```
!namelist

 $MODEL_GRIDS

! Simulation title (64 chars)

   EXPNME   = 'BRAMS Version 4.2',

   RUNTYPE  = 'INITIAL',  ! Type of run: MAKESFC, INITIAL, HISTORY,
                          !              MAKEVFILE, or MEMORY

   TIMEUNIT = 'h',        ! 'h','m','s' - Time units of TIMMAX, TIMSTR

   TIMMAX    = 24,

   LOAD_BAL = 0,    !  Dynamic load balance flag: 1=yes, 0=no

!  Start of simulation or ISAN processing

   IMONTH1  = 01,
   IDATE1   = 25,
   IYEAR1   = 2005,
   ITIME1   = 1200,

! Grid specifications

   NGRIDS   = 1,            ! Number of grids to run


   NNXP     = 35,78,34,        ! Number of x gridpoints
   NNYP     = 34,82,34,        ! Number of y gridpoints
   NNZP     = 32,32,32,        ! Number of z gridpoints

   NZG      = 9,       ! Number of soil layers
   NZS      = 4,         ! Maximum number of snow layers

   NXTNEST  = 0,1,2,2,          ! Grid number which is the next coarser
grid

! Coarse grid specifications

   IF_ADAP  = 0,

   IHTRAN   = 1,         ! 0-Cartesian, 1-Polar stereo

   DELTAX   = 112000.,
   DELTAY   = 112000.,       ! X and Y grid spacing

   DELTAZ   = 120.,         ! Z grid spacing (set to 0. to use ZZ)

   DZRAT    = 1.2,         ! Vertical grid stretch ratio
   DZMAX    = 1000.,        ! Maximum delta Z for vertical stretch

   ! Vertical levels if DELTAZ = 0
   ZZ       = 0.0,
     20.0,      46.0,      80.0,     120.0,     165.0,
    220.0,     290.0,     380.0,     480.0,     590.0,
    720.0,     870.0,    1030.0,    1200.0,    1380.0,
```

```
  1595.0,    1850.0,    2120.0,    2410.0,    2715.0,
  3030.0,    3400.0,    3840.0,    4380.0,    5020.0,
  5800.0,    6730.0,    7700.0,    8700.0,    9700.0,
 10700., 11700., 12700., 13700., 14700., 15700., 16700.,
 17700., 18700., 19700.,

  DTLONG   = 120.,         ! Coarse grid long timestep
  NACOUST  = 3,             ! Small timestep ratio
  IDELTAT  = 0,            ! =0 - constant timesteps
                           ! >0 - initial computation <0 - variable

                           ! Nest ratios between this grid
                           !  and the next coarser grid.
  NSTRATX  = 1,4,4,4,          ! x-direction
  NSTRATY  = 1,4,4,4,          ! y-direction
  NNDTRAT  = 1,3,3,2,          ! Time

  NESTZ1   = 0,    ! Contort coarser grids if negative
  NSTRATZ1 = 3,3,2,1, !
  NESTZ2   = 0,    ! Contort coarser grids if negative
  NSTRATZ2 = 3,3,2,1, !


  POLELAT  = -7.0,          ! Latitude of pole point
  POLELON  = -40.0,         ! Longitude of pole point

CENTLAT  = -7.0, -23.0, -23.2,
CENTLON  = -40.0, -52.5, -47.0,
! Grid point on the next coarser
                           !  nest where the lower southwest
                           !  corner of this nest will start.
                           !  If NINEST or NJNEST = 0, use CENTLAT/LON
  NINEST   = 1,0,0,0,         ! i-point
  NJNEST   = 1,0,0,0,         ! j-point
  NKNEST   = 1,1,1,1,          ! k-point

  NNSTTOP  = 1,1,1,1,          ! Flag (0-no or 1-yes) if this
  NNSTBOT  = 1,1,1,1,          ! Nest goes the top or bottom of the
                           !  coarsest nest.

  GRIDU    = 0.,0.,0.,0.,        ! u-component for moving grids
  GRIDV    = 0.,0.,0.,0.,        ! v-component for moving grids
                           !  (not working again!)

