Standard Archive Format for Europe

GOCE Specialisation for Level 1 processing

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1. Introduction

1.1. Purpose and scope

This document is part of the Standard Archive Format for Europe specialisation for GOCE (SAFE Specialisation for GOCE). This specialisation consists of the following set of documents:

- the GOCE mission specialisation control book, which is the top-level document of the specialisation, containing all the information that is common to all SAFE GOCE products and auxiliary files.
- three GOCE product specialisation control books organized by product level, one for GOCE Level-0 products and auxiliary files, one for Level-1 auxiliary files and one for GOCE Level-2 products.

The current book is the specialisation control book for GOCE Level-1 auxiliary files.

1.2. Book organisation

The specialisation control book for GOCE Level-1 auxiliary files is organized as follows:

Chapter 1: Introduction	Introductory part of the document.
Chapter 2: Target of preservation	Description of the target of preservation for L1 auxiliary files.
Chapter 3: Data Structures	Specification of the simple and complex types that are common to represent either an EEF, HDR or DBL file respectively.
Chapter 4: Instrument Independent Data Structures	Specification of the simple and complex types that are used to represent the information of the auxiliary file types not associated to any instrument in particular.
Chapter 5: EGG Specific Data Structures	Specification of the simple and complex types that are used to represent the information of the auxiliary file types associated to the EGG instrument.
Chapter 6: SST Specific Data Structures	Specification of the simple and complex types that are used to represent the information of the auxiliary file types associated to the SST instrument.

1.3. Acronyms and Abbreviations

ASCII	American Standard Code for Information Interchange
DBL	Datablock
DFDL	Data Format Description Language
GNU	GNU is Not Unix

HDR	Header
MPH	Main Product Header
PDS	Paylod Data Segment
SPH	Specific Product Header
W3C	World Wide Web Consortium
XML	eXtensible Mark-up Language

2. Target of preservation

GOCE L1 auxiliary files in native format are available in tar/gzip format, with extension ".TGZ"(GNU-zipped tar file merging). However, the targets of preservation considered in this SAFE specialisation are the files which are stored within i.e. the auxiliary file itself (EEF extension) and the header (HDR extension) and datablock (DBL extension) files depending on the product type as described in the following table:

Product Type	Target of preservation	Structure specification
AUX_ANT_OS	Earth Explorer file (.EEF)	See section 6.1.2
AUX_CAL_K2	Earth Explorer file (.EEF)	See section 5.1.1
AUX_EGG_DB	Earth Explorer file (.EEF)	See section 5.1.3
AUX_ICB_1b	Earth Explorer file (.EEF)	See section 6.1.1
AUX_ICM_1b	Earth Explorer file (.EEF)	See section 5.1.2
AUX_SST_DB	Earth Explorer file (.EEF)	See section 4.1.1
AUX_VC3_TM	Earth Explorer file (.EEF)	See section 5.1.4
MPL_ORBSCT	Earth Explorer file (.EEF)	See section 4.1.3
MPL_ORBPRE	Earth Explorer file (.EEF)	See section 4.1.2
AUX_OUTC__	Header file (.HDR) Datablock file (.DBL)	For HDR see section 6.2.1 For DBL see section 6.3.1
AUX_TCHI__	Header file (.HDR) Datablock file (.DBL)	For HDR see section 5.2.1 For DBL see section 5.3.1
MPL_OBPL__	Header file (.HDR) Datablock file (.DBL)	For HDR see section 5.2.2 For DBL see section 5.3.2
TLM_HKTM__	Header file (.HDR) Datablock file (.DBL)	For HDR see section 5.2.3 For DBL see section 5.3.3

Table 1: Product Types Specification Index

As a consequence, any file in native format must be unpackaged and decompressed before being converted into SAFE and the SAFE Packages will only contain the unpackaged and decompressed files. This is because the representation information schemas that are provided along with this specialisation describe the unpackaged and decompressed files, not the tar/gzip format (there would be limitations in doing this, as explained in the SAFE Core Specifications).

3. Data Structures

The information included in this chapter has been generated using the specifications defined by the schemas that represent the structure of the L1 Auxiliary files.

EEF and HDR files are simple/pure XML files (i.e. text files) that can be represented using standard XML Schemas. On the contrary, DBL files are not in XML files but rather binary files which, nevertheless, follow a structure which is represented by XML Schemas with DFDL annotations. A particular case is the DBL for MPL_OBPL__ and MPL_ORBPRE file types which are pure text files that can be represented using standard XML Schemas.

The representation information for EEF, HDR and DBL files is described by mean of complex structures that make use of simple types to represent the whole content of a given file type. The following sub-sections provide a detailed description of those complex/simple types that are common to EEF, HDR and DBL files respectively.

The diagrams included in this document provide an overview of the structure of the products by depicting the schemas which provide their representation information.

3.1. Data structures common to EEF files

There are no complex nor simple types common to all EEF files. Instead, some specific types have been defined per product type and they are described in chapters 4., 5. and 6..

3.2. Data Structures common to HDR files

The following simple and complex types have been specified as basic types to represent the information of the HDR files in scope. They are available for the representation of any HDR file of a specific product type in scope.

3.2.1. Simple types

The schemas used to represent the information of the L1 auxiliary files make use of the standard W3C simple types (e.g. xs:string, xs:integer, xs:NCName, etc…). Some of these types have been restricted for GOCE needs, resulting in new specific types detailed below:

3.2.1.1. ShortTimeType

Base Type	Format
xs:string	UTC=yyyy-mm-ddThh:mm:ss

Table 2: ShortTimeType Specification

3.2.1.2. LongTimeType

Base Type	Format
xs:string	UTC=yyyy-mm-ddThh:mm:ss.uuuuuu

Table 3: LongTimeType Specification

3.2.1.3. SizeType

Base Type	Format
xs:integer	Size Type (units: bytes) Total Digits : "13"

Table 4: SizeType Specification

3.2.2. Complex types

The following complex types are used by the schemas to represent the information of the L1 HDR auxiliary files:

3.2.2.1. fixedHeaderType

The standard GOCE header is completely ASCII and based on XML. The Fixed Header is the common header for all files in the GOCE Ground Segment.

#	Name/Description	Format
1	**File_Name** File Name without the extension	xs:NCName Max Length : 55 bytes
2	**File_Description** This field shall contain a description of file product. Possible values: GPS Antenna Offset Data Calibration K2 Factor File AUX EGG Data Base: Instrument constants used by the IPF processors Auxiliary Inter-Channel Bias Auxiliary Inverse Calibration Matrix OBT/UTC Time Correlator SST Auxiliary Database TC History File FOS Plan Increment File FOS Predicted Orbit File Reference Orbit Scenario File Extracted HK TM File	xs:string
3	**Notes** This field shall be always empty	
4	**Mission** This field shall be always GOCE Possible values: GOCE	xs:NCName
5	**File_Class** This element allows to specify the usage of the file, for a specific phase of the ground segment development or operations cycle.	xs:string

#	Name/Description	Format
	It allows, in particular, to reset version counters for each new phase without any risk of having ambiguous file names. For example, mission planning files used for SVT tests can be numbered independently for each SVT test, and all of those can be independant from the routine operations numbering. Possible values: OPER TEST CONS	
6	**File_Type** This element uniquely defines the file structure. All files of the same File Type share the same structure. Possible values: AUX_ANT_OS AUX_CAL_K2 AUX_EGG_DB AUX_ICB_1b AUX_ICM_1b AUX_OUTC__ AUX_SST_DB AUX_TCHI__ AUX_VC3_TM MPL_OBPL__ MPL_ORBPRE MPL_ORBSCT TLM_HKTM__	xs:NCName
7	**Validity_Period** This element specifies the Start and Stop time defining the satellite measurement period.	Validity_Period_Type
8	**File_Version** This field is version number of the generation of the product. It shall start from 0001 and increased by one anytime the same product shall be regenerated	xs:integer Total Digits : 4
9	**Source**	Source_Type

Table 5: fixedHeaderType Specification

3.2.2.2. Validity_Period_Type

#	Name/Description	Format
1	**Validity_Start** Validity Start time in UTC. This can have the special value 00000000T000000 for beginning of mission, or if a validity period is not applicable.	ShortTimeType

#	Name/Description	Format
2	**Validity_Stop** Validity Stop time in UTC. This can have the special value 99999999T999999 for end of mission, or if a validity period is not applicable.	ShortTimeType

Table 6: Validity_Period_Type Specification

3.2.2.3. Source_Type

#	Name/Description	Format
1	**System** System Information Possible values: RPF PDS FOS	xs:string
2	**Creator** Creator Information Possible values: RPF IPF IPF1 File Generation Subsystem: Manual Editor CGMCS FOS NAPEOS EXPLORER_ORBITxo_gen_osf_create Generator - Tool	xs:string
3	**Creator_Version** This field gives the version of the creator tool	xs:string
4	**Creation_Date** This field gives the UTC date of the generation of the file	ShortTimeType

Table 7: Source_Type Specification

3.2.2.4. MPHType

#	Name/Description	Format
1	**Product** Product File Name Note: the file name shall be without the extension.	xs:NCName Max Length : 55 bytes
2	**Ref_Doc** Reference DFCB Document describing the product shall always be "GO-ID-HPF-GS-0041" (Product Specification for L2 Products and Auxiliary Data Products, Issue 6.1, 30. April	xs:string

#	Name/Description	Format
	2009) Possible values: GO-MA-HPF-GS-0110	
3	**Acquisition_Station** Empty	xs:string
4	**Processor**	Processor_Type
5	**Time_Information**	Time_Information_Type
6	**Phase** Phase Code. Not used in GOCE. Set to X Possible values: X	xs:NCName
7	**Cycle** Cycle number. Not used in GOCE. Set to 0 Possible values: 0	xs:short
8	**Rel_Orbit** Relative Orbit Number at sensing start time. Not used in GOCE. Set to 0 Possible values: 0	xs:short
9	**Abs_Orbit** Absolute Orbit Number at sensing start time. Not used in GOCE. Set to 0 Possible values: 0	xs:integer
10	**State_Vector_Time** Empty	xs:string
11	**X_Position** Not used in GOCE. Set to '0.000' Possible values: 0.000	xs:decimal
12	**Y_Position** Not used in GOCE. Set to '0.000' Possible values: 0.000	xs:decimal
13	**Z_Position** Not used in GOCE. Set to '0.000' Possible values: 0.000	xs:decimal
14	**X_Velocity** Not used in GOCE. Set to '0.000000' Possible values: 0.000000	xs:decimal
15	**Y_Velocity** Not used in GOCE. Set to '0.000000' Possible values: 0.000000	xs:decimal

#	Name/Description	Format
16	**Z_Velocity** Not used in GOCE. Set to '0.000000' Possible values: 0.000000	xs:decimal
17	**Vector_Source** Empty	xs:string
18	**Product_Err** Product Errors: 0: no errors; 1: errors have been reported Possible values: 0 1	xs:integer
19	**DBL_Size** Datablock Size (unit: bytes)	xs:integer Total Digits : 13
20	**HDR_Size** Header Size (unit: bytes)	xs:integer Total Digits : 11
21	**Num_DSD** Number of DSD	xs:integer
22	**Num_Data_Sets** Number of DSDs with Dta_Set_Type='O'	xs:integer
23	**CRC** Not used in GOCE. Set to '-1' Possible values: -1	xs:integer

Table 8: MPHType Specification

3.2.2.5. Processor_Type

#	Name/Description	Format
1	**Proc_Stage** Processing stage code: O = Operations T = Test R = Reprocessing C = Consolidation Possible values: O T R C	xs:string
2	**Proc_Center** "HPF" for L2, else Workpackage/Institute Possible values: HPF	xs:string
3	**Proc_Time**	ShortTimeType

#	Name/Description	Format
	Processing Time (Product Generation Time)	
4	**Software_Ver** Processor Name and software version number. ProcessorName/VV.rr	xs:string

Table 9: Processor_Type Specification

3.2.2.6. Time_Information_Type

#	Name/Description	Format
1	**Sensing**	Sensing_Type
2	**Abs_Orbit** Absolute Orbit Number at sensing stop and start time.	Abs_Orbit_Type

Table 10: Time_Information_Type Specification

3.2.2.7. Sensing_Type

#	Name/Description	Format
1	**Start** UTC=yyyy-mm-ddThh:mm:ss.uuuuuu Can contain a 'not applicable' (N/A) value: UTC=0000-00-00T00:00:00.000000	LongTimeType
2	**Stop** UTC=yyyy-mm-ddThh:mm:ss.uuuuuu Can contain a 'not applicable' (N/A) value: UTC=9999-99-99T99:99:99.999999	LongTimeType

Table 11: Sensing_Type Specification

3.2.2.8. Abs_Orbit_Type

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 12: Abs_Orbit_Type Specification

3.3. Data Structures common to DBL files

There are no complex nor simple types common to all DBL files. Instead, some specific types have been defined per product type and they are described in section 4., 5. and 6..

