336 23 120 785.506 -1068.610 D 8.488 8.486 0.002 73.77 24.76 0.31 0.38
0.22 0.56 0.01 4.060 2.900 4.110
2002 337 23 120 785.506 -1068.610 D 8.487 8.486 0.000 20.88 71.18 0.00 0.03
0.02 0.04 7.87 4.060 2.900 4.110
2002 338 23 81 777.710 -1118.013 D 8.523 8.486 0.036 27.71 63.80 0.01 0.01
0.01 0.01 8.46 4.060 2.900 4.110
2002 339 23 81 777.710 -1118.013 D 8.487 8.486 0.000 83.63 16.15 0.00 0.01
0.01 0.01 0.14 4.060 2.900 4.110
2002 340 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.060 2.900 4.110
2002 341 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.060 2.900 4.110
2002 342 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.060 2.900 4.110
2002 343 23 81 777.710 -1118.013 D 8.486 8.486 0.000 112.50 3.12 0.00 0.01
0.02 0.03 0.00 4.060 2.900 4.110
2002 344 23 81 777.710 -1118.013 D 8.486 8.486 0.000 77.88 22.24 0.00 0.00
0.00 0.00 0.04 4.060 2.900 4.110
2002 345 23 120 785.506 -1068.610 D 8.487 8.486 0.000 74.62 25.24 0.00 0.01
0.02 0.02 0.03 4.060 2.900 4.110
2002 346 23 120 785.506 -1068.610 D 8.815 8.486 0.328 45.74 49.13 0.53 0.51
0.34 0.79 2.96 4.060 2.900 4.110
2002 347 23 87 789.783 -1098.197 D 8.810 8.486 0.323 44.21 51.95 0.45 0.43
0.29 0.66 2.01 4.060 2.900 4.110
2002 348 23 81 777.710 -1118.013 D 8.487 8.486 0.000 79.76 20.04 0.00 0.01

0.01 0.02 0.01 4.060 2.900 4.110
2002 349 23 120 785.506 -1068.610 D 8.568 8.486 0.081 64.45 34.84 0.26 0.09
0.15 0.20 0.01 4.060 2.900 4.110
2002 350 23 81 777.710 -1118.013 D 8.514 8.486 0.027 74.64 24.41 0.23 0.22
0.15 0.34 0.00 4.060 2.900 4.110
2002 351 23 120 785.506 -1068.610 D 8.488 8.486 0.001 74.49 24.36 0.16 0.37
0.14 0.49 0.00 4.060 2.900 4.110
2002 352 23 87 789.783 -1098.197 D 8.766 8.486 0.280 53.60 44.22 0.40 0.34
0.25 0.54 0.65 4.060 2.900 4.110
2002 353 23 84 781.422 -1113.936 D 8.702 8.486 0.216 48.56 45.71 0.77 0.78
0.50 1.18 2.51 4.060 2.900 4.110
2002 354 23 81 777.710 -1118.013 D 8.747 8.486 0.260 68.69 29.52 0.42 0.42
0.27 0.64 0.04 4.060 2.900 4.110
2002 355 23 120 785.506 -1068.610 D 8.583 8.486 0.096 58.61 39.86 0.37 0.36
0.24 0.56 0.00 4.060 2.900 4.110
2002 356 23 120 785.506 -1068.610 D 8.490 8.486 0.004 64.86 33.46 0.33 0.48
0.23 0.66 0.00 4.060 2.900 4.110
2002 357 23 81 777.710 -1118.013 D 8.926 8.486 0.440 68.92 27.84 0.40 0.37
0.25 0.58 1.63 4.060 2.900 4.110
2002 358 23 81 777.710 -1118.013 D 8.516 8.486 0.030 45.20 48.95 0.63 0.60
0.41 0.93 3.28 4.060 2.900 4.110
2002 359 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.060 2.900 4.110
2002 360 23 120 785.506 -1068.610 D 8.556 8.486 0.069 63.43 35.89 0.24 0.09
0.14 0.20 0.01 4.060 2.900 4.110
2002 361 23 120 785.506 -1068.610 D 9.086 8.486 0.600 54.38 44.66 0.24 0.21
0.15 0.33 0.03 4.060 2.900 4.110
2002 362 23 120 785.506 -1068.610 D 8.572 8.486 0.086 56.13 42.87 0.24 0.24
0.15 0.36 0.01 4.060 2.900 4.110
2002 363 23 81 777.710 -1118.013 D 8.486 8.486 0.000 0.00 0.00 0.00 0.00 0.00
0.00 0.00 4.060 2.900 4.110

