BUFR, NETCDF & HDF5
DATA PREPROCESSING
FOR ARPEGE/ALADIN/AROME.

NAMELIST FILE (BATOR)

VERSION ANGLAISE / ENGLISH VERSION

V. 1.0.0β

TABLE DES MATIÈRES

ANNEXES

1 First of all

1.1 Used writing rules

- Filenames, jobs and programs are written in **gras**.
- Examples are written using `Courier New` Font.
- In examples, optional entries are inserted in square brackets.
- Likewise, in examples, items writing using *`Courier New italique`* font must be replaced by their values.

2 Introduction

The purpose of this guide is to list give the meaning of the entries which are in the **NAMELIST** file of **Bator** from CY46t1.

3 History

Version 1.0.0ß (27/08/20189 :
– first release in english.
– update for CY46t1..

4 Namelists in the file

The file is composed by the 8 following namelists :

- NADIRS : is used to initialize “general interest” and some others required to read others namelists. It is the first namelist read in **Bator**.
- BUFR : initialize specific variables to the BUFR data preprocessing.
- NETCDF : initialize specific variables to the NETCDF data preprocessing..
- HDF5 : initialize specific variables to the HDF5 data preprocessing.
- GRIB : initialize specific variables to the GRIB data preprocessing.
- NAMDYNCORE : ??????
- NAMSATFREQ : specify the channels’ ID for GEOWIND data.
- NAMSCEN : ??????
- VALIDATION : optional namelist used in cycle validations . She allows to reduce the number of observations by type or family of data.

5 items in namelists

5.1 NADIRS

Main key	Second key	Component	Kind	Meaning/Remark
INbTypeBufr			Integer	Number of BUFR templates to read in the **param.cfg** file. Default value : 0
InbTypeNetcdf			Integer	Number of NETCDF templates to read in the **param.cfg** file. Default value : 0
InbTypeHdf5			Integer	Number of HDF5 templates to read in the **param.cfg** file. Default value : 0
MinSeviriSatid			Integer	Lowest SID waited in the SEVIRI data (NETCDF format). It is used as lower bound when allocating NSEVIRI type. Default value : 0
MaxSeviriSatid			Integer	Highest SID waited in the SEVIRI data (NETCDF format). It is used as upper bound when allocating NSEVIRI type. Default value : 0
MinMtvzaSatid			Integer	Lowest SID waited in the MTVZA data (HDF5 format). It is used as lower bound when allocating HMTVZA type. Default value : 0
MaxMtvzaSatid			Integer	Highest SID waited in the MTVZA data (HDF5 format). It is used as upper bound when allocating HMTVZA type. Default value : 0
LATMS_MANDATORY_AVG			Boolean	Activate/Deactivate ATMS data averaging. Default value : .FALSE.
LSSMIS_MANDATORY_AVG			Boolean	Activate/Deactivate SSMIS data averaging. Default value : .FALSE.
LAMSUB_MANDATORY_AVG			Boolean	Activate/Deactivate AMSUB data averaging. Default value : .FALSE.
LSAPHIR_MANDATORY_AVG			Boolean	Activate/Deactivate SAPHIR data averaging. Default value : .FALSE.
LVARBC_APD			Boolean	If .TRUE., force the bias value to 0 for GPSSOL observations. In this case, the VarBC will be used. Default value .FALSE.
FORCE_MTD_POOL_BALANCE			Integer	Allow to choose one of the methods for distributing observations of each timeslot in the pools. Default value : 0 for automatic distribution method selection, following the context. 1 to select “simple_balancing” method and 2 to select “packet_balancing” method. (have a look in bator_pool_balance_mod.F90 for more explanations).
PACKETSIZE_POOL_BALANCE			Integer	Number of observations contained in an “elementary packet” used in distribution methods. Default value : 64.
SIGMAO_COEF(:)			Real	One dimension array containing modification coefficients of sigmaos for each data-type (= ODB obstype). Default value : 0,9.
LPERTOBS			Boolean	?????
NMEMBER			Integer	?????
ECTERO(:,:,:,:)			Real	Specifies the observation errors, the first dimension describes the obstype, the second the codetype index, the third the observed variable ID (varno), the fourth and last is a free dimension, standards levels for altitude data, arbitrary index for a particular satellite for scatterometers.

Main key	Second key	Component	Kind	Meaning/Remark
READNAMELOBSTHINNING			Boolean	Activate/Deactivate optionel VALIDATION namelist reading. Default value : .FALSE. (no reading)

5.2 BUFR

With the default values of TS_* types components (initialized in bator_init_mod.F90), no observations will be preprocessed by Bator. To pre-process observations using one of these types (for one or several SID) you have to initialize the required components (of the selected TS_* type) using this namelist..