4. Instrument Independent Data Structures

This section contains the data structures defined by the XML schemas (with or without DFDL annotations) used to represent the information of the GOCE L1 auxiliary files that are not associated to one instrument in particular.

4.1. Data Structures for file types in EEF format

The data structures have been classified by file type in the following sub-sections:

4.1.1. AUX_SST_DB (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_SST_DB file type in EEF format:

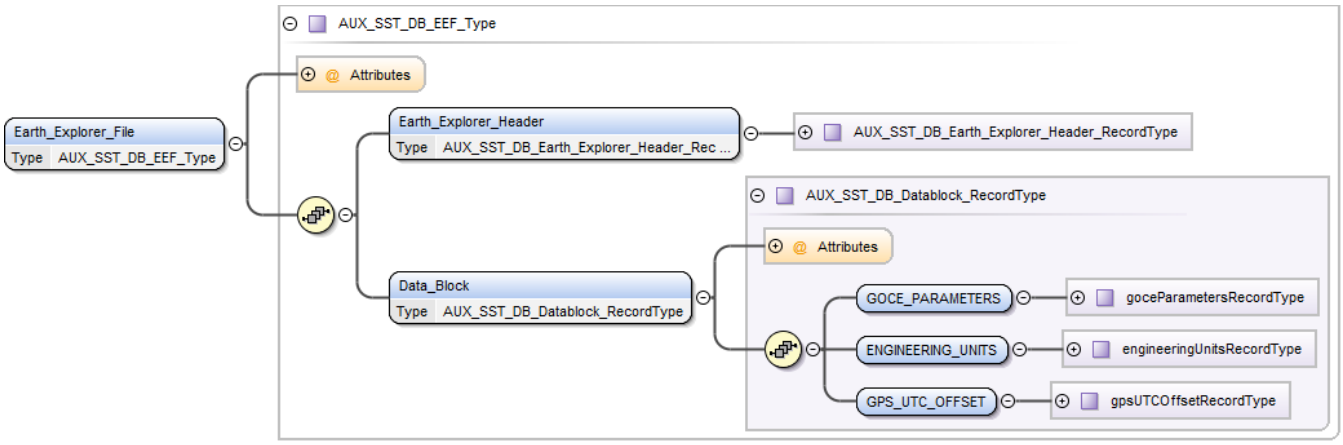

Figure 1: AUX_SST_DB EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

4.1.1.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION Data file containing all GOCE Spacecraft Parameters specified before launch. OBJECTIVE It contains constants, instrument specific parameters, filter constants, processor flags to support the ground processing software. FILE GENERATION FREQUENCY The last available valid file is transferred to the PDS. FILE SCOPE	AUX_SST_DB_EEF_Type

#	Name/Description	Format
	Each file shall be valid as soon as transferred, and until the end of the mission or until a new update is transferred. DATA VOLUME A few kbytes.	

Table 13: Earth_Explorer_File Specification

4.1.1.2. Complex Types

4.1.1.2.1. AUX_SST_DB_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_SST_DB_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_SST_DB_Datablock_RecordType

Table 14: AUX_SST_DB_EEF_Type Specification

4.1.1.2.2. AUX_SST_DB_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_SST_DB_VariableHeaderType

Table 15: AUX_SST_DB_Earth_Explorer_Header_RecordType Specification

4.1.1.2.3. AUX_SST_DB_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	AUX_SST_DB_SPHType Min Occurs : 0

Table 16: AUX_SST_DB_VariableHeaderType Specification

4.1.1.2.4. AUX_SST_DB_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: AUX_SST_DB EGG_NOM_2 EGG_TRF_2 EGM_GOC_2	xs:string
2	**Original_Source**	Original_Source_AUX_SST_DB_Type
3	**Time_Information**	Time_Information_AUX_SST_DB_Type
4	**AUX_SST_DB**	AUX_SST_DB_SpecificType
5	**DSDs**	DSDs_AUX_SST_DB_Type

Table 17: AUX_SST_DB_SPHType Specification

4.1.1.2.5. Original_Source_AUX_SST_DB_Type

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 18: Original_Source_AUX_SST_DB_Type Specification

4.1.1.2.6. Time_Information_AUX_SST_DB_Type

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_AUX_SST_DB_Type
2	**Abs_Orbit**	Abs_Orbit_AUX_SST_DB_Type

Table 19: Time_Information_AUX_SST_DB_Type Specification

4.1.1.2.7. GPS_Time_AUX_SST_DB_Type

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 20: GPS_Time_AUX_SST_DB_Type Specification

4.1.1.2.8. Abs_Orbit_AUX_SST_DB_Type

#	Name/Description	Format
1	**Start**	xs:integer

#	Name/Description	Format
2	**Stop**	xs:integer

Table 21: Abs_Orbit_AUX_SST_DB_Type Specification

4.1.1.2.9. DSDs_AUX_SST_DB_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_AUX_SST_DB_Type

Table 22: DSDs_AUX_SST_DB_Type Specification

4.1.1.2.10. List_of_DSDs_AUX_SST_DB_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 23: List_of_DSDs_AUX_SST_DB_Type Specification

4.1.1.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 24: Data_Set_DescriptorType Specification

4.1.1.2.12. AUX_SST_DB_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 25: AUX_SST_DB_SpecificType Specification

4.1.1.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRP_2_Type

Table 26: SST_PRP_2Type Specification

4.1.1.2.14. Original_Source_SST_PRP_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRP_2_Type

Table 27: Original_Source_SST_PRP_2_Type Specification

4.1.1.2.15. Format_SST_PRP_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 28: Format_SST_PRP_2_Type Specification

4.1.1.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PKI_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information__SST_PKI_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PKI_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PKI_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 29: SST_PKI_2Type Specification

4.1.1.2.17. Original_Source_SST_PKI_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PKI_2_Type

Table 30: Original_Source_SST_PKI_2_Type Specification

4.1.1.2.18. Format_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 31: Format_SST_PKI_2_Type Specification

4.1.1.2.19. Time_Information__SST_PKI_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PKI_2_Type

Table 32: Time_Information__SST_PKI_2_Type Specification

4.1.1.2.20. GPS_Time_SST_PKI_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PKI_2_Type
2	**Stop**	xs:string

Table 33: GPS_Time_SST_PKI_2_Type Specification

4.1.1.2.21. Start_SST_PKI_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PKI_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PKI_2_Type
3	**Gregorian**	GregorianType

Table 34: Start_SST_PKI_2_Type Specification

4.1.1.2.22. GPS_SST_PKI_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 35: GPS_SST_PKI_2_Type Specification

4.1.1.2.23. Mod_Jul_Day_SST_PKI_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 36: Mod_Jul_Day_SST_PKI_2_Type Specification

4.1.1.2.24. Epoch_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 37: Epoch_Information_SST_PKI_2_Type Specification

4.1.1.2.25. List_of_Satellite_Descriptors_SST_PKI_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PKI_2_Type Max Occurs : unbounded

Table 38: List_of_Satellite_Descriptors_SST_PKI_2_Type Specification

4.1.1.2.26. Satellite_Descriptor_SST_PKI_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 39: Satellite_Descriptor_SST_PKI_2_Type Specification

4.1.1.2.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PCV_2_Type
2	**Var_Cov_Matrix**	Var_Cov_Matrix_SST_PCV_2_Type
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_SST_PCV_2_Type
4	**Time_Information**	Time_Information_SST_PCV_2_Type
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 40: SST_PCV_2Type Specification

4.1.1.2.28. Original_Source_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PCV_2_Type

Table 41: Original_Source_SST_PCV_2_Type Specification

4.1.1.2.29. Format_SST_PCV_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values:	xs:string

#	Name/Description	Format
	Covariance	
2	**Version**	xs:string

Table 42: Format_SST_PCV_2_Type Specification

4.1.1.2.30. Var_Cov_Matrix_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 43: Var_Cov_Matrix_SST_PCV_2_Type Specification

4.1.1.2.31. Corresponding_Kinematic_Orbit_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 44: Corresponding_Kinematic_Orbit_SST_PCV_2_Type Specification

4.1.1.2.32. Time_Information_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_SST_PCV_2_Type
3	**GPS_Time**	GPS_Time_SST_PCV_2_Type

Table 45: Time_Information_SST_PCV_2_Type Specification

4.1.1.2.33. Time_Step_Size_SST_PCV_2_Type

#	Name/Description	Format
1	Time Step Size SST_PCV_2 Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 46: Time_Step_Size_SST_PCV_2_Type Specification

4.1.1.2.34. GPS_Time_SST_PCV_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PCV_2_Type
2	**Stop**	xs:string

Table 47: GPS_Time_SST_PCV_2_Type Specification

4.1.1.2.35. Start_SST_PCV_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 48: Start_SST_PCV_2_Type Specification

4.1.1.2.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRD_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PRD_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRD_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PRD_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 49: SST_PRD_2Type Specification

4.1.1.2.37. Original_Source_SST_PRD_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRD_2_Type

Table 50: Original_Source_SST_PRD_2_Type Specification

4.1.1.2.38. Format_SST_PRD_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 51: Format_SST_PRD_2_Type Specification

4.1.1.2.39. Time_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRD_2_Type

Table 52: Time_Information_SST_PRD_2_Type Specification

4.1.1.2.40. GPS_Time_SST_PRD_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRD_2_Type
2	**Stop**	xs:string

Table 53: GPS_Time_SST_PRD_2_Type Specification

4.1.1.2.41. Start_SST_PRD_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PRD_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PRD_2_Type
3	**Gregorian**	GregorianType

Table 54: Start_SST_PRD_2_Type Specification

4.1.1.2.42. GPS_SST_PRD_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 55: GPS_SST_PRD_2_Type Specification

4.1.1.2.43. Mod_Jul_Day_SST_PRD_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 56: Mod_Jul_Day_SST_PRD_2_Type Specification

4.1.1.2.44. Epoch_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 57: Epoch_Information_SST_PRD_2_Type Specification

4.1.1.2.45. List_of_Satellite_Descriptors_SST_PRD_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
		Max Occurs : unbounded

Table 58: List_of_Satellite_Descriptors_SST_PRD_2_Type Specification

4.1.1.2.46. Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 59: Satellite_Descriptor_SST_PRD_2_Type Specification

4.1.1.2.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	SST_PRM_2Type_SST_PRM_2_Type
2	**Transformation**	Transformation_SST_PRM_2_Type
3	**Time_Information**	Time_Information_SST_PRM_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRM_2_Type
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_SST_PRM_2_Type
7	**Subdaily_Model**	xs:string

Table 60: SST_PRM_2Type Specification

4.1.1.2.48. SST_PRM_2Type_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PRM_2_Type

Table 61: SST_PRM_2Type_SST_PRM_2_Type Specification

4.1.1.2.49. Format_SST_PRM_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 62: Format_SST_PRM_2_Type Specification

4.1.1.2.50. Transformation_SST_PRM_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

#	Name/Description	Format
2	**Direction**	xs:string

Table 63: Transformation_SST_PRM_2_Type Specification

4.1.1.2.51. Time_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRM_2_Type

Table 64: Time_Information_SST_PRM_2_Type Specification

4.1.1.2.52. GPS_Time_SST_PRM_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRM_2_Type
2	**Stop**	xs:string

Table 65: GPS_Time_SST_PRM_2_Type Specification

4.1.1.2.53. Start_SST_PRM_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 66: Start_SST_PRM_2_Type Specification

4.1.1.2.54. Epoch_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**Reference**	xs:string

Table 67: Epoch_Information_SST_PRM_2_Type Specification

4.1.1.2.55. Nutation_SST_PRM_2_Type

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 68: Nutation_SST_PRM_2_Type Specification