$END

$CATT_INFO

  CATT = 0, ! 1-CATT environmental model activated 0-off

  ! Fire Map file prefix
  FIREMAPFN = './datain/catt/CATT_sources',

  RECYCLE_TRACERS = 0,

  PLUMERISE  = 1, !0-Desativated, 1-Activated Plume Rise routine
  PRFRQ = 3600.,
```

```
 $END

 $TEB_SPM_INFO

   TEB_SPM  = 0, ! 1-TEB activated 0-off

 $END


 $MODEL_FILE_INFO

! Variable initialization input

   INITIAL  = 2,             ! Initial fields - 1=horiz.homogeneous,
                             !                  2=init from varfile
                             !                  3=init from HFILIN


!  ------ Analysis nudging parameters ----------------------------------
   NUD_TYPE = 2,             ! =1 - nudge from history files(1-way nest)
                             ! =2 - nudge from varfiles
                             ! =0 - no analysis nudging

   VARFPFX  = './dataout/IVAR/iv-brams',
   VWAIT1   = 0.,            ! wait between each VFILE check (s)
   VWAITTOT = 0.,            ! total wait before giving up on a VFILE (s)

   NUD_HFILE = './dataout/HIS/a-H-2001-07-21-000000-head.txt',
            ! Header file name for history nudging files (only prefix is
used)

   NUDLAT   = 5,          ! Number of points in lateral bnd region
   TNUDLAT  = 1800.,         ! Nudging time scale(s) at lateral boundary
   TNUDCENT = 0.,               ! Nudging time scale(s) in center of
domain
   TNUDTOP  = 10800.,        ! Nudging time scale (s) at top of domain
   ZNUDTOP  = 16000.,        ! Nudging at top of domain above height(m)

   WT_NUDGE_GRID =  1., 1., 0.7, 0.5, ! Relative nudging weights for
active grids
                                      ! =0., turns off nudging for that
grid

                             ! These weights will multiply the base
timescales
                             !   to determine full nudging weight.
                             !   (Timescales)/(WT_NUDGE_*)
                             !    must be larger than DTLONG
   WT_NUDGE_UV = 1.,         ! Anal nudging weight for u and v
   WT_NUDGE_TH = 1.,         ! Anal nudging weight for theta
   WT_NUDGE_PI = 1.,         ! Anal nudging weight for pi
   WT_NUDGE_RT = 1.,         ! Anal nudging weight for r_tot

!-----------------------------------------------------------------------
-

!----------- Condensate nudging ----------------------------------------
-
```

```
   NUD_COND    = 0,          ! Only nudge total water where condensate
                             !   exists (from previous history files,
HFILIN)
   COND_HFILE = './dataout/HIS/a-H-2001-07-21-000000-head.txt',
            ! Header file name for cond nudging history files (only
prefix is used)
   TCOND_BEG=0., TCOND_END=21600., ! Model time start and end of cond
nudging (sec)
   T_NUDGE_RC = 3600.,       ! Cond nudging timescale for r_total
   WT_NUDGEC_GRID =  1., 0.8, 0.7, 0.5, ! Relative nudging weights for
active grids
                                        ! =0., turns off nudging for that
grid
!-------------------------------------------------------------------------
-

!--------- Observation Data Assimilation (ODA) --------------------------
-------
   IF_ODA = 0,                           ! Flag to turn on oda
   ODA_UPAPREFIX = './obs/dp-r',         ! File prefix for upper air obs
   ODA_SFCPREFIX = './obs/dt-s',         ! File prefix for surface obs

   FRQODA=300.,                          ! Frequency of obs analysis
   TODABEG=0., TODAEND=99999999.,        ! Model time start and end of
oda (sec)

   TNUDODA= 900.,                        ! Nudging timescale for each
grid
   WT_ODA_GRID =  1., 1., 0.7, 0.5,      ! Relative nudging weights for
active grids
                                         ! =0., turns off nudging for
that grid

   WT_ODA_UV = 1.,          ! ODA nudging weight for u and v
   WT_ODA_TH = 1.,          ! ODA nudging weight for theta
   WT_ODA_PI = 1.,          ! ODA nudging weight for pi
   WT_ODA_RT = 1.,          ! ODA nudging weight for r_tot

  ! Following are radii that affect the "smoothness" of the analyzed
fields
  !     The SFCE and UPAE are the radii where the affect falls off to
e**(-2)
  !     The SFC0 and UPA0 are the radii where the affect falls off to 0
  !     Values are grid dependent.