Main key	Second key	Component	Type	Meaning/Remark
GPSSOLMETHOD			string	Select method for GPSSOL data. Default value : 'NULL' (no selection). For each statid, Value 'CENT' select the nearest observation from timeslot center, and value 'MEAN' averages all the observations (for each statid) inside a timeslot.
NBTEMPMAXLEVELS			integer	Maximum number of levels to be read in a HR vertical sounding (TEMP, PILOT...). Remaining levels will be ignored. Default value : 5000.
TEMPSONDSPLIT			boolean	When set to .TRUE., allows to split a HR vertical sounding following timeslots. Default value : .FALSE. This key has no effect when variable TempSondOrTraj = .FALSE.
TempSondOrTraj			boolean	When set to .TRUE., allows to keep HR vertical sounding. If it is set to .FALSE. Each level of the HR vertical sounding is converted in a single obs (trajectory like aeronautical messages). Default value : .TRUE.
ElimTemp0			boolean	When set to .TRUE., skip TEMP messages without time or position changes). Default value : .TRUE.
ElimPilot0			boolean	When set to .TRUE., skip PILOT messages without time or position changes). Default value : .TRUE.
NFREQVERT_TPHR			integer	??????
LPacome			boolean	When set to .TRUE., activate preprocessing of french RADOME (307096) when its local category matches any value in Origine(:) array. Default value (without any RADOME) : .FALSE.
Origine(:)			integer	One dimension array of suitable local categories for french RADOMEs. Default value (no local category suitable) : -1
ZSAMPL_RADAR			real	Distance between two RADAR observations (in meters). Default value : 5000.
NbGpsroMaxLevels			integer	Maximum number of waited levels in GPSRO data. Default value : 300.
llignore_tpd			boolean	???????
ll_applyqc1			boolean	???????
ll_applyqc2			boolean	???????
ll_applyqc3			boolean	???????
ECTERR_ASCAT25_UVBYCELL(:,:)			real	Adjustment factor to apply to observation error of ASCAT winds, 25km grid, according to the cross-track cell index. The first dimension is the cell number (42), the second has indices 124:125 for v and u components (varnos for the ambiguous winds)

Main key	Second key	Component	Type	Meaning/Remark
ECTERR_OSCAT50_UVBYCELL(:,:)			real	Adjustment factor to apply to observation error of OSCAT winds, 50km grid, according to the cross-track cell index. The first dimension is the cell number (36), the second has indices 124:125 for v and u components (varnos for the ambiguous winds)
ECTERR_HSCAT50_UVBYCELL(:,:)			real	Adjustment factor to apply to observation error of HSCAT winds, 50km grid, according to the cross-track cell index. The first dimension is the cell number (38), the second has indices 124:125 for v and u components (varnos for the ambiguous winds)
ECTERR_RSCAT50_UVBYCELL(:,:)			real	Adjustment factor to apply to observation error of RapidSCAT winds, 50km grid, according to the cross-track cell index. The first dimension is the cell number (21), the second has indices 124:125 for v and u components (varnos for the ambiguous winds)
ECTERR_SSCAT50_UVBYCELL(:,:)			Real	Adjustment factor to apply to observation error of ScatSat-1 winds, 50km grid, according to the cross-track cell index. The first dimension is the cell number (38), the second has indices 124:125 for v and u components (varnos for the ambiguous winds)
LSCAT_UVBYCELL(:)			boolean	Applies the adjustment factor to observation error according to the cross-track cell index, by scatterometer type index (.TRUE.). Default value: .FALSE.
NScaWSolMax_DcdAscat			integer	pecifies the max number of ASCAT wind ambiguous solutions written in ODB. Default value: 4
LSCAT_REORDER(:)			boolean	Re-orders the SCATT wind ambiguous solutions, the most likelihood, then the most opposite in direction against the most likelihood, then the other solutions, from the most to the less likelihood (.TRUE.). By scatterometer type index. Default value:.FALSE.
LMKCMARPL			boolean	ODB building in ECMWF style, for SCATT data (additional varnos). Allows to pass in MKCMARPL code part in screening, without abort (.TRUE.). Default value:.FALSE.
ASCAT_XYGRID			real	ASCAT grid resolution, which is processed. Default value:25000 (25km).
TS_AMSUA(:) %	t_select %	SclStart SclJump TabFov(:) TabFovInterlace(:) FovInterlace NbChannels ChannelsList(:) LPrint	integer integer integer integer boolean integer integer boolean	Array of AMSUA data type. The Indexes match SIDs. First scanline number to consider. Scanline sampling (1/n). Array of selected FOV . Array of selected FOV if interlacing is activated. Activate/deactivate FOV interlacing. Number of wished channels. Array of wished channels number. To print the type definition..
	t_satsid %	ModSid LPrint	integer boolean	Target SID if any change is needed. Print.
TS_AMSUB(:) %	t_select %			Array of AMSUB data type. See TS_AMSUA(:)%t_select% type description.
	t_satsens %	ModSensor LPrint	integer boolean	Target sensor number if any change is needed. Print..
TS_AIRS(:) %	t_select %			Array of AIRSBT data type. See TS_AMSUA(:)%t_select% type description.
TS_ATMS(:) %	t_select %			Array of ATMS data type. See TS_AMSUA(:)%t_select% type description.