4.1.1.2.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 69: GregorianType Specification

4.1.1.2.57. AUX_SST_DB_Datablock_RecordType

Attribute:

Name	Use	Type
type	optional	xs:string

#	Name/Description	Format
1	**GOCE_PARAMETERS**	goceParametersRecordType
2	**ENGINEERING_UNITS**	engineeringUnitsRecordType
3	**GPS_UTC_OFFSET**	gpsUTCOffsetRecordType

Table 70: AUX_SST_DB_Datablock_RecordType Specification

4.1.1.2.58. goceParametersRecordType

#	Name/Description	Format
1	**Abs_Delay_Corr** Absolute Delay Correction for the delay of GOCE GPS receiver	recordValueFloatType
2	**Antenna_Boresight** Antenna boresight for RINEX output header The values (3) are separated by comma	recordValueStringType
3	**Ant_Id_Goce** Flag that determines which of GOCE GPS antennas is used	recordValueIntegerType
4	**Ant_Phc_Offset_Goce** Antenna IDs, Main and Redundant APID, two string(Main,Redundant) followed by antenna phase center offsets of GOCE satellite's 3 GPS antenna(s) The values are separated by comma	recordValueStringType
5	**Aux_Ant_Size** Size of AUX_ANT_PT table, i.e. number of (elevation, gain) pairs	recordValueIntegerType
6	**Aux_Ant_Gain** Elevation of data point and Antenna gain (radiation pattern)	recordValueStringType
7	**Freespace_Prop_Loss_Constant** Constant for free space propagation	recordValueFloatType
8	**Rx_Noise_Power** Constant for derivation of receiver noise	recordValueFloatType
9	**Cor_Chip_Spacing** Correlator chip spacing	recordValueFloatType
10	**TEC_Scaling_Factor** TBD	recordValueFloatType
11	**Gps_L1_Freq** Carrier frequency for L1	recordValueFloatType
12	**Gps_L2_Freq**	recordValueFloatType

#	Name/Description	Format
	Carrier frequency for L2	
13	**Iono_Corr_Factor** Frequency dependant scaling factor for ionosphere correction	recordValueFloatType
14	**Gps_Ant_Gain** Antenna Gain of GPS	recordValueFloatType
15	**Icb_Table** Interchannel CA, P1, P2 bias for 12 channels Values (3x12) are separated by comma	recordValueStringType
16	**Ifb_Table_Size** Size of the IFB table, i.e. (temperature, bias) pairings	recordValueIntegerType
17	**Ifb_Table** Table entries for inter-frequency bias as a function of temperature Values (IFB_TABLE_SIZE*2) are separated by comma	recordValueStringType
18	**Atmo_Signal_Loss** Loss of signal power due to propagation through the atmosphere	recordValueFloatType
19	**L1_Code_Loss** Code Sharing Loss from GPS at L1 for P-Code	recordValueFloatType
20	**L2_Code_Loss** Code Sharing Loss from GPS at L2 for P-Code	recordValueFloatType
21	**L1_Impl_Loss** Implementation Loss for L1	recordValueFloatType
22	**L2_Impl_Loss** Implementation Loss for L2	recordValueFloatType
23	**Loop_Bw_L1** Loop bandwidth of the GOCE GPS receiver at L1	recordValueFloatType
24	**Loop_Bw_L2** Loop bandwidth of the GOCE GPS receiver at L2	recordValueFloatType
25	**Freespace_Prop_Loss_Factor** Factor for free space propagation	recordValueFloatType
26	**Rx_Noise_Power_Factor** Factor for derivation of receiver noise	recordValueFloatType
27	**Iono_Hgt_Offset** Offset used to scale the single layer height extracted from ionosphere map	recordValueFloatType
28	**Iono_Hgt_Scale** Scale height for the integration of the Chapman profile used for the position solution	recordValueFloatType
29	**Power_Tx_Gps_P_L1** Transmitted power signal from GPS at L1 P-Code	recordValueFloatType
30	**Power_Tx_Gps_P_L2** Transmitted power signal from GPS at L2 P-Code	recordValueFloatType
31	**Rx_Phase_Wrap**	recordValueFloatType

#	Name/Description	Format
	Wrapping of GOCE GPS Receiver	
32	**Rx_Osc_Instab_L1** Instability of the GOCE GPS receiver oscillator at L1	recordValueFloatType
33	**Rx_Osc_Instab_L2** Instability of the GOCE GPS receiver oscillator at L2	recordValueFloatType
34	**Sigma_Apriori_P1** A priori instrument noise for P1 code measurements	recordValueFloatType
35	**Sigma_Apriori_P2** A priori instrument noise for P2 code measurements	recordValueFloatType
36	**Sigma_Apriori_CA** A priori instrument noise for CA code measurements	recordValueFloatType
37	**Sigma_Apriori_L1** A priori instrument noise for L1 code measurements	recordValueFloatType
38	**Sigma_Apriori_L2** A priori instrument noise for L2 code measurements	recordValueFloatType
39	**Sample_Rate_Nominal** Nominal Sampling Rate for the SSTI Packets	recordValueFloatType
40	**Sample_Rate_Margin** Margin sample rate of receiver	recordValueFloatType
41	**T_Chip_Interval** Chipping interval	recordValueFloatType
42	**T_Noise_Temp** Equivalent noise temperature	recordValueFloatType
43	**T_Pred_Time** Predetection time of GOCE GPS receiver	recordValueFloatType
44	**Thres_Ssti_Temp** Threshold for temperature sensor	recordValueFloatType
45	**Receiver_Software_Version** Software version of the LABEN GPS receiver	recordValueFloatType

Table 71: goceParametersRecordType Specification

4.1.1.2.59. engineeringUnitsRecordType

#	Name/Description	Format
1	**CN0_Eng_Unit** Engineering unit conversion factor for C/N0 science telemetry	recordValueFloatType
2	**Pseudorange_Eng_Unit** Engineering unit conversion factor for pseudorange science telemetry	recordValueFloatType
3	**Doppler_Eng_Unit** Engineering unit conversion factor for integrated	recordValueFloatType

#	Name/Description	Format
	Doppler science telemetry	
4	**InstDoppler_Eng_Unit** Engineering unit conversion factor for instantenoeus Doppler science telemetry	recordValueFloatType
5	**Position_Eng_Unit** Engineering unit conversion factor for navigation solution position science telemetry	recordValueFloatType
6	**Velocity_Eng_Unit** Engineering unit conversion factor for navigation solution velocity science telemetry	recordValueFloatType
7	**ClockBias_Eng_Unit** Engineering unit conversion factor for navigation solution clock bias science telemetry	recordValueFloatType
8	**ClockDrift_Eng_Unit** Engineering unit conversion factor for navigation solution clock drift science telemetry	recordValueFloatType
9	**TempSensor_Eng_Unit** Engineering unit conversion factor for temperature sensor science telemetry	recordValueFloatType

Table 72: engineeringUnitsRecordType Specification

4.1.1.2.60. gpsUTCOffsetRecordType

#	Name/Description	Format
1	**Diff_Gps_Utc** GPS-UTC time offset	recordValueFloatType
2	**Leap_Seconds** Number of leap seconds in UTC	recordValueIntegerType
3	**Leap_Jump_Flag** Flag set if leap second jump during DB validity	recordValueIntegerType
4	**Leap_Jump_Value** Size of leap second jump	recordValueIntegerType
5	**Leap_Jump_UTC** UTC time of leap second jump	recordValueUTCType

Table 73: gpsUTCOffsetRecordType Specification

4.1.1.2.61. recordValueIntegerType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	ValueInteger_Type

Table 74: recordValueIntegerType Specification

4.1.1.2.62. ValueInteger_Type

#	Name/Description	Format
1	Value Integer Type	xs:integer

#	Name/Description	Format
		Attribute: Name: "unit" Type: "xs:string" Use : "required"

Table 75: ValueInteger_Type Specification

4.1.1.2.63. recordValueFloatType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	ValueFloat_Type

Table 76: recordValueFloatType Specification

4.1.1.2.64. ValueFloat_Type

#	Name/Description	Format
1	Value Float Type	xs:float **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 77: ValueFloat_Type Specification

4.1.1.2.65. recordValueStringType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	ValueString_Type

Table 78: recordValueStringType Specification

4.1.1.2.66. ValueString_Type

#	Name/Description	Format
1	Value String Type	xs:string **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 79: ValueString_Type Specification

4.1.1.2.67. recordValueUTCType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	ValueUTC_Type

#	Name/Description	Format

Table 80: recordValueUTCType Specification

4.1.1.2.68. ValueUTC_Type

#	Name/Description	Format
1	Value UTC Type	ShortTimeType **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 81: ValueUTC_Type Specification

4.1.2. MPL_ORBPRE (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an MPL_ORBPRE file type in EEF format:

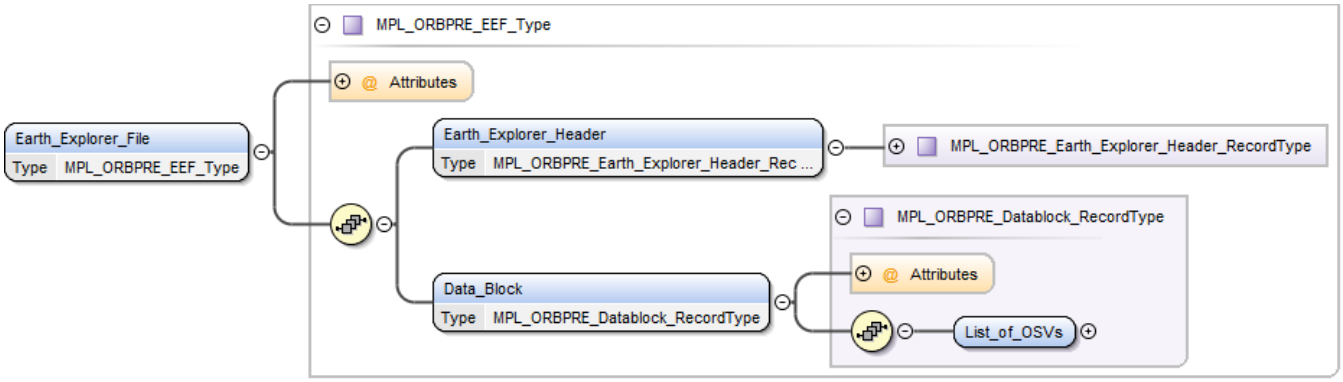

Figure 2: MPL_ORBPRE EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

4.1.2.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** TBD	MPL_ORBPRE_EEF_Type

Table 82: Earth_Explorer_File Specification

4.1.2.2. Simple Types

4.1.2.3. TAIType

Base Type	Length (bytes)	Comments
xs:string	minLength: 30 maxLength: 30	

Table 83: TAIType Specification

4.1.2.4. UT1Type

Base Type	Length (bytes)	Comments
xs:string	minLength: 30 maxLength: 30	

Table 84: UT1Type Specification

4.1.2.5. Complex Types

4.1.2.5.1. MPL_ORBPRE_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	MPL_ORBPRE_Earth_Explorer_Header_RecordType
2	**Data_Block**	MPL_ORBPRE_Datablock_RecordType

Table 85: MPL_ORBPRE_EEF_Type Specification

4.1.2.5.2. MPL_ORBPRE_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	MPL_ORBPRE_VariableHeaderType

Table 86: MPL_ORBPRE_Earth_Explorer_Header_RecordType Specification

4.1.2.5.3. MPL_ORBPRE_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	MPL_ORBPRE_SPHType Min Occurs : 0

Table 87: MPL_ORBPRE_VariableHeaderType Specification

4.1.2.5.4. MPL_ORBPRE_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: MPL_ORBPRE EGG_NOM_2 EGG_TRF_2 EGM_GOC_2	xs:string
2	**Original_Source**	Original_Source_MPL_ORBPRE_Type
3	**Time_Information**	Time_Information_MPL_ORBPRE_Type
4	**MPL_ORBPRE**	MPL_ORBPRE_SpecificType
5	**DSDs**	DSDs_MPL_ORBPRE_Type