   RODA_SFCE = 50000.,100.,100.,100.,
   RODA_SFC0 = 100000.,100000.,100000.,100000.,
   RODA_UPAE = 100000.,200.,200.,200.,
   RODA_UPA0 = 200000.,2000.,2000.,2000.,

   RODA_HGT = 3000.,3000.,3000.,3000.,  ! Height at which transition from
SFC radii
                                        !   to UPA radii occurs

   RODA_ZFACT = 100.,100.,100.,100.,    ! Vertical factor related to
dx/dz

   ! - Time interpolate limit (TIL)- if the future-past obs time
```

```
   !    is > this limit, do not use to interpolate
   !
   ! - Time extrapolate limit (TEL)- if past/future obs is greater than
TIL,
   !    but less than TEL, use the obs

   ODA_SFC_TIL=21600.,
   ODA_SFC_TEL=900.,
   ODA_UPA_TIL=43200.,
   ODA_UPA_TEL=21600.,
!-------------------------------------------------------------------------

!----- Cumulus inversion tendency input -----
   IF_CUINV = 0,
   CU_PREFIX = './t5-C-',

   TNUDCU=900.,
   WT_CU_GRID=1., 1., .5,

   TCU_BEG=0., TCU_END=7200.,
   CU_TEL=3600.,
   CU_TIL=21600.,
!-------------------------------------------------------------------------

! History file input

   TIMSTR   = 0.0,           ! Time of history start (see TIMEUNIT)
   HFILIN   = './h-apagar-brams-simepar.vfm',
                             ! Input history file name

! Analysis file input for assimilation (currently LEAF variables)

   IPASTIN   = 0,            ! Initialize various fields from analysis
file?
                             !  1=yes, 0=no
   PASTFN    = './a-A-2000-01-09-000000-head.txt',
                             ! Input analysis file name

! History/analysis file output

   IOUTPUT  =  2,            ! 0-no files, 1-save ASCII, 2-save binary
   HFILOUT  = './dataout/HIS/hist',
   AFILOUT  = './dataout/ANL/anal',
   ICLOBBER = 1,           ! 0=stop if files exist, 1=overwite files
   IHISTDEL = 1,           ! 0=keep all hist files, 1=delete previous
   FRQHIS   = 21600.,          ! History file frequency
   FRQANL   = 3600.,          ! Analysis file frequency
!-------------------------------------------------------------------------
   FRQLITE  = 0.,            ! Analysis freq. for "lite" variables
                             !   = 0 : no lite files
   XLITE    = '/0:0/',       ! nums>0 are absolute grid indexes
   YLITE    = '/0:0/',       ! nums<0 count in from the domain edges
   ZLITE    = '/0:0/',       ! nums=0 are domain edges

   NLITE_VARS=0,
   LITE_VARS='UP','VP','WP','swdr','THETA',
!-------------------------------------------------------------------------
```

```
   AVGTIM   = 0.,            ! Averaging time for analysis variables
                             !   must be abs(AVGTIM) <= FRQANL
                             !   > 0 : averaging is centered at FRQANL
                             !   < 0 : averaging ends at FRQANL
                             !   = 0 : no averaged files
   FRQMEAN  = 0.,            ! Analysis freq. for "averaged" variables
   FRQBOTH  = 0.,            ! Analysis freq. for Both "averaged" and
                             !   "lite" variables
   KWRITE   = 0,             ! 1-write,0-don't write scalar K's to anal.

! Printed output controls

   FRQPRT   = 10800.,         ! Printout frequency
   INITFLD  = 1,             ! Initial field print flag 0=no prnt,1=prnt

! Input topography variables

   TOPFILES = './dataout/SFC/toph-brams',  ! File path and prefix for
topo files.