Main key	Second key	Component	Type	Meaning/Remark
	t_satsens %			See TS_AMSUB(:)%t_satsens% type description.
TS_CRIS(:) %	t_select %			Array of CRIS data type. See TS_AMSUA(:)%t_select% type description.
TS_GEOWIND(:) %	t_select %	Cseries DataStream(:,:) Lcanal(:) IcepCanal(:) QiTemplate(:) LPrint	string integer boolean integer integer boolean	Array of GEOWIND (SATOB) data type. Satellite serie (arbitrary word but meaning as 'MSG'). ODB column value datastream@sat according to the sub-center producer (dimension 1) and the center producer (dimension 2), WMO ids. Worth 0 in the general case, 1 if acquired by a sub-center. Select the winds from which channels to save in ODB, channel ids are the WMO ids (« Satellite derived wind computation method », values from 1 to 16) (.TRUE.) Default value:.FALSE. Maps the WMO "computation method" with the CEP "computation method". Defines the template type to apply for decoding correctly the Qis in the BUFR files, by producer. Printing.
TS_GMI(:) %	t_select %			Array of GMI data type. See TS_AMSUA(:)%t_select% type description.
	t_satsens %			See TS_AMSUB(:)%t_satsens% type description.
TS_HIRS(:) %	t_select %			Array of HIRS data type. See TS_AMSUA(:)%t_select% type description.
TS_IASI(:) %	t_select %			Array of IASI data type. See TS_AMSUA(:)%t_select% type description.
TS_MWRI(:) %	t_select %			Array of MWRI data type. See TS_AMSUA(:)%t_select% type description.
	t_satsens %			See TS_AMSUB(:)%t_satsens% type description.
TS_SEVIRI(:) %	t_select %			Array of GEORAD (CSR) data type. See TS_AMSUA(:)%t_select% type description.
	t_satsens %			See TS_AMSUB(:)%t_satsens% type description.
TS_SSMI(:) %	t_select %			Array of SSMI data type. See TS_AMSUA(:)%t_select% type description.
	t_satsid %			See TS_AMSUA(:)%t_satsid% type description.
	t_surf %	SurfList(:) LPrint	Boolean boolean	When set to .TRUE., get the surface type. Default value : .FALSE. Print..
TS_SSMIS(:) %	t_select %			Array of SSMIS data type. See TS_AMSUA(:)%t_select% type description.
	t_satsid %			See TS_AMSUA(:)%t_satsid% type description.