Table 88: MPL_ORBPRE_SPHType Specification

4.1.2.5.5. Original_Source_MPL_ORBPRE_Type

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 89: Original_Source_MPL_ORBPRE_Type Specification

4.1.2.5.6. Time_Information_MPL_ORBPRE_Type

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_MPL_ORBPRE_Type
2	**Abs_Orbit**	Abs_Orbit_MPL_ORBPRE_Type

Table 90: Time_Information_MPL_ORBPRE_Type Specification

4.1.2.5.7. GPS_Time_MPL_ORBPRE_Type

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 91: GPS_Time_MPL_ORBPRE_Type Specification

4.1.2.5.8. Abs_Orbit_MPL_ORBPRE_Type

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 92: Abs_Orbit_MPL_ORBPRE_Type Specification

4.1.2.5.9. DSDs_MPL_ORBPRE_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_MPL_ORBPRE_Type

Table 93: DSDs_MPL_ORBPRE_Type Specification

4.1.2.5.10. List_of_DSDs_MPL_ORBPRE_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 94: List_of_DSDs_MPL_ORBPRE_Type Specification

4.1.2.5.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 95: Data_Set_DescriptorType Specification

4.1.2.5.12. MPL_ORBPRE_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 96: MPL_ORBPRE_SpecificType Specification

4.1.2.5.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRP_2_Type

Table 97: SST_PRP_2Type Specification

4.1.2.5.14. Original_Source_SST_PRP_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRP_2_Type

Table 98: Original_Source_SST_PRP_2_Type Specification

4.1.2.5.15. Format_SST_PRP_2_Type

#	Name/Description	Format
1	**Name** File Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 99: Format_SST_PRP_2_Type Specification

4.1.2.5.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PKI_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PKI_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PKI_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PKI_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 100: SST_PKI_2Type Specification

4.1.2.5.17. Original_Source_SST_PKI_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PKI_2_Type

Table 101: Original_Source_SST_PKI_2_Type Specification

4.1.2.5.18. Format_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** File Name Possible values: SP3c	xs:string
2	**Version**	xs:string

#	Name/Description	Format
3	**Type**	xs:string Max Length : 1 bytes

Table 102: Format_SST_PKI_2_Type Specification

4.1.2.5.19. Time_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PKI_2_Type

Table 103: Time_Information_SST_PKI_2_Type Specification

4.1.2.5.20. GPS_Time_SST_PKI_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PKI_2_Type
2	**Stop**	xs:string

Table 104: GPS_Time_SST_PKI_2_Type Specification

4.1.2.5.21. Start_SST_PKI_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PKI_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PKI_2_Type
3	**Gregorian**	GregorianType

Table 105: Start_SST_PKI_2_Type Specification

4.1.2.5.22. GPS_SST_PKI_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 106: GPS_SST_PKI_2_Type Specification

4.1.2.5.23. Mod_Jul_Day_SST_PKI_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 107: Mod_Jul_Day_SST_PKI_2_Type Specification

4.1.2.5.24. Epoch_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 108: Epoch_Information_SST_PKI_2_Type Specification

4.1.2.5.25. List_of_Satellite_Descriptors_SST_PKI_2_Type

Attribute:

Name	Use	Type

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PKI_2_Type Max Occurs : unbounded

Table 109: List_of_Satellite_Descriptors_SST_PKI_2_Type Specification

4.1.2.5.26. Satellite_Descriptor_SST_PKI_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 110: Satellite_Descriptor_SST_PKI_2_Type Specification

4.1.2.5.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PCV_2_Type
2	**Var_Cov_Matrix**	Var_Cov_Matrix_SST_PCV_2_Type
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_SST_PCV_2_Type
4	**Time_Information**	Time_Information_SST_PCV_2_Type
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 111: SST_PCV_2Type Specification

4.1.2.5.28. Original_Source_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PCV_2_Type

Table 112: Original_Source_SST_PCV_2_Type Specification

4.1.2.5.29. Format_SST_PCV_2_Type

#	Name/Description	Format
1	**Name** File Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 113: Format_SST_PCV_2_Type Specification

4.1.2.5.30. Var_Cov_Matrix_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 114: Var_Cov_Matrix_SST_PCV_2_Type Specification

4.1.2.5.31. Corresponding_Kinematic_Orbit_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 115: Corresponding_Kinematic_Orbit_SST_PCV_2_Type Specification

4.1.2.5.32. Time_Information_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_SST_PCV_2_Type
3	**GPS_Time**	GPS_Time_SST_PCV_2_Type

Table 116: Time_Information_SST_PCV_2_Type Specification

4.1.2.5.33. Time_Step_Size_SST_PCV_2_Type

#	Name/Description	Format
1	Time Step Size SST_PCV_2 Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 117: Time_Step_Size_SST_PCV_2_Type Specification

4.1.2.5.34. GPS_Time_SST_PCV_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PCV_2_Type
2	**Stop**	xs:string

Table 118: GPS_Time_SST_PCV_2_Type Specification

4.1.2.5.35. Start_SST_PCV_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 119: Start_SST_PCV_2_Type Specification

4.1.2.5.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRD_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PRD_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRD_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string

#	Name/Description	Format
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PRD_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 120: SST_PRD_2Type Specification

4.1.2.5.37. Original_Source_SST_PRD_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRD_2_Type

Table 121: Original_Source_SST_PRD_2_Type Specification

4.1.2.5.38. Format_SST_PRD_2_Type

#	Name/Description	Format
1	**Name** File Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 122: Format_SST_PRD_2_Type Specification

4.1.2.5.39. Time_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRD_2_Type

Table 123: Time_Information_SST_PRD_2_Type Specification

4.1.2.5.40. GPS_Time_SST_PRD_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRD_2_Type
2	**Stop**	xs:string

Table 124: GPS_Time_SST_PRD_2_Type Specification

4.1.2.5.41. Start_SST_PRD_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PRD_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PRD_2_Type
3	**Gregorian**	GregorianType

Table 125: Start_SST_PRD_2_Type Specification

4.1.2.5.42. GPS_SST_PRD_2_Type

#	Name/Description	Format
1	**Week**	xs:integer

#	Name/Description	Format
2	**Seconds_of_Week**	xs:decimal

Table 126: GPS_SST_PRD_2_Type Specification

4.1.2.5.43. Mod_Jul_Day_SST_PRD_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 127: Mod_Jul_Day_SST_PRD_2_Type Specification

4.1.2.5.44. Epoch_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 128: Epoch_Information_SST_PRD_2_Type Specification

4.1.2.5.45. List_of_Satellite_Descriptors_SST_PRD_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PRD_2_Type Max Occurs : unbounded

Table 129: List_of_Satellite_Descriptors_SST_PRD_2_Type Specification

4.1.2.5.46. Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 130: Satellite_Descriptor_SST_PRD_2_Type Specification

4.1.2.5.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRM_2_Type
2	**Transformation**	Transformation_SST_PRM_2_Type
3	**Time_Information**	Time_Information_SST_PRM_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRM_2_Type
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_SST_PRM_2_Type
7	**Subdaily_Model**	xs:string

Table 131: SST_PRM_2Type Specification

4.1.2.5.48. Original_Source_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string

#	Name/Description	Format
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PRM_2_Type

Table 132: Original_Source_SST_PRM_2_Type Specification

4.1.2.5.49. Format_SST_PRM_2_Type

#	Name/Description	Format
1	**Name** File Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 133: Format_SST_PRM_2_Type Specification

4.1.2.5.50. Transformation_SST_PRM_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 134: Transformation_SST_PRM_2_Type Specification

4.1.2.5.51. Time_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRM_2_Type

Table 135: Time_Information_SST_PRM_2_Type Specification

4.1.2.5.52. GPS_Time_SST_PRM_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRM_2_Type
2	**Stop**	xs:string

Table 136: GPS_Time_SST_PRM_2_Type Specification

4.1.2.5.53. Start_SST_PRM_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 137: Start_SST_PRM_2_Type Specification

4.1.2.5.54. Epoch_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**Reference**	xs:string

Table 138: Epoch_Information_SST_PRM_2_Type Specification

4.1.2.5.55. Nutation_SST_PRM_2_Type

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 139: Nutation_SST_PRM_2_Type Specification

4.1.2.5.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 140: GregorianType Specification

4.1.2.5.57. MPL_ORBPRE_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**List_of_OSVs**	List_of_OSVs_Type

Table 141: MPL_ORBPRE_Datablock_RecordType Specification

4.1.2.5.58. List_of_OSVs_Type

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**OSV**	OSVType Min Occurs : 1 Max Occurs : unbounded

Table 142: List_of_OSVs_Type Specification

4.1.2.5.59. OSVType

#	Name/Description	Format
1	**TAI**	TAIType
2	**UTC**	LongTimeType
3	**UT1**	UT1Type
4	**Absolute_Orbit**	xs:integer
5	**X**	coordType
6	**Y**	coordType
7	**Z**	coordType
8	**VX**	coordType

#	Name/Description	Format
9	**VY**	coordType
10	**VZ**	coordType
11	**Quality**	xs:int

Table 143: OSVType Specification

4.1.2.5.60. coordType

#	Name/Description	Format
1	Coordinates Type	xs:float **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 144: coordType Specification

4.1.3. MPL_ORBSCT (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an MPL_ORBSCT file type in EEF format:

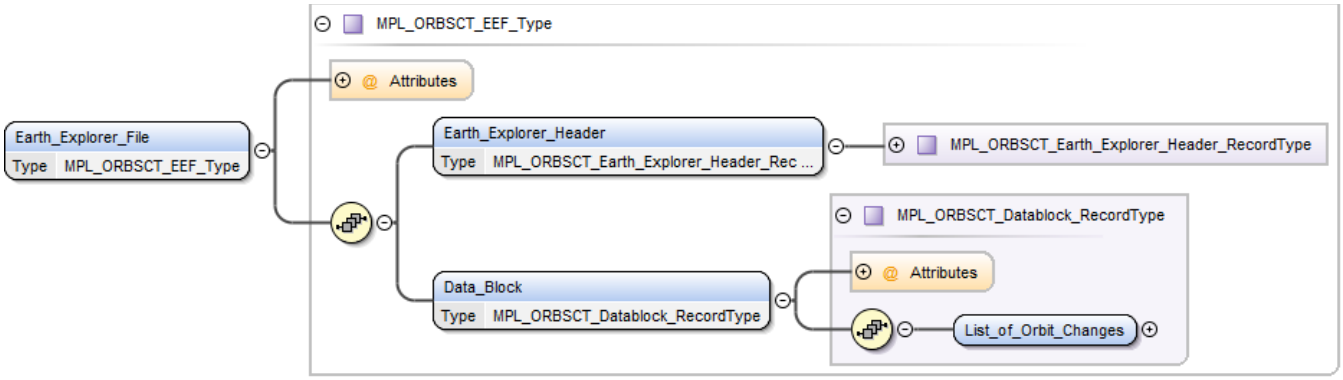

Figure 3: MPL_ORBSCT EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

4.1.3.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION This file contains reference or bit parameters for each change of orbit planned during the mission. OBJECTIVE It is used to determine timing of orbit events (e.g. ANX time, zones visibility duration, etc...). FILE GENERATION FREQUENCY The file is generated once, for the duration of the	MPL_ORBSCT_EEF_Type

#	Name/Description	Format
	mission. An update will be performed only if the planned orbit changes have to be modified (e.g. change of date, addition of a Validation Phase,...). FILE SCOPE The file covers the whole mission. DATA VOLUME A few kbytes.	