   SFCFILES = './dataout/SFC/sfc-brams',
   SSTFPFX  = './dataout/SFC/sst-brams',
   NDVIFPFX = './dataout/SFC/ndvi-brams',  ! Path and prefix for ndvi
files


   ITOPTFLG = 1,1,1,1,           ! 2 - Fill data in "leaf3_init"
   ISSTFLG  = 1,1,1,1,           ! 0 - Interpolate from coarser grid
   IVEGTFLG = 1,1,1,1,           ! 1 - Read from standard Lat/Lon data
file
   ISOILFLG = 2,2,2,1,           !
   NDVIFLG  = 2,2,2,2,           !

   NOFILFLG = 2,2,2,2,           ! 2 - Fill data in "leaf3_init"
                                 ! 0 - Interpolate from coarser grid

   IUPDNDVI  = 0,             ! 0 - No update of NDVI values during run
   IUPDSST  = 0,              ! 0 - No update of SST values during run
                              ! 1 - Update values during run

                             ! The following only apply for IxxxxFLG=1

   ITOPTFN  = './datain/topo10km/H',
              './datain/topo/EL',
              './datain/topo/EL',

   ISSTFN   = './datain/sst/S',
              './datain/sst/S',
              './datain/sst/S',

   IVEGTFN  = './datain/veget/OGE',
              './datain/veget/OGE',
              './datain/veget/OGE',

   ISOILFN  = ' ',
              ' ',
              ' ',

   NDVIFN  = ' ',
```

```
! Topography scheme

   ITOPSFLG = 1,1,1,0,           ! 0 = Average Orography
                                 ! 1 = Silhouette Orography
                                 ! 2 = Envelope Orography
                                 ! 3 = Reflected Envelope Orography

   TOPTENH  = 1.,1.,1.,0.,       ! For ITOPSFLG=1, Weighting of topo
                                 !   silhouette averaging
                                 ! For ITOPSFLG=2 or 3, Reflected
Envelope
                                 !   and Envelope Orography enhancement
factor

   TOPTWVL  = 3.,2.,2.,4.,       ! Topo wavelength cutoff in filter

! Surface Roughness scheme

   IZ0FLG   = 0,0,0,0,           ! 0 = Use veg, bare soil and water
surface
                                 ! 1 = Also use subgrid scale topography
   Z0MAX    = 5.,5.,5.,5.,       ! Max zo for IZ0FLG=1
   Z0FACT   = 0.005,             ! Subgrid scale orograhic roughness
factor

! Microphysics collection tables

   MKCOLTAB = 0,              ! Make table: 0 = no, 1 = yes
   COLTABFN = './datain/micro/ct2.0',
                              ! Filename to read or write

 $END

 $MODEL_OPTIONS

   NADDSC   = 0,              ! Number of additional scalar species
                              ! To use with CATT must be >= 4

! Numerical schemes

   ICORFLG  = 1,              ! Coriolis flag/2D v-component  -  0=off,
1=on

   IBND     = 1,              ! Lateral boundary condition flags
   JBND     = 1,              ! 1-Klemp/Wilhelmson, 2-Klemp/Lilly, 3-
Orlanski
                              !  4-cyclic
   CPHAS    = 20.,            ! Phase speed if IBND or JBND = 1
   LSFLG    = 0,              ! Large-scale gradient flag for variables
other than
                              !  normal velocity:
                              !  0 = zero gradient inflow and outflow
                              !  1 = zero gradient inflow, radiative b.c.
outflow
                              !  2 = constant inflow, radiative b.c.
outflow
                              !  3 = constant inflow and outflow
```

```
   NFPT     = 0,             ! Rayleigh friction - number of points from
the top
   DISTIM   = 400.,           !             - dissipation time scale

! Radiation parameters

   ISWRTYP  = 1,             ! Shortwave radiation type
   ILWRTYP  = 1,             ! Longwave radiation type
                             !    0-none, 2-Mahrer/Pielke, 1-Chen, 3-
Harrington
                             !    4-CARMA
   ! Parameters needed by CARMA radiation scheme
   RADDATFN  = './datain/carma/rad_param.data',

   RADFRQ   = 1800.,          ! Freq. of radiation tendency update (s)
   LONRAD   = 1,          ! Longitudinal variation of shortwave
                              !    (0-no, 1-yes)

! Cumulus parameterization parameters

   NNQPARM  = 2,2,2,2,           ! Convective param. flag (0-off, 1-on,
                                 !                         1-on standard,
                                 !                         2-on Grell
par.)