5.3 HDF5

Main key	Second key	Component	Type	Meaning/remark
HODIM %				Type containing the required components to preprocess OPERA radar data. For more informations on OPERA file format, see « OPERA Data Information Model for HDF5 » version >2.
		Resolution	Real	Wished distance (in meters) between 2 observations on a ray when reading the data file. Default value : RABSI.
		DOWThreshold	Real	if reflectivity is above this threshold, radial velocity is not considered (added to avoid assimilate radial velocity from clear sky echoes). Default value : RABSI. **(used only for Météo France in-house product).**
		Nilimit	Real	Threshold for Nyquist velocity. If the Nyquist velocity specified in the metadata is inferior, radial velocity is not used (too many risk to have aliased velocities). Default value : RABSI.
		Sample	integer	Final resolution (in meters). Default value : 1000.
		ChoosenTask	string	Name of the quality flag to be considered, stored in 'task' attribute. Default value : ' ?'.
		GrpElevName	string	Label root of "dataset" groups. Default value : ' ?'.
		GrpWhereName	string	Label of the "where" group. Default value : ' ?'.
		GrpWhatName	string	Label of the "what" group. Default value : ' ?'.
		GrpHowName	string	Label of the "how" group. Default value : ' ?'.
		GrpParamName	string	Label root of the "data" groups. Default value : ' ?'.
		GrpFlagName	string	Label root of the "quality" groups. Default value : ' ?'.
		NbWagon	integer	Number of meteorological data per observation (ZWAGON). Default value : 0.
		NbSupp	integer	Number of meta-data per observation (ZENTSUP). Default value : 0.
		NodeNames(:)	string	One dimension array of "nodes" to preprocess. Default value : ' ?'.
		ConventionName	string	Label of the "Conventions" attribute. Default value : ' ?'.
		AllowedConventions(:)	string	One dimension array of allowed "Conventions"versions. Default value : ' ?'.
		ElevName	string	Label of the "elevation" attribute. Default value : ' ?'.
		NraysName	string	Label of the "nrays" attribute. Default value : ' ?'.
		NbinsName	string	Label of the "nbins" attribute. Default value : ' ?'.
		RstartName	string	Label of the "rstart" attribute. Default value : ' ?'.
		RscaleName	string	Label of the "rscale" attribute. Default value : ' ?'.
		ObjectName	string	Label of the "object" attribute. Default value : ' ?'.
		SourceName	string	Label of the "source" attribute. Default value : ' ?'.
		DateName	string	Label of the "date" attribute. Default value : ' ?'.
		TimeName	string	Label of the "time" attribute. Default value : ' ?'.
		StartDateName	string	Label of the "startdate" attribute. Default value : ' ?'.
		StartTimeName	string	Label of the "starttime" attribute. Default value : ' ?'.
		QuantityName	string	Label of the "quantity" attribute. Default value : ' ?'.
		GainName	string	Label of the "gain" attribute. Default value : ' ?'.
		OffsetName	string	Label of the "offset" attribute. Default value : ' ?'.
		NoDataName	string	Label of the "nodata" attribute. Default value : ' ?'.
		NoDetectName	string	Label of the "undetect" attribute. Default value : ' ?'.
		SiteHeightName	string	Label of the "height" attribute. Default value : ' ?'.
		SiteLatName	string	Label of the "lat" attribute (radar antenna). Default value : ' ?'.
		SiteLonName	string	Label of the "lon" attribute (radar antenna). Default value : ' ?'.

Main key	Second key	Component	Type	Meaning/remark
		TaskName	string	Label of the “task” attribute. Default value : ‘ ?’.
		BeamWidthName	string	Label of the “beamwidth” attribute. Default value : ‘ ?’.
		MinDetectName	string	name of the minimum detectable signal (used to determine the value of the noise level and assimilate non-rainy information) in the ODIM file. Default value : ‘?’.
		NyquistVel	string	Nyquist velocity name of the metadata read in the ODIM file. Default value : ‘?’.
		LPrint	boolean	Print.
HMTVZA(:) %				Array of MTVZA data type. The indexes match SIDs.
		DatasetNameRoot	string	Label root of the datasets. Default value : ‘ ?’.
		NamChannels(:)	string	One dimension array of label roots for datasets containing Tb data. Each label index must be the same as the index of its channel number used in channels(:) component. Default value : ‘ ?’.
		Julien	string	Label root of the dataset containing the observation begin date. Default value : ‘ ?’.
		Time	string	Label root of the dataset containing the observation begin time. Default value : ‘ ?’.
		Lat	string	Label root of the dataset containing latitudes. Default value : ‘ ?’.
		Lon	string	Label root of the dataset containing the longitudes. Default value : ‘ ?’.
		Surf	string	Label root of the dataset containing the surface quality flags. Default value : ‘ ?’.
		SunAzimuth	string	Label root of the dataset containing the solar azilmuths. Default value : ‘ ?’.
		SunZenith	string	Label root of the dataset containing solar zenithal angles. Default value : ‘ ?’.
		TbMinAttrib	string	Label of the attribute which gives the lowest suitable Tb value. Default value : ‘ ?’.
		TbMaxAttrib	string	Label of the attribute which gives the highest suitable Tb value. Default value : ‘ ?’.
		Sensor	integer	Sensor ID. Default value : -9
		NbWagon	integer	Number of meteorological data per observation (ZWAGON). Default value : 0.
		NbSupp	integer	Number of meta-data per observation (ZENTSUP). Default value : 0.
		NbChannels	integer	Number of wished channels. Default value : 0.
		Channels(:)	integer	Array of wished channels number. Default value : -9.
		LPrint	boolean	Print.