Table 145: Earth_Explorer_File Specification

4.1.3.2. Simple Types

4.1.3.2.1. MLST_Type

Base Type	Length (bytes)	Comments
xs:string	minLength: 15 maxLength: 15	

Table 146: MLST_Type Specification

4.1.3.2.2. TAI_Type

Base Type	Length (bytes)	Comments
xs:string	minLength: 30 maxLength: 30	

Table 147: TAI_Type Specification

4.1.3.2.3. UT1_Type

Base Type	Length (bytes)	Comments
xs:string	minLength: 30 maxLength: 30	

Table 148: UT1_Type Specification

4.1.3.3. Complex Types

4.1.3.3.1. MPL_ORBSCT_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	MPL_ORBSCT_Earth_Explorer_Header_RecordType
2	**Data_Block**	MPL_ORBSCT_Datablock_RecordType

Table 149: MPL_ORBSCT_EEF_Type Specification

4.1.3.3.2. MPL_ORBSCT_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	MPL_ORBSCT_VariableHeaderType

Table 150: MPL_ORBSCT_Earth_Explorer_Header_RecordType Specification

4.1.3.3.3. MPL_ORBSCT_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	MPL_ORBSCT_SPHType Min Occurs : 0

Table 151: MPL_ORBSCT_VariableHeaderType Specification

4.1.3.3.4. MPL_ORBSCT_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: MPL_ORBSCT EGG_NOM_2 EGG_TRF_2 EGM_GOC_2	xs:string
2	**Original_Source**	Original_Source_MPL_ORBSCT_Type
3	**Time_Information**	Time_Information_MPL_ORBSCT_Type
4	**MPL_ORBSCT**	MPL_ORBSCT_SpecificType
5	**DSDs**	DSDs_MPL_ORBSCT_Type

Table 152: MPL_ORBSCT_SPHType Specification

4.1.3.3.5. Original_Source_MPL_ORBSCT_Type

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 153: Original_Source_MPL_ORBSCT_Type Specification

4.1.3.3.6. Time_Information_MPL_ORBSCT_Type

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_MPL_ORBSCT_Type
2	**Abs_Orbit**	Abs_Orbit_MPL_ORBSCT_Type

Table 154: Time_Information_MPL_ORBSCT_Type Specification

4.1.3.3.7. GPS_Time_MPL_ORBSCT_Type

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 155: GPS_Time_MPL_ORBSCT_Type Specification

4.1.3.3.8. Abs_Orbit_MPL_ORBSCT_Type

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 156: Abs_Orbit_MPL_ORBSCT_Type Specification

4.1.3.3.9. DSDs_MPL_ORBSCT_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_MPL_ORBSCT_Type

Table 157: DSDs_MPL_ORBSCT_Type Specification

4.1.3.3.10. List_of_DSDs_MPL_ORBSCT_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 158: List_of_DSDs_MPL_ORBSCT_Type Specification

4.1.3.3.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set Possible values: I O S	xs:NCName
3	**File_Name**	xs:string

#	Name/Description	Format
	Name of Reference File	Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 159: Data_Set_DescriptorType Specification

4.1.3.3.12. MPL_ORBSCT_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 160: MPL_ORBSCT_SpecificType Specification

4.1.3.3.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRP_2_Type

Table 161: SST_PRP_2Type Specification

4.1.3.3.14. Original_Source_SST_PRP_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRP_2_Type

Table 162: Original_Source_SST_PRP_2_Type Specification

4.1.3.3.15. Format_SST_PRP_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 163: Format_SST_PRP_2_Type Specification

4.1.3.3.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PKI_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PKI_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PKI_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string

#	Name/Description	Format
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PKI_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 164: SST_PKI_2Type Specification

4.1.3.3.17. Original_Source_SST_PKI_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PKI_2_Type

Table 165: Original_Source_SST_PKI_2_Type Specification

4.1.3.3.18. Format_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 166: Format_SST_PKI_2_Type Specification

4.1.3.3.19. Time_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PKI_2_Type

Table 167: Time_Information_SST_PKI_2_Type Specification

4.1.3.3.20. GPS_Time_SST_PKI_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PKI_2_Type
2	**Stop**	xs:string

Table 168: GPS_Time_SST_PKI_2_Type Specification

4.1.3.3.21. Start_SST_PKI_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PKI_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PKI_2_Type
3	**Gregorian**	GregorianType

Table 169: Start_SST_PKI_2_Type Specification

4.1.3.3.22. GPS_SST_PKI_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 170: GPS_SST_PKI_2_Type Specification

4.1.3.3.23. Mod_Jul_Day_SST_PKI_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 171: Mod_Jul_Day_SST_PKI_2_Type Specification

4.1.3.3.24. Epoch_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 172: Epoch_Information_SST_PKI_2_Type Specification

4.1.3.3.25. List_of_Satellite_Descriptors_SST_PKI_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PKI_2_Type Max Occurs : unbounded

Table 173: List_of_Satellite_Descriptors_SST_PKI_2_Type Specification

4.1.3.3.26. Satellite_Descriptor_SST_PKI_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 174: Satellite_Descriptor_SST_PKI_2_Type Specification

4.1.3.3.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PCV_2_Type
2	**Var_Cov_Matrix**	Var_Cov_Matrix_SST_PCV_2_Type
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_SST_PCV_2_Type
4	**Time_Information**	Time_Information_SST_PCV_2_Type
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 175: SST_PCV_2Type Specification

4.1.3.3.28. Original_Source_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PCV_2_Type

Table 176: Original_Source_SST_PCV_2_Type Specification

4.1.3.3.29. Format_SST_PCV_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 177: Format_SST_PCV_2_Type Specification

4.1.3.3.30. Var_Cov_Matrix_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 178: Var_Cov_Matrix_SST_PCV_2_Type Specification

4.1.3.3.31. Corresponding_Kinematic_Orbit_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 179: Corresponding_Kinematic_Orbit_SST_PCV_2_Type Specification

4.1.3.3.32. Time_Information_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_SST_PCV_2_Type
3	**GPS_Time**	GPS_Time_SST_PCV_2_Type

Table 180: Time_Information_SST_PCV_2_Type Specification

4.1.3.3.33. Time_Step_Size_SST_PCV_2_Type

#	Name/Description	Format
1	Time Step Size SST_PCV_2 Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 181: Time_Step_Size_SST_PCV_2_Type Specification

4.1.3.3.34. GPS_Time_SST_PCV_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PCV_2_Type
2	**Stop**	xs:string

Table 182: GPS_Time_SST_PCV_2_Type Specification

4.1.3.3.35. Start_SST_PCV_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 183: Start_SST_PCV_2_Type Specification

4.1.3.3.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRD_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PRD_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRD_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PRD_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 184: SST_PRD_2Type Specification

4.1.3.3.37. Original_Source_SST_PRD_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRD_2_Type

Table 185: Original_Source_SST_PRD_2_Type Specification

4.1.3.3.38. Format_SST_PRD_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 186: Format_SST_PRD_2_Type Specification

4.1.3.3.39. Time_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRD_2_Type

Table 187: Time_Information_SST_PRD_2_Type Specification

4.1.3.3.40. GPS_Time_SST_PRD_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRD_2_Type
2	**Stop**	xs:string

Table 188: GPS_Time_SST_PRD_2_Type Specification

4.1.3.3.41. Start_SST_PRD_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PRD_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PRD_2_Type
3	**Gregorian**	GregorianType

Table 189: Start_SST_PRD_2_Type Specification

4.1.3.3.42. GPS_SST_PRD_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 190: GPS_SST_PRD_2_Type Specification

4.1.3.3.43. Mod_Jul_Day_SST_PRD_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 191: Mod_Jul_Day_SST_PRD_2_Type Specification

4.1.3.3.44. Epoch_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 192: Epoch_Information_SST_PRD_2_Type Specification

4.1.3.3.45. List_of_Satellite_Descriptors_SST_PRD_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
		Max Occurs : unbounded

Table 193: List_of_Satellite_Descriptors_SST_PRD_2_Type Specification

4.1.3.3.46. Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 194: Satellite_Descriptor_SST_PRD_2_Type Specification

4.1.3.3.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRM_2_Type
2	**Transformation**	Transformation_SST_PRM_2_Type
3	**Time_Information**	Time_Information_SST_PRM_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRM_2_Type
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_SST_PRM_2_Type
7	**Subdaily_Model**	xs:string

Table 195: SST_PRM_2Type Specification

4.1.3.3.48. Original_Source_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PRM_2_Type

Table 196: Original_Source_SST_PRM_2_Type Specification

4.1.3.3.49. Format_SST_PRM_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 197: Format_SST_PRM_2_Type Specification

4.1.3.3.50. Transformation_SST_PRM_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 198: Transformation_SST_PRM_2_Type Specification

4.1.3.3.51. Time_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRM_2_Type

Table 199: Time_Information_SST_PRM_2_Type Specification

4.1.3.3.52. GPS_Time_SST_PRM_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRM_2_Type
2	**Stop**	xs:string

Table 200: GPS_Time_SST_PRM_2_Type Specification

4.1.3.3.53. Start_SST_PRM_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 201: Start_SST_PRM_2_Type Specification

4.1.3.3.54. Epoch_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**Reference**	xs:string

Table 202: Epoch_Information_SST_PRM_2_Type Specification

4.1.3.3.55. Nutation_SST_PRM_2_Type

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 203: Nutation_SST_PRM_2_Type Specification

4.1.3.3.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 204: GregorianType Specification

4.1.3.3.57. MPL_ORBSCT_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**List_of_Orbit_Changes**	List_of_Orbit_Changes_Type

Table 205: MPL_ORBSCT_Datablock_RecordType Specification

4.1.3.3.58. List_of_Orbit_Changes_Type

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**Orbit_Change**	Orbit_Change_Type Min Occurs : 1 Max Occurs : unbounded

Table 206: List_of_Orbit_Changes_Type Specification

4.1.3.3.59. Orbit_Change_Type

#	Name/Description	Format
1	**Orbit**	orbitType
2	**Cycle**	cycleType
3	**Time_of_ANX**	timeOfANXType

Table 207: Orbit_Change_Type Specification

4.1.3.3.60. orbitType

#	Name/Description	Format
1	**Absolute_Orbit**	xs:integer
2	**Relative_Orbit**	xs:integer
3	**Cycle_Number**	xs:integer
4	**Phase_Number**	xs:integer

Table 208: orbitType Specification

4.1.3.3.61. cycleType

#	Name/Description	Format
1	**Repeat_Cycle**	Repeat_Cycle_Type
2	**Cycle_Length**	Cycle_Length_Type
3	**ANX_Longitude**	ANX_Longitude_Type
4	**MLST**	MLST_Type
5	**MLST_Drift**	MLST_Drift_Type

Table 209: cycleType Specification

4.1.3.3.62. Repeat_Cycle_Type

#	Name/Description	Format
1	Repeat Cycle Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 210: Repeat_Cycle_Type Specification

4.1.3.3.63. Cycle_Length_Type

#	Name/Description	Format
1	Cycle Length Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 211: Cycle_Length_Type Specification

4.1.3.3.64. ANX_Longitude_Type

#	Name/Description	Format
1	ANX Longitude Type	xs:float **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 212: ANX_Longitude_Type Specification

4.1.3.3.65. MLST_Drift_Type

#	Name/Description	Format
1	MLST Drift Type	xs:float **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 213: MLST_Drift_Type Specification

4.1.3.3.66. timeOfANXType

#	Name/Description	Format
1	**TAI**	TAI_Type
2	**UTC**	LongTimeType
3	**UT1**	UT1_Type

Table 214: timeOfANXType Specification

5. EGG Specific Data Structures

This section contains the data structures defined by the XML schemas (with or without DFDL annotations) used to represent the information of the GOCE L1 auxiliary files associated to the EGG instrument.