   CLOSURE_TYPE = 'GR',          ! Closure type (for Grell Param.):
                                 ! EN: ensemble (all closures)
                                 ! GR: Grell
                                 ! LO: low level omega
                                 ! MC: moisture convergence
                                 ! SC: like Fritsch Chappel or Kain
Fritsch
                                 ! AS: Arakawa-Schubert

   NNSHCU   = 1,1,1,1,           ! Shallow Cumulus Param. (0-off, 1-on)
   CONFRQ   = 1200.,           ! Frequency of conv param. updates (s)
   SHCUFRQ  = 1200.,          ! Frequency of Shallow param. updates (s)
   WCLDBS   = .0005,           ! Vertical motion needed at cloud base for
                              !    to trigger convection

! Surface layer and soil parameterization

   NPATCH   = 2,             ! Number of patches per grid cell (min=2)

   NVEGPAT  = 1,             ! Number of patches per grid cell to be
                             !    filled from
                             ! vegetation files
                             !    (min of 1, max of NPATCH-1)

   N_CO2    = 1,             ! Number of CO2 tracers for use with SiB
submodel

   CO2_INIT = 360., 360., 360., 355., 355., 355., 350., 350., 340.,
   ! CO2 vertical profile for SiB submodel initialization. [ppm]

   ISFCL    = 1,             ! Surface layer/soil/veg model
                             !  0-specified surface layer gradients
                             !  1-soil/vegetation model - LEAF
```

```
                              !  3- SiB submodel

   NVGCON   = 6,              ! Vegetation type (see below)

   !   1 -- Crop/mixed farming         2 -- Short grass
   !   3 -- Evergreen needleleaf tree  4 -- Deciduous needleleaf tree
   !   5 -- Deciduous broadleaf tree   6 -- Evergreen broadleaf tree
   !   7 -- Tall grass                 8 -- Desert
   !   9 -- Tundra                    10 -- Irrigated crop
   !  11 -- Semi-desert               12 -- Ice cap/glacier
   !  13 -- Bog or marsh              14 -- Inland water
   !  15 -- Ocean                     16 -- Evergreen shrub
   !  17 -- Deciduous shrub           18 -- Mixed woodland

   PCTLCON  = 1.,             ! Constant land % if for all domain
   NSLCON   = 6,              ! Constant soil type if for all domain

   !   1 -- sand             2 -- loamy sand      3 -- sandy loam
   !   4 -- silt loam        5 -- loam            6 -- sandy clay loam
   !   7 -- silty clay loam  8 -- clay loam       9 -- sandy clay
   !  10 -- silty clay      11 -- clay           12 -- peat

   ZROUGH   = .05,            ! Constant roughness if for all domain
   ALBEDO   = .2,             ! Constant albedo if not running soil model
   SEATMP   = 298.,           ! Constant water surface temperature

   DTHCON   = 0.,             ! Constant sfc layer  temp grad for no soil
   DRTCON   = 0.,             ! Constant sfc layer moist grad for no soil

   SOIL_MOIST = 'n',             ! n => Homogeneous (standard)
                                 ! i,h,a => Heterogenous Soil Moist.Init.
                                 !          with file.
                                 !          i => INITIAL
                                 !          h => HISTORY
                                 !          a => INITIAL or HISTORY

   SOIL_MOIST_FAIL = 'l',        ! In case of Heterogenous Soil Moist.
file was
                                 ! not found, what to do?
                                 ! s => STOP the program
                                 ! h => Initialize with Homogenous Soil
Moist.
                                 ! l => Looking for 5 days old files, and
if
                                 !      not found again then stop.