5.4 NETCDF

Main key	Second key	Component	Type	Meaning/remark
NSEVIRI(:) %				Array of SEVIRI data type. The indexes match SIDs.
		Saut	integer	Observations sampling (1/n). Default value : 1.
		NbChannels	integer	Number of wished channels. Default value : 0.
		Channels(:)	integer	Array of wished channels number. Default value : -9
		NbSupp	integer	Number of meta-data per observation (ZENTSUP). Default value : 0.
		NamChannels(:)	string	One dimension array of variable labels containing Tb data. Each label index must be the same as the index of its channel number used in channels(:) component. Default value : ‘’.
		NcmlName	string	Label of “NetCDF multicanal source” general attribute. Default value : ‘’.
		NwcSafName	string	Label of “nwc_saf_algorithm “ general attribute. Default value : ‘’.
		NamLat	string	Label of the “lat” variable. Default value : ‘’.
		NamLon	string	Label of the “lon” variable. Default value : ‘’.
		NamTime	string	Label of the variable which gives observation data in second since 01/01/1970 00h. Default value : ‘’.
		NamSatAzimuth	string	Label of the variable containing satellite azimuth angles. Default value : ‘’.
		NamSatZenith	string	Label of the variable contaning satellite zenithal angles. Default value : ‘’.
		NamCT	string	Label of the variable containing the clouds types (CT). Default value : ‘’.
		NamCTQ	string	Label of the variable containing quality flags associated to CT. Default value : ‘’.
		NamCTP	string	Label of the variable containing top clouds pressures (CTP). Default value : ‘’.
		NamCTPQ	string	Label of the variable containing quality flags associated to CTP. Default value : ‘’.
		LPrint	boolean	Print.

5.5 GRIB

Main key	Second key	Component	Type	Meaning/remark
NLON_GRIB			integer	??????
NLAT_GRIB			integer	??????
NFREQ_SEV			integer	Observations sampling (1/n). Default value : 5.

5.6 NAMDYNCORE

Main key	Second key	Component	Type	Meaning/remark
				?????

5.7 NAMSATFREQ

Main key	Second key	Component	Type	Meaning/remark
TS_SERIES(:) %		CLSERIES_MAP ZFREQ_MAP(:) IFREQ_MAP(:) CLABEL(:)	String real integer string	For GEOWIND, defines channels id and label, when these ones are several in one same spectral band (IR. VIS, WV, ie,...) according to satellite type (serie) and the frequency provided with the observation. See satobfreq_bynam.F90 for the specified default values. Satellite serie. Frequency list as read in the BUFR file or a given satellite serie. Index for computing the final id, written in the ODB column comp_method@satob (also duplicated in sensor@hdr). Label associated to the final channel id.

5.8 NAMSCEN

Main key	Second key	Component	Type	Meaning/remark
				????

5.9 VALIDATION

Clef principale	Clef secondaire	Composant	Type	Définition/Remarque
OBSTHINNING %		AIRS	Integer	Observations reduction ratio for AIRS data. Default value : 1.
		AQUA	Integer	Observations reduction ratio for AQUA data (if the bufr file is like airs). Default value : 1.
		AMSUA	Integer	Observations reduction ratio for TOVSAMSUA. data default value : 1.
		AMSUB	Integer	Observations reduction ratio for TOVSAMSUB, SAPHIR, AMSR data. Default valuie : 1.
		MWRI	Integer	Observations reduction ratio for MWRI, MWHSX data. Default value : 1.
		HIRS	Integer	Observations reduction ratio for TOVSHIRS data. Default value : 1.
		ASCAT	Integer	Observations reduction ratio for ASCAT data. Default value : 1.
		ERSUWI	Integer	Observations reduction ratio for ERSUWI data. Default value : 1.
		GEOWIND	Integer	Observations reduction ratio for GEOWIND data. Default value : 1.
		SEV	Integer	Observations reduction ratio for GEORAD data. Default value : 1.
		QSCAT	Integer	Observations reduction ratio for QSCAT data. Default value : 1.
		KUSCAT	Integer	Observations reduction ratio for KUSCAT data. Default value : 1.
		GPSRO	Integer	Observations reduction ratio for GPSRO data. Default value : 1.
		SSMI	Integer	Observations reduction ratio for SSMI data. Default value : 1.
		SSMIS	Integer	Observations reduction ratio for SSMIS data. Default value : 1.
		IASI	Integer	Observations reduction ratio for IASI data. Default value : 1.
		CRIS	Integer	Observations reduction ratio for CRIS data. Default value : 1.
		AEOLUS	Integer	Observations reduction ratio for AEOLUS data. Default value : 1.
		ATMS	Integer	Observations reduction ratio for ATMS data. Default value : 1.
		GMI	Integer	Observations reduction ratio for GMI data. Default value : 1.
		SYNOP	Integer	Observations reduction ratio for SOL data. Default value : 1.
		SEA	Integer	Observations reduction ratio for BUOY, TESAC. BATHY data. Default value : 1.
		AERO	Integer	Observations reduction ratio for ACAR, AMDAR, AIREP, data. Default value : 1.
		GPSSOL	Integer	Observations reduction ratio for GPSSOL data. Default value : 1.
		PROFIL	Integer	Observations reduction ratio for EUROPROFIL, PROFILER data. Default value : 1.
		SOND	Integer	Observations reduction ratio for type TEMP et PILOT data. Default value : 1.
		RADAR	Integer	Observations reduction ratio for RADAR au format BUFR data. Default value : 1.
		SEVIRI	Integer	Observations reduction ratio for SEVIRI au format NETCDF data. Default value : 1.
		MTVZA	Integer	Observations reduction ratio for MTVZA au format HDF5 data. Default value : 1.
		ODIM	Integer	Observations reduction ratio for RADAR ODIM au format HDF5 data. Default value : 1.