5.1. Data Structures for file types in EEF format

The data structures have been classified by file type in the following sub-sections:

5.1.1. AUX_CAL_K2 (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_CAL_K2 file type in EEF format:

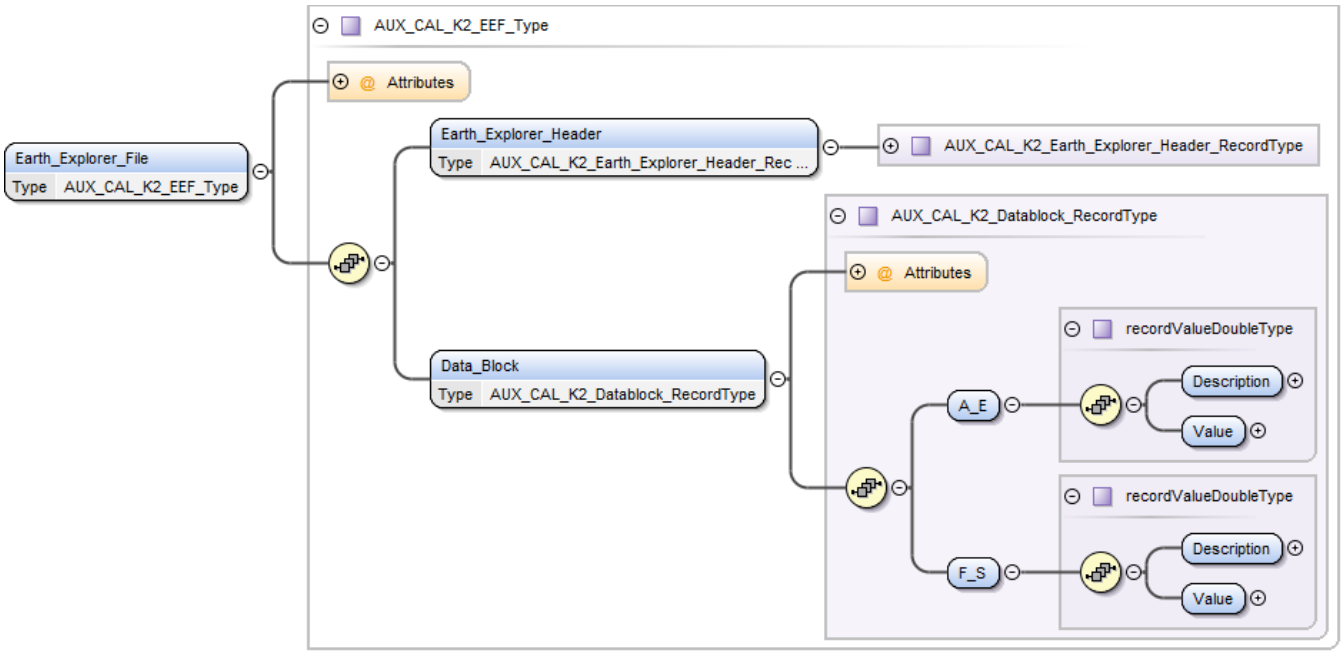

Figure 4: AUX_CAL_K2 EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.1.1.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION This file contains information about the frequency and the amplitude of the applied signal during proof mass shaking, required for K2 Calibration Processor. OBJECTIVE It is used by the PDS to determine quadratic	AUX_CAL_K2_EEF_Type

#	Name/Description	Format
	factors and corrections for axis and accelerometer under calibration. FILE GENERATION FREQUENCY The last available valid file is transferred to the PDS. FILE SCOPE Each file shall be valid as soon as transferred, and until the end of the mission or until a new update is transferred. DATA VOLUME A few kbytes.	

Table 215: Earth_Explorer_File Specification

5.1.1.2. Complex Types

5.1.1.2.1. AUX_CAL_K2_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_CAL_K2_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_CAL_K2_Datablock_RecordType

Table 216: AUX_CAL_K2_EEF_Type Specification

5.1.1.2.2. AUX_CAL_K2_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_CAL_K2_VariableHeaderType

Table 217: AUX_CAL_K2_Earth_Explorer_Header_RecordType Specification

5.1.1.2.3. AUX_CAL_K2_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	AUX_CAL_K2_SPHType

#	Name/Description	Format
		Min Occurs : 0

Table 218: AUX_CAL_K2_VariableHeaderType Specification

5.1.1.2.4. AUX_CAL_K2_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: AUX_CAL_K2	xs:string
2	**Original_Source**	Original_Source_Type_AUX_CAL_K2
3	**Time_Information**	Time_Information_Type_AUX_CAL_K2
4	**AUX_CAL_K2**	AUX_CAL_K2_SpecificType
5	**DSDs**	DSDs_Type_AUX_CAL_K2

Table 219: AUX_CAL_K2_SPHType Specification

5.1.1.2.5. Original_Source_Type_AUX_CAL_K2

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 220: Original_Source_Type_AUX_CAL_K2 Specification

5.1.1.2.6. Time_Information_Type_AUX_CAL_K2

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_Type_AUX_CAL_K2
2	**Abs_Orbit**	Abs_Orbit_Type_AUX_CAL_K2

Table 221: Time_Information_Type_AUX_CAL_K2 Specification

5.1.1.2.7. GPS_Time_Type_AUX_CAL_K2

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 222: GPS_Time_Type_AUX_CAL_K2 Specification

5.1.1.2.8. Abs_Orbit_Type_AUX_CAL_K2

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 223: Abs_Orbit_Type_AUX_CAL_K2 Specification

5.1.1.2.9. DSDs_Type_AUX_CAL_K2

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type_AUX_CAL_K2

Table 224: DSDs_Type_AUX_CAL_K2 Specification

5.1.1.2.10. List_of_DSDs_Type_AUX_CAL_K2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 225: List_of_DSDs_Type_AUX_CAL_K2 Specification

5.1.1.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 226: Data_Set_DescriptorType Specification

5.1.1.2.12. AUX_CAL_K2_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 227: AUX_CAL_K2_SpecificType Specification

5.1.1.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRP_2

Table 228: SST_PRP_2Type Specification

5.1.1.2.14. Original_Source_Type_SST_PRP_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PRP_2

Table 229: Original_Source_Type_SST_PRP_2 Specification

5.1.1.2.15. Format_Type_SST_PRP_2

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 230: Format_Type_SST_PRP_2 Specification

5.1.1.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PKI_2
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_Type_SST_PKI_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PKI_2
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_Type_SST_PKI_2
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 231: SST_PKI_2Type Specification

5.1.1.2.17. Original_Source_Type_SST_PKI_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PKI_2

Table 232: Original_Source_Type_SST_PKI_2 Specification

5.1.1.2.18. Format_Type_SST_PKI_2

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string

#	Name/Description	Format
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 233: Format_Type_SST_PKI_2 Specification

5.1.1.2.19. Time_Information_Type_SST_PKI_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PKI_2

Table 234: Time_Information_Type_SST_PKI_2 Specification

5.1.1.2.20. GPS_Time_Type_SST_PKI_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PKI_2
2	**Stop**	xs:string

Table 235: GPS_Time_Type_SST_PKI_2 Specification

5.1.1.2.21. Start_Type_SST_PKI_2

#	Name/Description	Format
1	**GPS**	GPS_Type_SST_PKI_2
2	**Mod_Jul_Day**	Mod_Jul_Day_Type_SST_PKI_2
3	**Gregorian**	GregorianType

Table 236: Start_Type_SST_PKI_2 Specification

5.1.1.2.22. GPS_Type_SST_PKI_2

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 237: GPS_Type_SST_PKI_2 Specification

5.1.1.2.23. Mod_Jul_Day_Type_SST_PKI_2

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 238: Mod_Jul_Day_Type_SST_PKI_2 Specification

5.1.1.2.24. Epoch_Information_Type_SST_PKI_2

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 239: Epoch_Information_Type_SST_PKI_2 Specification

5.1.1.2.25. List_of_Satellite_Descriptors_Type_SST_PKI_2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Max Occurs : unbounded

Table 240: List_of_Satellite_Descriptors_Type_SST_PKI_2 Specification

5.1.1.2.26. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PCV_2
2	**Var_Cov_Matrix**	Var_Cov_Matri_Type_SST_PCV_2
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_Type_SST_PCV_2
4	**Time_Information**	Time_Information_Type_SST_PCV_2
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 241: SST_PCV_2Type Specification

5.1.1.2.27. Original_Source_Type_SST_PCV_2

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_Type_SST_PCV_2

Table 242: Original_Source_Type_SST_PCV_2 Specification

5.1.1.2.28. Format_Type_SST_PCV_2

#	Name/Description	Format
1	**Name** Format Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 243: Format_Type_SST_PCV_2 Specification

5.1.1.2.29. Var_Cov_Matri_Type_SST_PCV_2

#	Name/Description	Format
1	**File_Name**	xs:string

Table 244: Var_Cov_Matri_Type_SST_PCV_2 Specification

5.1.1.2.30. Corresponding_Kinematic_Orbit_Type_SST_PCV_2

#	Name/Description	Format
1	**File_Name**	xs:string

Table 245: Corresponding_Kinematic_Orbit_Type_SST_PCV_2 Specification

5.1.1.2.31. Time_Information_Type_SST_PCV_2

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_Type_SST_PCV_2
3	**GPS_Time**	GPS_Time_Type_SST_PCV_2

Table 246: Time_Information_Type_SST_PCV_2 Specification

5.1.1.2.32. Time_Step_Size_Type_SST_PCV_2

#	Name/Description	Format
1	Time Step Size Type SST_PCV_2	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 247: Time_Step_Size_Type_SST_PCV_2 Specification

5.1.1.2.33. GPS_Time_Type_SST_PCV_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PCV_2
2	**Stop**	xs:string

Table 248: GPS_Time_Type_SST_PCV_2 Specification

5.1.1.2.34. Start_Type_SST_PCV_2

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 249: Start_Type_SST_PCV_2 Specification

5.1.1.2.35. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRD_2
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_Type_SST_PRD_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PRD_2
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_Type_SST_PRD_2
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 250: SST_PRD_2Type Specification

5.1.1.2.36. Original_Source_Type_SST_PRD_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PRD_2

Table 251: Original_Source_Type_SST_PRD_2 Specification

5.1.1.2.37. Format_Type_SST_PRD_2

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 252: Format_Type_SST_PRD_2 Specification

5.1.1.2.38. Time_Information_Type_SST_PRD_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PRD_2

Table 253: Time_Information_Type_SST_PRD_2 Specification

5.1.1.2.39. GPS_Time_Type_SST_PRD_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PRD_2
2	**Stop**	xs:string

Table 254: GPS_Time_Type_SST_PRD_2 Specification

5.1.1.2.40. Start_Type_SST_PRD_2

#	Name/Description	Format
1	**GPS**	GPS_Type_SST_PRD_2
2	**Mod_Jul_Day**	Mod_Jul_Day_Type_SST_PRD_2
3	**Gregorian**	GregorianType

Table 255: Start_Type_SST_PRD_2 Specification

5.1.1.2.41. GPS_Type_SST_PRD_2

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 256: GPS_Type_SST_PRD_2 Specification

5.1.1.2.42. Mod_Jul_Day_Type_SST_PRD_2

#	Name/Description	Format
1	**Day**	xs:integer

#	Name/Description	Format
2	**Fractional_Day**	xs:decimal

Table 257: Mod_Jul_Day_Type_SST_PRD_2 Specification

5.1.1.2.43. Epoch_Information_Type_SST_PRD_2

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 258: Epoch_Information_Type_SST_PRD_2 Specification

5.1.1.2.44. List_of_Satellite_Descriptors_Type_SST_PRD_2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_Type_SST_PRD_2 Max Occurs : unbounded

Table 259: List_of_Satellite_Descriptors_Type_SST_PRD_2 Specification

5.1.1.2.45. Satellite_Descriptor_Type_SST_PRD_2

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 260: Satellite_Descriptor_Type_SST_PRD_2 Specification

5.1.1.2.46. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRM_2
2	**Transformation**	Transformation_Type_SST_PRM_2
3	**Time_Information**	Time_Information_Type_SST_PRM_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PRM_2
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_Type_SST_PRM_2
7	**Subdaily_Model**	xs:string

Table 261: SST_PRM_2Type Specification

5.1.1.2.47. Original_Source_Type_SST_PRM_2

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_Type_SST_PRM_2

Table 262: Original_Source_Type_SST_PRM_2 Specification

5.1.1.2.48. Format_Type_SST_PRM_2

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 263: Format_Type_SST_PRM_2 Specification

5.1.1.2.49. Transformation_Type_SST_PRM_2

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 264: Transformation_Type_SST_PRM_2 Specification

5.1.1.2.50. Time_Information_Type_SST_PRM_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PRM_2

Table 265: Time_Information_Type_SST_PRM_2 Specification

5.1.1.2.51. GPS_Time_Type_SST_PRM_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PRM_2
2	**Stop**	xs:string

Table 266: GPS_Time_Type_SST_PRM_2 Specification

5.1.1.2.52. Start_Type_SST_PRM_2

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 267: Start_Type_SST_PRM_2 Specification