--- 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) DELTA DV %_SO4
%_NO3 %_OC %_EC %_PMC %_PMF %_NO2 F(RH) F(RH) F(RH)
2002 205 23 120 785.506 -1068.610 D 9.697 8.643 1.054 82.22 17.23 0.14 0.12
0.09 0.20 0.00 4.410 3.100 4.440 1
2002 61 23 99 792.559 -1083.896 D 9.314 8.366 0.948 62.17 36.59 0.25 0.24 0.16
0.37 0.22 3.790 2.740 3.870 2
2002 257 23 120 785.506 -1068.610 D 9.245 8.541 0.703 87.17 11.56 0.31 0.30
0.20 0.46 0.00 4.180 2.970 4.230 3
2002 361 23 120 785.506 -1068.610 D 9.086 8.486 0.600 54.38 44.66 0.24 0.21
0.15 0.33 0.03 4.060 2.900 4.110 4
2002 203 23 81 777.710 -1118.013 D 9.184 8.643 0.541 92.11 7.27 0.16 0.14 0.10
0.22 0.00 4.410 3.100 4.440 5
2002 164 23 81 777.710 -1118.013 D 9.042 8.519 0.522 94.57 3.87 0.38 0.37 0.25
0.57 0.00 4.120 2.940 4.210 6
2002 193 23 120 785.506 -1068.610 D 9.126 8.643 0.483 83.91 15.55 0.13 0.13
0.08 0.20 0.00 4.410 3.100 4.440 7
2002 5 23 81 777.710 -1118.013 D 8.965 8.491 0.474 31.58 63.51 0.41 0.39 0.26
0.61 3.24 4.080 2.910 4.100 8
2002 46 23 120 785.506 -1068.610 D 8.849 8.379 0.471 80.57 18.46 0.24 0.22
0.16 0.35 0.01 3.820 2.760 3.890 9

2002 357 23 81 777.710 -1118.013 D 8.926 8.486 0.440 68.92 27.84 0.40 0.37
0.25 0.58 1.63 4.060 2.900 4.110 10
2002 231 23 120 785.506 -1068.610 D 8.987 8.622 0.365 96.24 2.97 0.20 0.18
0.13 0.29 0.00 4.370 3.070 4.380 11
2002 8 23 87 789.783 -1098.197 D 8.843 8.491 0.352 55.64 43.24 0.27 0.25 0.17
0.39 0.03 4.080 2.910 4.100 12
2002 346 23 120 785.506 -1068.610 D 8.815 8.486 0.328 45.74 49.13 0.53 0.51
0.34 0.79 2.96 4.060 2.900 4.110 13
2002 202 23 81 777.710 -1118.013 D 8.971 8.643 0.328 90.02 9.34 0.16 0.15 0.10
0.23 0.00 4.410 3.100 4.440 14
2002 347 23 87 789.783 -1098.197 D 8.810 8.486 0.323 44.21 51.95 0.45 0.43
0.29 0.66 2.01 4.060 2.900 4.110 15
2002 20 23 120 785.506 -1068.610 D 8.804 8.491 0.313 51.89 47.19 0.25 0.15
0.15 0.27 0.11 4.080 2.910 4.100 16
2002 6 23 81 777.710 -1118.013 D 8.799 8.491 0.308 30.36 65.62 0.56 0.53 0.36
0.82 1.73 4.080 2.910 4.100 17
2002 204 23 120 785.506 -1068.610 D 8.940 8.643 0.297 90.70 8.68 0.15 0.15
0.10 0.23 0.00 4.410 3.100 4.440 18
2002 352 23 87 789.783 -1098.197 D 8.766 8.486 0.280 53.60 44.22 0.40 0.34
0.25 0.54 0.65 4.060 2.900 4.110 19
2002 236 23 120 785.506 -1068.610 D 8.902 8.622 0.280 88.85 10.08 0.26 0.25
0.17 0.39 0.00 4.370 3.070 4.380 20
2002 302 23 86 789.227 -1101.058 D 8.701 8.425 0.277 77.96 20.23 0.39 0.30
0.24 0.50 0.37 3.920 2.820 3.990 21
2002 92 23 120 785.506 -1068.610 D 8.621 8.347 0.274 92.40 6.34 0.32 0.29 0.20
0.45 0.00 3.740 2.720 3.850 22

--- Number of days with Delta-Deciview => 0.50: 6
--- Number of days with Delta-Deciview => 1.00: 1
--- Largest Delta-Deciview = 1.054

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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

116 788.252 -1072.109 D 8.510 8.475 0.035

--- Number of recs with Delta-Deciview > 0.10: 0
--- Largest Delta-Deciview = 0.035