ANNEXES

1 Namel_bator file skeleton

```
&NADIRS
  variable1 = valeur1
  …
  variablen = valeurn
/
&BUFR
  variable1 = valeur1
  …
  variablen = valeurn
/
&HDF5
  variable1 = valeur1
  …
  variablen = valeurn
/
&NETCDF
  variable1 = valeur1
  …
  variablen = valeurn
/
&GRIB
  variable1 = valeur1
  …
  variablen = valeurn
/
&NAMDYNCORE
  variable1 = valeur1
  …
  variablen = valeurn
/
&NAMSATFREQ
  variable1 = valeur1
  …
  variablen = valeurn
/
&NAMSCEN
  variable1 = valeur1
  …
  variablen = valeurn
/
```

2 NADIRS example (arome)

```
&NADIRS
   InbTypeBufr         =     200,
   InbTypeNetcdf       =       1,
   InbTypeHdf5         =       2,
   MinSeviriSatid      =      54,
   MaxSeviriSatid      =      70,
   MinMtvzaSatid       =     320,
   MaxMtvzaSatid       =     320,
   SIGMAO_COEF(7)      =    1.15,
   SIGMAO_COEF(9)      =      1.,
   ECTERO(9,6,125,3)   =    1.24,
   ECTERO(9,6,124,3)   =    1.34,
   LATMS_MANDATORY_AVG =  .TRUE.,
   LVARBC_APD          = .FALSE.,
/
```

3 BUFR examples (arpege)

```
&BUFR
  GPSSOLMETHOD                                = 'MEAN',
  NBTEMPMAXLEVELS                             =   8000,
  TEMPSONDSPLIT                               = .TRUE.,
  NFREQVERT_TPHR                              =    400,
  LSCAT_UVBYCELL(3)                           = .TRUE.,
  LSCAT_UVBYCELL(6)                           = .TRUE.,
  ECTERR_RSCAT50_UVBYCELL( 1,125)             = 1.01,1.00,0.99,0.99,0.98,0.99,1.00,
  ECTERR_RSCAT50_UVBYCELL( 8,125)             = 1.01,1.01,1.01,1.00,1.00,0.99,0.98,
  ECTERR_RSCAT50_UVBYCELL(15,125)             = 0.97,0.97,0.98,1.00,1.02,1.05,1.09,
  ECTERR_RSCAT50_UVBYCELL( 1,124)             = 0.99,0.98,0.97,0.98,0.99,1.01,1.03,
  ECTERR_RSCAT50_UVBYCELL( 8,124)             = 1.04,1.04,1.04,1.04,1.04,1.03,1.01,
  ECTERR_RSCAT50_UVBYCELL(15,124)             = 0.99,0.97,0.97,0.97,0.98,1.00,1.04,
  TS_AMSUB(207)%T_SATSENS%MODSENSOR           =      4,
  TS_AMSUB(207)%T_SELECT%CHANNELSLIST(1:5)    = 1,2,3,4,5,
  TS_AMSUB(207)%T_SELECT%FOVINTERLACE         = .TRUE.,
  TS_AMSUB(207)%T_SELECT%SCLJUMP              =      1,
  TS_AMSUB(207)%T_SELECT%TABFOV(1:18)         = 10,14,18,22,26,30,34,38,42,46,50,54,58,62,66,70,74,78,
  TS_AMSUB(207)%T_SELECT%TABFOVINTERLACE(1:18) = 12,16,20,24,28,32,36,40,44,48,52,56,60,64,68,72,76,80,
  TS_SSMI(13)%T_SATSID%MODSID                 =    246,
  TS_SSMI(13)%T_SURF%SURFLIST(5)              = .TRUE.,
  TS_SSMI(13)%T_SELECT%CHANNELSLIST(:)        =     -1,
  TS_SSMI(13)%T_SELECT%FOVINTERLACE           = .TRUE.,
  TS_SSMI(13)%T_SELECT%SCLJUMP                =      2,
/
```