5.1.1.2.53. Epoch_Information_Type_SST_PRM_2

#	Name/Description	Format
1	**Reference**	xs:string

Table 268: Epoch_Information_Type_SST_PRM_2 Specification

5.1.1.2.54. Nutation_Type_SST_PRM_2

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 269: Nutation_Type_SST_PRM_2 Specification

5.1.1.2.55. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer

#	Name/Description	Format
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 270: GregorianType Specification

5.1.1.2.56. AUX_CAL_K2_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**A_E** Amplitude of the sinusoidal acceleration induced during the proof mass shaking	recordValueDoubleType
2	**F_S** Frequency of the square wave signal	recordValueDoubleType

Table 271: AUX_CAL_K2_Datablock_RecordType Specification

5.1.1.2.57. recordValueDoubleType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	recordValueDoubleType_Type

Table 272: recordValueDoubleType Specification

5.1.1.2.58. recordValueDoubleType_Type

#	Name/Description	Format
1	record Value DoubleType Type	xs:double **Attribute:** Name: "unit" Type: "xs:string" Use : "optional"

Table 273: recordValueDoubleType_Type Specification

5.1.2. AUX_ICM_1b (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_ICM_1b file type in EEF format:

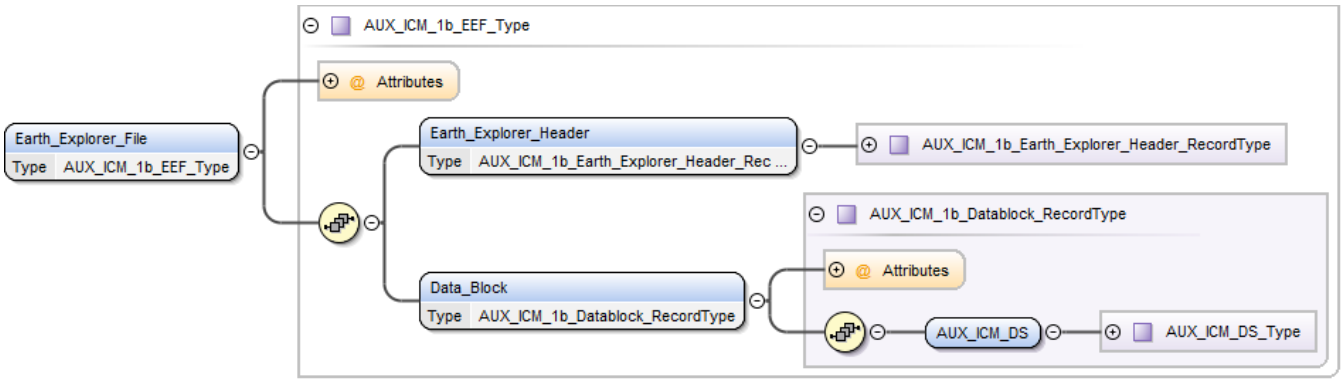

Figure 5: AUX_ICM_1b EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.1.2.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION This file contains the Inverse Calibration Matrix. OBJECTIVE It is used by the PDS to compute the actual common and differential mode accelerations of the proof masses of the accelerometer pairs. FILE GENERATION FREQUENCY The last available valid file is transferred to the PDS. FILE SCOPE Each file shall be valid as soon as transferred, and until the end of the mission or until a new update is transferred. DATA VOLUME A few kbytes.	AUX_ICM_1b_EEF_Type

Table 274: Earth_Explorer_File Specification

5.1.2.2. Complex Types

5.1.2.2.1. AUX_ICM_1b_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_ICM_1b_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_ICM_1b_Datablock_RecordType

Table 275: AUX_ICM_1b_EEF_Type Specification

5.1.2.2.2. AUX_ICM_1b_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_ICM_1b_VariableHeaderType

Table 276: AUX_ICM_1b_Earth_Explorer_Header_RecordType Specification

5.1.2.2.3. AUX_ICM_1b_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	AUX_ICM_1b_SPHType Min Occurs : 0

Table 277: AUX_ICM_1b_VariableHeaderType Specification

5.1.2.2.4. AUX_ICM_1b_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: AUX_ICM_1b EGG_NOM_2 EGG_TRF_2 EGM_GOC_2	xs:string
2	**Original_Source**	Original_Source_AUX_ICM_1b_Type
3	**Time_Information**	Time_Information_AUX_ICM_1b_Type
4	**AUX_ICM_1b**	AUX_ICM_1b_SpecificType
5	**DSDs**	DSDs_AUX_ICM_1b_Type

Table 278: AUX_ICM_1b_SPHType Specification

5.1.2.2.5. Original_Source_AUX_ICM_1b_Type

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 279: Original_Source_AUX_ICM_1b_Type Specification

5.1.2.2.6. Time_Information_AUX_ICM_1b_Type

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_AUX_ICM_1b_Type
2	**Abs_Orbit**	Abs_Orbit_AUX_ICM_1b_Type

Table 280: Time_Information_AUX_ICM_1b_Type Specification

5.1.2.2.7. GPS_Time_AUX_ICM_1b_Type

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 281: GPS_Time_AUX_ICM_1b_Type Specification

5.1.2.2.8. Abs_Orbit_AUX_ICM_1b_Type

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 282: Abs_Orbit_AUX_ICM_1b_Type Specification

5.1.2.2.9. DSDs_AUX_ICM_1b_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_AUX_ICM_1b_Type

Table 283: DSDs_AUX_ICM_1b_Type Specification

5.1.2.2.10. List_of_DSDs_AUX_ICM_1b_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 284: List_of_DSDs_AUX_ICM_1b_Type Specification

5.1.2.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name**	xs:string

#	Name/Description	Format
	Name describing the Data Set	
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 285: Data_Set_DescriptorType Specification

5.1.2.2.12. AUX_ICM_1b_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 286: AUX_ICM_1b_SpecificType Specification

5.1.2.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRP_2_Type

Table 287: SST_PRP_2Type Specification

5.1.2.2.14. Original_Source_SST_PRP_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRP_2_Type

Table 288: Original_Source_SST_PRP_2_Type Specification

5.1.2.2.15. Format_SST_PRP_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 289: Format_SST_PRP_2_Type Specification

5.1.2.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PKI_2_Type

#	Name/Description	Format
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PKI_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PKI_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PKI_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 290: SST_PKI_2Type Specification

5.1.2.2.17. Original_Source_SST_PKI_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PKI_2_Type

Table 291: Original_Source_SST_PKI_2_Type Specification

5.1.2.2.18. Format_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 292: Format_SST_PKI_2_Type Specification

5.1.2.2.19. Time_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PKI_2_Type

Table 293: Time_Information_SST_PKI_2_Type Specification

5.1.2.2.20. GPS_Time_SST_PKI_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PKI_2_Type
2	**Stop**	xs:string

Table 294: GPS_Time_SST_PKI_2_Type Specification

5.1.2.2.21. Start_SST_PKI_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PKI_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PKI_2_Type
3	**Gregorian**	GregorianType

Table 295: Start_SST_PKI_2_Type Specification

5.1.2.2.22. GPS_SST_PKI_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 296: GPS_SST_PKI_2_Type Specification

5.1.2.2.23. Mod_Jul_Day_SST_PKI_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 297: Mod_Jul_Day_SST_PKI_2_Type Specification

5.1.2.2.24. Epoch_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 298: Epoch_Information_SST_PKI_2_Type Specification

5.1.2.2.25. List_of_Satellite_Descriptors_SST_PKI_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PKI_2_Type Max Occurs : unbounded

Table 299: List_of_Satellite_Descriptors_SST_PKI_2_Type Specification

5.1.2.2.26. Satellite_Descriptor_SST_PKI_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 300: Satellite_Descriptor_SST_PKI_2_Type Specification

5.1.2.2.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PCV_2_Type
2	**Var_Cov_Matrix**	Var_Cov_Matrix_SST_PCV_2_Type
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_SST_PC

#	Name/Description	Format
		V_2_Type
4	**Time_Information**	Time_Information_SST_PCV_2_Type
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 301: SST_PCV_2Type Specification

5.1.2.2.28. Original_Source_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PCV_2_Type

Table 302: Original_Source_SST_PCV_2_Type Specification

5.1.2.2.29. Format_SST_PCV_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 303: Format_SST_PCV_2_Type Specification

5.1.2.2.30. Var_Cov_Matrix_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 304: Var_Cov_Matrix_SST_PCV_2_Type Specification

5.1.2.2.31. Corresponding_Kinematic_Orbit_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 305: Corresponding_Kinematic_Orbit_SST_PCV_2_Type Specification

5.1.2.2.32. Time_Information_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_SST_PCV_2_Type
3	**GPS_Time**	GPS_Time_SST_PCV_2_Type

Table 306: Time_Information_SST_PCV_2_Type Specification

5.1.2.2.33. Time_Step_Size_SST_PCV_2_Type

#	Name/Description	Format
1	Time Step Size SST_PCV_2 Type	xs:integer **Attribute:**

#	Name/Description	Format
		Name: "unit" Type: "xs:string" Use : "required"

Table 307: Time_Step_Size_SST_PCV_2_Type Specification

5.1.2.2.34. GPS_Time_SST_PCV_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PCV_2_Type
2	**Stop**	xs:string

Table 308: GPS_Time_SST_PCV_2_Type Specification

5.1.2.2.35. Start_SST_PCV_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 309: Start_SST_PCV_2_Type Specification

5.1.2.2.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRD_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PRD_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRD_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PRD_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 310: SST_PRD_2Type Specification

5.1.2.2.37. Original_Source_SST_PRD_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRD_2_Type

Table 311: Original_Source_SST_PRD_2_Type Specification

5.1.2.2.38. Format_SST_PRD_2_Type

#	Name/Description	Format
1	**Name** Format Name	xs:string

#	Name/Description	Format
	Possible values: SP3c	
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 312: Format_SST_PRD_2_Type Specification

5.1.2.2.39. Time_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRD_2_Type

Table 313: Time_Information_SST_PRD_2_Type Specification

5.1.2.2.40. GPS_Time_SST_PRD_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRD_2_Type
2	**Stop**	xs:string

Table 314: GPS_Time_SST_PRD_2_Type Specification

5.1.2.2.41. Start_SST_PRD_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PRD_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PRD_2_Type
3	**Gregorian**	GregorianType

Table 315: Start_SST_PRD_2_Type Specification

5.1.2.2.42. GPS_SST_PRD_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 316: GPS_SST_PRD_2_Type Specification

5.1.2.2.43. Mod_Jul_Day_SST_PRD_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 317: Mod_Jul_Day_SST_PRD_2_Type Specification

5.1.2.2.44. Epoch_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 318: Epoch_Information_SST_PRD_2_Type Specification

5.1.2.2.45. List_of_Satellite_Descriptors_SST_PRD_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PRD_2_Type Max Occurs : unbounded

Table 319: List_of_Satellite_Descriptors_SST_PRD_2_Type Specification

5.1.2.2.46. Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 320: Satellite_Descriptor_SST_PRD_2_Type Specification

5.1.2.2.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	SST_PRM_2Type_SST_PRM_2_Type
2	**Transformation**	Transformation_SST_PRM_2_Type
3	**Time_Information**	Time_Information_SST_PRM_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRM_2_Type
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_SST_PRM_2_Type
7	**Subdaily_Model**	xs:string

Table 321: SST_PRM_2Type Specification

5.1.2.2.48. SST_PRM_2Type_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PRM_2_Type

Table 322: SST_PRM_2Type_SST_PRM_2_Type Specification

5.1.2.2.49. Format_SST_PRM_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 323: Format_SST_PRM_2_Type Specification

5.1.2.2.50. Transformation_SST_PRM_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 324: Transformation_SST_PRM_2_Type Specification

5.1.2.2.51. Time_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRM_2_Type

Table 325: Time_Information_SST_PRM_2_Type Specification

5.1.2.2.52. GPS_Time_SST_PRM_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRM_2_Type
2	**Stop**	xs:string

Table 326: GPS_Time_SST_PRM_2_Type Specification

5.1.2.2.53. Start_SST_PRM_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 327: Start_SST_PRM_2_Type Specification

5.1.2.2.54. Epoch_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**Reference**	xs:string

Table 328: Epoch_Information_SST_PRM_2_Type Specification

5.1.2.2.55. Nutation_SST_PRM_2_Type

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 329: Nutation_SST_PRM_2_Type Specification