   USDATA_IN  = './datain/umid/us',    ! Soil Moisture File prefix
   USMODEL_IN = './datain/umid/us',    ! File prefix with pre-calculated
data by BRAMS

  SLZ     =  -2.0, -1.75, -1.50, -1.25, -1.00, -0.75, -0.50, -0.25, -
0.05, ! soil grid levels

  SLMSTR  =  0.30, 0.30, 0.30, 0.25, 0.25, 0.20, 0.20, 0.18, 0.15,
                              ! Initial soil moisture

  STGOFF=  0.0,  0.0,  0.0,   0.0, 0.0,  0.0,  0.0,   0.0, 0.0,
                              ! Initial soil temperature offset
```

```
                              !  from lowest atmospheric level
!-------------------------------------------------------------------------
--

!----- Urban canopy parameterization -------------------------------

   IF_URBAN_CANOPY =0,

!-------------------------------------------------------------------------
-

!--------- Eddy diffusion coefficient parameters ----------------------

   IDIFFK  = 1,1,1,1,           ! K flag:
                              !  1 - Horiz deform/Vert Mellor-Yamada
                              !  2 - Anisotropic deformormation
                              !      (horiz & vert differ)
                              !  3 - Isotropic deformation
                              !      (horiz and vert same)
                              !  4 - Deardorff TKE (horiz and vert same)
   IHORGRAD = 2,              !  1 - horiz grad frm decomposed sigma grad
                              !  2 - true horizontal gradient.
                              !      Non-conserving, but allows small DZ
   CSX     = .2,.2,.2,.2,            ! Deformation horiz. K's coefficient
   CSZ     = .35,.35,.35,.2,         ! Deformation vert. K's coefficient
   XKHKM   = 3.,3.,3.,3.,            ! Ratio of horiz K_h to K_m for
deformation
   ZKHKM   = 3.,3.,3.,3.,            ! Ratio of vert K_h to K_m for
deformation
   AKMIN   = 1.,1.,1.,2.,            ! Ratio of minimum horizontal eddy
                              !    viscosity coefficientto typical value
                              !    from deformation K
!-------------------------------------------------------------------------
------

!----- Microphysics -----------------------------------------------------
-

   LEVEL   = 3,               ! Moisture complexity level

   ICLOUD  = 4,            ! Microphysics flags
   IRAIN   = 2,            !-------------------
   IPRIS   = 5,            !  1 - diagnostic concen.
   ISNOW   = 2,            !  2 - specified mean diameter
   IAGGR   = 2,            !  3 - specified y-intercept
   IGRAUP  = 2,            !  4 - specified concentration
   IHAIL   = 2,            !  5 - prognostic concentration

   CPARM   = .1e9,            !  Microphysics parameters
   RPARM   = 1e-3,            !-------------------------
   PPARM   = 0.,              !  Characteristic diameter, # concentration
   SPARM   = 1e-3,            !    or y-intercept
   APARM   = 1e-3,
   GPARM   = 1e-3,
   HPARM   = 3e-3,

   GNU     = 2.,2.,2.,2.,2.,2.,2., ! Gamma shape parms for
                                   ! cld rain pris snow aggr graup hail
```

```
!--------------------------------------------------------------------------
-----

 $END

 $MODEL_SOUND

!-----------------------------------
! Sounding specification
!-----------------------------------

! Flags for how sounding is specified

   IPSFLG   = 1,             ! Specifies what is in PS array
                             !  0-pressure(mb) 1-heights(m)
                             !  PS(1)=sfc press(mb)

   ITSFLG   = 0,             ! Specifies what is in TS array
                             !  0-temp(C) 1-temp(K) 2-pot. temp(K)

   IRTSFLG  = 3,             ! Specifies what is in RTS array
                             !  0-dew pnt.(C) 1-dew pnt.(K)