4 NETCDF example (arome)

```
&NETCDF
  NSEVIRI(57)%NcmlName         ='ncml_version',
  NSEVIRI(57)%NwcSafName       ='nwc_saf_algorith_version',
  NSEVIRI(57)%NamLat           ='lat',
  NSEVIRI(57)%NamLon           ='lon',
  NSEVIRI(57)%NamTime          ='time',
  NSEVIRI(57)%NamSatAzimuth    ='sat_azi_ang',
  NSEVIRI(57)%NamSatZenith     ='sat_zen_ang',
  NSEVIRI(57)%NamCT            ='CT',
  NSEVIRI(57)%NamCTQ           ='CT_QUALITY',
  NSEVIRI(57)%NamCTP           ='CTP',
  NSEVIRI(57)%NamCTPQ          ='CTP_QUALITY',
  NSEVIRI(57)%SAUT             = 5,
  NSEVIRI(57)%NbSupp           = 12,
  NSEVIRI(57)%NbChannels       = 8,
  NSEVIRI(57)%Channels(1:8)    = 1,2,3,4,5,6,7,8,
  NSEVIRI(57)%NamChannels(1:8) ='IR_039','WV_062','WV_073','IR_087','IR_097','IR_108','IR_120','IR_134',
/
```

5 HDF5 example (mtvza)

```
&HDF5
  HMTVZA(320)%DatasetNameRoot    ='m_m2_',
  HMTVZA(320)%NbWagon            =29,
  HMTVZA(320)%NbSupp             =10,
  HMTVZA(320)%Sensor             =76,
  HMTVZA(320)%NbChannels         =24,
  HMTVZA(320)%Channels(1:24)     = 1,2,3,4,5,6,7,8,9,10,15,16,17,18,19,20,21,22,23,24,25,27,28,29,
  HMTVZA(320)%NamChannels(1:4)   ='m_m2_01_10.6V','m_m2_02_10.6H','m_m2_03_18.7V','m_m2_04_18.7H',
  HMTVZA(320)%NamChannels(5:8)   ='m_m2_05_23.8V','m_m2_06_23.8H','m_m2_26_31.5V','m_m2_27_31.5H',
  HMTVZA(320)%NamChannels(9:12)  ='m_m2_07_36.7V','m_m2_08_36.7H','m_m2_11_52_80V','m_m2_12_53_30V',
  HMTVZA(320)%NamChannels(13:15) ='m_m2_13_53_80V','m_m2_14_54_64V','m_m2_15_55_63V',
  HMTVZA(320)%NamChannels(16:17) ='m_m2_16_57_0.32_0.1H','m_m2_17_57_0.32_0.05H',
  HMTVZA(320)%NamChannels(18:19) ='m_m2_18_57_0.32_0.025H','m_m2_19_57_0.32_0.01H',
  HMTVZA(320)%NamChannels(20:21) ='m_m2_20_57_0.32_0.005H','m_m2_09_91.65V',
  HMTVZA(320)%NamChannels(22:24) ='m_m2_21_183_7.0V','m_m2_23_183_3.0V','m_m2_22_183_1.4V',
  HMTVZA(320)%Julien             ='m_m2_Julian Day',
  HMTVZA(320)%Time               ='m_m2_Time of day',
  HMTVZA(320)%Lat                ='m_m2_Lattitude',
  HMTVZA(320)%Lon                ='m_m2_Longitude',
  HMTVZA(320)%Surf               ='m_m2_Surface',
  HMTVZA(320)%SunAzimuth         ='m_m2_SunAzimuth',
  HMTVZA(320)%SunZenith          ='m_m2_SunZenith',
  HMTVZA(320)%TbMinAttrib        ='valid min',
  HMTVZA(320)%TbMaxAttrib        ='valid max',
/
```

6 HDF5 example (ODIM)

```
&HDF5
  HODIM%ConventionName          ='Conventions',
  HODIM%AllowedConventions(1:3) ='ODIM_H5/V2_0','ODIM_H5/V2_1','ODIM_H5/V2_2','ODIM_H5/V2_3',
  HODIM%Resolution              =1000.0,
  HODIM%Sample                  =5000,
  HODIM%NbWagon                 =3,
  HODIM%NbSupp                  =0,
  HODIM%Nilimit                 =30.0,
  HODIM%DOWThreshold            =8.0,
  HODIM%TaskName                ='task',
  HODIM%ChoosenTask             ='pl.imgw.quality.qi_total',
  HODIM%GrpElevName             ='dataset',
  HODIM%GrpParamName            ='data',
  HODIM%GrpWhereName            ='where',
  HODIM%GrpWhatName             ='what',
  HODIM%GrpHowName              ='how',
  HODIM%GrpFlagName             ='quality',
  HODIM%ElevName                ='elangle',
  HODIM%NraysName               ='nrays',
  HODIM%NbinsName               ='nbins',
  HODIM%RstartName              ='rstart',
  HODIM%RscaleName              ='rscale',
  HODIM%ObjectName              ='object',
  HODIM%SourceName              ='source',
  HODIM%DateName                ='date',
  HODIM%TimeName                ='time',
  HODIM%SiteHeightName          ='height',
  HODIM%SiteLatName             ='lat',
  HODIM%SiteLonName             ='lon',
  HODIM%StartDateName           ='startdate',
  HODIM%StartTimeName           ='starttime',
  HODIM%QuantityName            ='quantity',
  HODIM%GainName                ='gain',
  HODIM%OffsetName              ='offset',
  HODIM%NoDataName              ='nodata',
  HODIM%NoDetectName            ='undetect',
  HODIM%BeamWidthName           ='beamwidth',
  HODIM%MinDetectName           =’MDS’,
  HODIM%NyquistVel              =’NI’,
  HODIM%NodeNames(1:8)          ='bewid','bezav','deemd','deess','defbg','defld','dehnr','demem',
  HODIM%NodeNames(9:16)         ='deneu','denhb','deoft','detur','esbad','esbar','eslid','esmad',
  HODIM%NodeNames(17:24)        ='esmur','espma','essan','essse','esval','eszar','iedub','iesha',
  HODIM%NodeNames(25:32)        ='nldbl','nldhl','ukcle','ukcob','ukcyg','ukdea','ukham','uking',
  HODIM%NodeNames(33:34)        ='ukpre','ukthu',
/
```

7 NAMSATFREQ

```
&NAMSATFREQ
   TS_SERIES(2)%ZFREQ_MAP(7)=0.461219D14,
   TS_SERIES(2)%IFREQ_MAP(7)=3,
   TS_SERIES(2)%CLABEL(7)='WV3',
   TS_SERIES(4)%CLSERIES_MAP='HTG',
   TS_SERIES(4)%ZFREQ_MAP(1:3)=0.46968210D15,0.40795300D14,0.43155900D14,
   TS_SERIES(4)%ZFREQ_MAP(4:6)=0.48037800D14,0.28763500D14,0.77043900D14,
   TS_SERIES(4)%ZFREQ_MAP(1:5)=0.46842570D15,0.41067400D14,0.43448100D14,0.48353600D14,0.28826100D14,
   TS_SERIES(4)%IFREQ_MAP(1:5)=1,1,2,3,1,
   TS_SERIES(4)%CLABEL(1:5)='VIS1','WV1','WV2','WV3','IR1',
   TS_SERIES(5)%CLSERIES_MAP='GOES-R',
   TS_SERIES(5)%ZFREQ_MAP(1:3)=0.4684257D+15,0.408437D+14,0.431356D+14,
   TS_SERIES(5)%ZFREQ_MAP(4:6)=0.484317D+14,0.267672D+14,0.768699D+14,
   TS_SERIES(5)%IFREQ_MAP(1:6)=1,1,2,3,1,2,
   TS_SERIES(5)%CLABEL(1:6)='VIS1','WV1','WV2','WV3','IR1','IR2',
 /
```

8 VALIDATION

```
VALIDATION
   OBSTHINNING%AIRS=1000,
   OBSTHINNING%AQUA=1000,
   OBSTHINNING%AMSUA=1000,
   OBSTHINNING%AMSUB=1000,
   OBSTHINNING%MWRI=1000,
   OBSTHINNING%HIRS=1000,
   OBSTHINNING%ASCAT=1000,
   OBSTHINNING%ERSUWI=100,
   OBSTHINNING%GEOWIND=1000,
   OBSTHINNING%SEV=1000,
   OBSTHINNING%QSCAT=1000,
   OBSTHINNING%KUSCAT=1000,
   OBSTHINNING%GPSRO=1000,
   OBSTHINNING%SSMI=1000,
   OBSTHINNING%SSMIS=1000,
   OBSTHINNING%IASI=1000,
   OBSTHINNING%CRIS=1000,
   OBSTHINNING%AEOLUS=1000,
   OBSTHINNING%ATMS=1000,
   OBSTHINNING%GMI=1000,
   OBSTHINNING%SYNOP=100,
   OBSTHINNING%SEA=10,
   OBSTHINNING%AERO=100,
   OBSTHINNING%GPSSOL=100,
   OBSTHINNING%PROFIL=100,
   OBSTHINNING%SOND=10 ,
   OBSTHINNING%RADAR=100,
   OBSTHINNING%SEVIRI=100,
   OBSTHINNING%MTVZA=100,
   OBSTHINNING%ODIM=100,
 /
```