                             !  2-mix rat(g/kg)
                             !  3-relative humidity in %,
                             !  4-dew pnt depression(K)

   IUSFLG   = 0,             ! Specifies what is in US and VS arrays
                             ! 0-u,v component(m/s)
                             ! 1-umoms-direction, vmoms-speed

   HS       = 0.,

  PS =
1010.,1000.,2000.,3000.,4000.,6000.,8000.,11000.,15000.,20000.,25000.,

  TS =    25., 18.5,  12., 4.5, -11., -24., -37., -56.5, -56.5, -56.5, -
56.5,

  RTS = 70.,70.,70.,70.,20.,20.,20.,20.,10.,10.,10.,

!  US = 2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,
  US = 10.,10.,10.,10.,10.,10.,10.,10.,10.,10.,10.,
!  US = 0.,0.,0.,0.,0.,0.,0.,0.,0.,0.,0.,
!  US = 3.,3.,3.,3.,3.,3.,3.,3.,3.,3.,

!  VS = 3.,3.,3.,3.,3.,3.,3.,3.,3.,3.,3.,
!  VS = 2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.5,
  VS =  0.,0.,0.,0.,0.,0.,0.,0.,0.,0.,0.,

 $END


 $MODEL_PRINT

!-----------------------------------
! Specifies the fields to be printed during the simulation
!-----------------------------------
```

```
   NPLT     = 0,            ! Number of fields printed at each time
                            !   for various cross-sections (limit of 50)

   IPLFLD   = 'UP','THP','THETA','RT','TOTPRE',
                            ! Field names - see table below

!   PLFMT(1)  = '0PF7.3',   ! Format spec. if default is unacceptable

   IXSCTN    = 3,3,3,3,3,3,
                            ! Cross-section type (1=XZ, 2=YZ, 3=XY)

   ISBVAL    = 2,2,2,2,2,2,2,
                            ! Grid-point slab value for third direction

  ! The following variables can also be set in the  namelist:  IAA,
  ! IAB, JOA, JOB, NAAVG, NOAVG, PLTIT, PLCONLO, PLCONHI, and PLCONIN.

!     'UP'    - UP(M/S)     'RC'   - RC(G/KG)    'PCPT' - TOTPRE
!     'VP'    - VP(M/S)     'RR'   - RR(G/KG)    'TKE'  - TKE
!     'WP'    - WP(CM/S)    'RP'   - RP(G/KG)    'HSCL' - HL(M)
!     'PP'   - PRS(MB)      'RA'   - RA(G/KG)    'VSCL' - VL(M)
!     'THP'  - THP(K)
!     'THETA'- THETA(K)     'RL'   - RL(G/KG)    'TG'   - TG (K)
!     'THVP' - THV'(K)      'RI'   - RI(G/KG)    'SLM'  - SLM (PCT)
!     'TV'   - TV(K)        'RCOND'- RD(G/KG)    'CONPR'- CON RATE
!     'RT'   - RT(G/KG)     'CP'   - NPRIS       'CONP' - CON PCP
!     'RV'   - RV(G/KG)     'RTP'  - RT'(G/KG)   'CONH' - CON HEAT
!                                                'CONM' - CON MOIS
!     'THIL' - Theta-il (K) 'TEMP' - temperature (K)
!     'TVP'  - Tv' (K)      'THV'  - Theta-v     (K)
!     'RELHUM'-relative humidity (%)           'SPEED'- wind speed (m/s)
!     'FTHRD'- radiative flux convergence (??)
!     'MICRO'- GASPRC
!     'Z0'   - Z0 (M)       'ZI'   - ZI (M)      'ZMAT' - ZMAT (M)
!     'USTARL'-USTARL(M/S)  'USTARW'-USTARW(M/S) 'TSTARL'-TSTARL (K)
!     'TSTARW'-TSTARW(K)    'RSTARL'-RSTARL(G/G) 'RSTARW'-RSTARW(G/G)
!     'UW'   - UW  (M*M/S*S)                     'VW'   - VW (M*M/S*S)
!     'WFZ'  - WFZ (M*M/S*S)                     'TFZ'  - TFZ (K*M/S)
!     'QFZ'  - QFZ (G*M/G*S)                     'RLONG'- RLONG
!     'RSHORT'-RSHORT

 $END

 $ISAN_CONTROL

!-----------------------------------
! Isentropic control
!-----------------------------------

   ISZSTAGE   = 1,        ! Main switches for isentropic-sigz
   IVRSTAGE   = 1,        !    "varfile" processing

   ISAN_INC = 0600,         ! ISAN processing increment (hhmm)
                            !    range controlled by TIMMAX,
                            !    IYEAR1,...,ITIME1

   GUESS1ST = 'PRESS',      ! Type of first guess input- 'PRESS', 'RAMS'
```

```
   I1ST_FLG = 1,            ! What to do if first guess file should be
                            !  used but does not exist.
                            !  1=I know it may not be there,
                            !        skip this data time
                            !  2=I screwed up, stop the run
                            !  3=interpolate first guess file from
                            !    nearest surrounding times, stop if
unable
                            !     (not yet available)

   IUPA_FLG = 3,            ! UPA-upper air, SFC-surface
   ISFC_FLG = 3,            ! What to do if other data files should be
                            !  uesed, but does not exist.
                            !  1 = I know it may not be there,
                            !      skip this data time
                            !  2 = I screwed up, stop the run
                            !  3 = Try to continue processing anyway

! Input data file prefixes

   IAPR    = './datain/dp/dp',
   IARAWI  = '', ! Archived rawindsonde file name
   IASRFCE = './datain/dp/fl_is', ! Archived surface obs file name

! File names and dispose flags

   VARPFX    = './dataout/IVAR/iv-brams',
   IOFLGISZ  = 0,           ! Isen-sigz file flag: 0 = no write, 1 =
write
   IOFLGVAR  = 1,           ! Var file flag: 0 = no write, 1 = write

 $END

 $ISAN_ISENTROPIC

!-----------------------------------
! Isentropic and sigma-z processing
!-----------------------------------

!-----------------------------------
! Specify isentropic levels
!-----------------------------------

   NISN     = 43,           ! Number of isentropic levels
   LEVTH    =
280,282,284,286,288,290,292,294,296,298,300,303,306,309,312,

315,318,321,324,327,330,335,340,345,350,355,360,380,400,420,
              440,460,480,500,520,540,570,600,630,670,700,750,800,

!-----------------------------------
! Analyzed grid information:
!-----------------------------------

   NIGRIDS  = 1,            ! Number of RAMS grids to analyze

   TOPSIGZ  = 20000.,       ! Sigma-z coordinates to about this height
```

```
   HYBBOT   = 4000.,         ! Bottom (m) of blended sigma-z/isentropic
                             !    layer in varfiles
   HYBTOP   = 6000.,         ! Top (m) of blended sigma-z/isentropic layr

   SFCINF   = 1000.,         ! Vert influence of sfc observation analysis

   SIGZWT   = 1.,            ! Weight for sigma-z data in varfile:
                             !  0.= no sigz data,
                             !  1.=full weight from surface to HYBBOT

   NFEEDVAR = 1,             ! 1=feed back nested grid varfile, 0=don't

!-----------------------------------
! Observation number limits:
!-----------------------------------

   MAXSTA   = 150,           ! maximum number of rawindsondes
                             !    (archived + special)
   MAXSFC   = 1000,          ! maximum number of surface observations

   NOTSTA   = 0,             ! Number of stations to be excluded
   NOTID    = 'r76458',      ! Station ID's to be excluded
                             !  Prefix with 'r' for rawindsonde,
                             !               's' for surface
   IOBSWIN = 1800,

   STASEP   = .1,            ! Minimum sfc station separation in degrees.
                             !    Any surface obs within this distance
                             !    of another obs will be thrown out
                             !    unless it has less missing data,
                             !    in which case the other obs will be
                             !    thrown out.


   IGRIDFL  = 3,             ! Grid flag=0 if no grid point, only obs
                             !           1 if all grid point data and obs
                             !           2 if partial grid point and obs
                             !           3 if only grid data
                             !           4 all data... fast


   GRIDWT   = .01,.001,      ! Relative weight for the gridded press data
                             !   compared to the observational data in
                             !   the objective analysis


   GOBSEP   = 2.,            ! Grid-observation separation (degrees)
   GOBRAD   = 2.,            ! Grid-obs proximity radius (degrees)

   WVLNTH   = 1600.,1000.,600.,   ! Used in S. Barnes objective analysis.
                             !   Wavelength in km to be retained to the
                             !   RESPON % from the data to the upper air
                             !   grids.
   SWVLNTH  = 750.,300.,750.,    ! Wavelength for surface objective
analysis

   RESPON   = .90,.9,.9,       ! Percentage of amplitude to be retained.
```

```
$END
```