5.1.2.2.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 330: GregorianType Specification

5.1.2.2.57. AUX_ICM_1b_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**AUX_ICM_DS**	AUX_ICM_DS_Type

Table 331: AUX_ICM_1b_Datablock_RecordType Specification

5.1.2.2.58. AUX_ICM_DS_Type

#	Name/Description	Format
1	**AUX_ICM_1i**	AUX_ICM_1i_Type

Table 332: AUX_ICM_DS_Type Specification

5.1.2.2.59. AUX_ICM_1i_Type

#	Name/Description	Format
1	**Start_Icm** Start Time of Calibration in GPS system time Note: The time is represented as follow: 10 digits for seconds, 9 digits for nanoseconds separated by '.'	Start_Icm_Type
2	**Stop_Icm** Stop Time of Calibration in GPS system time Note: The time is represented as follow: 10 digits for seconds, 9 digits fornanoseconds separated by '.'	Stop_Icm_Type
3	**Icm_14**	Icm_14_Type
4	**Icm_25**	Icm_25_Type
5	**Icm_36**	Icm_36_Type

Table 333: AUX_ICM_1i_Type Specification

5.1.2.2.60. Start_Icm_Type

#	Name/Description	Format
1	Start ICM Type	xs:double **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 334: Start_Icm_Type Specification

5.1.2.2.61. Stop_Icm_Type

#	Name/Description	Format
1	Stop ICM Type	xs:double **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 335: Stop_Icm_Type Specification

5.1.2.2.62. Icm_14_Type

Inverse Calibration Matrix for Accelerometer pair 14

#	Name/Description	Format
1	**Row1** Elements of the first row relative to A1,A4 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
2	**Row2** Elements of the second row relative to A1,A4 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
3	**Row3** Elements of the third row relative to A1,A4 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
4	**Row4** Elements of the fourth row relative to A1,A4 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
5	**Row5** Elements of the fifth row relative to A1,A4 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
6	**Row6** Elements of the sixth row relative to A1,A4 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string

Table 336: Icm_14_Type Specification

5.1.2.2.63. Icm_25_Type

Inverse Calibration Matrix for Accelerometer pair 25

#	Name/Description	Format
1	**Row1** Elements of the first row relative to A2,A5 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
2	**Row2**	xs:string

#	Name/Description	Format
	Elements of the second row relative to A2,A5 Array of double value, size=6 (%+15.8e). The values are separated by blank character	
3	**Row3** Elements of the third row relative to A2,A5 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
4	**Row4** Elements of the fourth row relative to A2,A5 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
5	**Row5** Elements of the fifth row relative to A2,A5 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
6	**Row6** Elements of the sixth row relative to A2,A5 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string

Table 337: Icm_25_Type Specification

5.1.2.2.64. Icm_36_Type

Inverse Calibration Matrix for Accelerometer pair 36

#	Name/Description	Format
1	**Row1** Elements of the first row relative to A3,A6 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
2	**Row2** Elements of the first row relative to A3,A6 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
3	**Row3** Elements of the first row relative to A3,A6 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
4	**Row4** Elements of the first row relative to A3,A6 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
5	**Row5** Elements of the first row relative to A3,A6 Array of double value, size=6 (%+15.8e). The values are separated by blank character	xs:string
6	**Row6** Elements of the first row relative to A3,A6 Array of double value, size=6 (%+15.8e). The values are	xs:string

#	Name/Description	Format
	separated by blank character	

Table 338: Icm_36_Type Specification

5.1.3. AUX_EGG_DB (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_EGG_DB file type in EEF format:

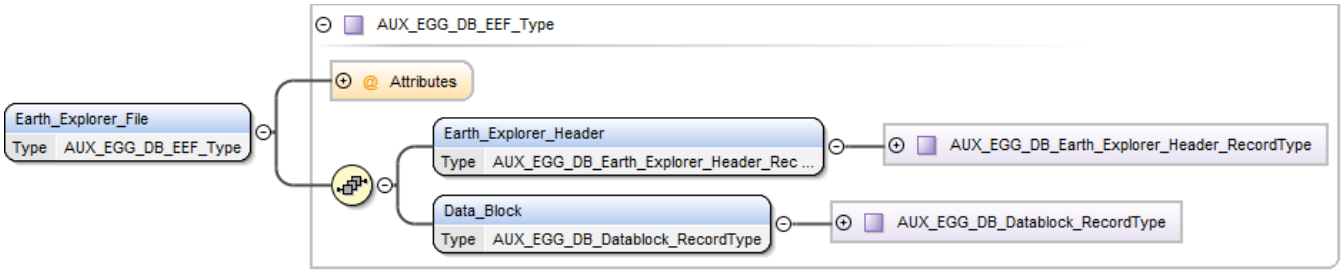

Figure 6: AUX_EGG_DB EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.1.3.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION Auxiliary File containing pre-flight parameters and characterization parameters for EGG OBJECTIVE It contains constants, instrument specific parameters, filter constants, processor flags to support the ground processing software. FILE GENERATION FREQUENCY The last available valid file is transferred to the PDS. FILE SCOPE Each file shall be valid as soon as transferred, and until the end of the mission or until a new update is transferred. DATA VOLUME About 1 MB.	AUX_EGG_DB_EEF_Type

Table 339: Earth_Explorer_File Specification

5.1.3.2. Complex Types

5.1.3.2.1. AUX_EGG_DB_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_EGG_DB_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_EGG_DB_Datablock_RecordType

Table 340: AUX_EGG_DB_EEF_Type Specification

5.1.3.2.2. AUX_EGG_DB_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_EGG_DB_VariableHeaderType

Table 341: AUX_EGG_DB_Earth_Explorer_Header_RecordType Specification

5.1.3.2.3. AUX_EGG_DB_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType
2	**SPH**	AUX_EGG_DB_SPHType

Table 342: AUX_EGG_DB_VariableHeaderType Specification

5.1.3.2.4. AUX_EGG_DB_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: AUX_EGG_DB	xs:string
2	**Original_Source**	Original_Source_AUX_EGG_DB_Type
3	**Time_Information**	Time_Information_AUX_EGG_DB_Type
4	**AUX_EGG_DB**	AUX_EGG_DB_SpecificType
5	**DSDs**	DSDs_AUX_EGG_DB_Type

Table 343: AUX_EGG_DB_SPHType Specification

5.1.3.2.5. Original_Source_AUX_EGG_DB_Type

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 344: Original_Source_AUX_EGG_DB_Type Specification

5.1.3.2.6. Time_Information_AUX_EGG_DB_Type

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_AUX_EGG_DB_Type
2	**Abs_Orbit**	Abs_Orbit_AUX_EGG_DB_Type

Table 345: Time_Information_AUX_EGG_DB_Type Specification

5.1.3.2.7. GPS_Time_AUX_EGG_DB_Type

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 346: GPS_Time_AUX_EGG_DB_Type Specification

5.1.3.2.8. Abs_Orbit_AUX_EGG_DB_Type

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 347: Abs_Orbit_AUX_EGG_DB_Type Specification

5.1.3.2.9. DSDs_AUX_EGG_DB_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_AUX_EGG_DB_Type

Table 348: DSDs_AUX_EGG_DB_Type Specification

5.1.3.2.10. List_of_DSDs_AUX_EGG_DB_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 349: List_of_DSDs_AUX_EGG_DB_Type Specification

5.1.3.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string

#	Name/Description	Format
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 350: Data_Set_DescriptorType Specification

5.1.3.2.12. AUX_EGG_DB_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 351: AUX_EGG_DB_SpecificType Specification

5.1.3.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRP_2_Type

Table 352: SST_PRP_2Type Specification

5.1.3.2.14. Original_Source_SST_PRP_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRP_2_Type

Table 353: Original_Source_SST_PRP_2_Type Specification

5.1.3.2.15. Format_SST_PRP_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 354: Format_SST_PRP_2_Type Specification

5.1.3.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PKI_2_Type
2	**Pos_or_Vel** Position or Velocity	xs:string

#	Name/Description	Format
	Possible values: P V	
3	**Time_Information**	Time_Information_SST_PKI_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PKI_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PKI_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 355: SST_PKI_2Type Specification

5.1.3.2.17. Original_Source_SST_PKI_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PKI_2_Type

Table 356: Original_Source_SST_PKI_2_Type Specification

5.1.3.2.18. Format_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 357: Format_SST_PKI_2_Type Specification

5.1.3.2.19. Time_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PKI_2_Type

Table 358: Time_Information_SST_PKI_2_Type Specification

5.1.3.2.20. GPS_Time_SST_PKI_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PKI_2_Type
2	**Stop**	xs:string

Table 359: GPS_Time_SST_PKI_2_Type Specification

5.1.3.2.21. Start_SST_PKI_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PKI_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PKI_2_Type
3	**Gregorian**	GregorianType

Table 360: Start_SST_PKI_2_Type Specification

5.1.3.2.22. GPS_SST_PKI_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 361: GPS_SST_PKI_2_Type Specification

5.1.3.2.23. Mod_Jul_Day_SST_PKI_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 362: Mod_Jul_Day_SST_PKI_2_Type Specification

5.1.3.2.24. Epoch_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 363: Epoch_Information_SST_PKI_2_Type Specification

5.1.3.2.25. List_of_Satellite_Descriptors_SST_PKI_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PKI_2_Type Max Occurs : unbounded

Table 364: List_of_Satellite_Descriptors_SST_PKI_2_Type Specification

5.1.3.2.26. Satellite_Descriptor_SST_PKI_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 365: Satellite_Descriptor_SST_PKI_2_Type Specification

5.1.3.2.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	_SST_PCV_2_Type
2	**Var_Cov_Matrix**	Var_Cov_Matrix_SST_PCV_2_Type
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_SST_PC

#	Name/Description	Format
		V_2_Type
4	**Time_Information**	Time_Information_SST_PCV_2_Type
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 366: SST_PCV_2Type Specification

5.1.3.2.28. _SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PCV_2_Type

Table 367: _SST_PCV_2_Type Specification

5.1.3.2.29. Format_SST_PCV_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 368: Format_SST_PCV_2_Type Specification

5.1.3.2.30. Var_Cov_Matrix_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 369: Var_Cov_Matrix_SST_PCV_2_Type Specification

5.1.3.2.31. Corresponding_Kinematic_Orbit_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 370: Corresponding_Kinematic_Orbit_SST_PCV_2_Type Specification

5.1.3.2.32. Time_Information_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_SST_PCV_2_Type
3	**GPS_Time**	GPS_Time_SST_PCV_2_Type

Table 371: Time_Information_SST_PCV_2_Type Specification

5.1.3.2.33. Time_Step_Size_SST_PCV_2_Type

#	Name/Description	Format
1	Time Step Size SST_PCV_2_ Type	xs:integer **Attribute:**

#	Name/Description	Format
		Name: "unit" Type: "xs:string" Use : "required"

Table 372: Time_Step_Size_SST_PCV_2_Type Specification

5.1.3.2.34. GPS_Time_SST_PCV_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PCV_2_Type
2	**Stop**	xs:string

Table 373: GPS_Time_SST_PCV_2_Type Specification

5.1.3.2.35. Start_SST_PCV_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 374: Start_SST_PCV_2_Type Specification

5.1.3.2.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRD_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PRD_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRD_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PRD_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 375: SST_PRD_2Type Specification

5.1.3.2.37. Original_Source_SST_PRD_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRD_2_Type

Table 376: Original_Source_SST_PRD_2_Type Specification

5.1.3.2.38. Format_SST_PRD_2_Type

#	Name/Description	Format
1	**Name** Format Name	xs:string

#	Name/Description	Format
	Possible values: SP3c	
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 377: Format_SST_PRD_2_Type Specification

5.1.3.2.39. Time_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRD_2_Type

Table 378: Time_Information_SST_PRD_2_Type Specification

5.1.3.2.40. GPS_Time_SST_PRD_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRD_2_Type
2	**Stop**	xs:string

Table 379: GPS_Time_SST_PRD_2_Type Specification

5.1.3.2.41. Start_SST_PRD_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PRD_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PRD_2_Type
3	**Gregorian**	GregorianType

Table 380: Start_SST_PRD_2_Type Specification

5.1.3.2.42. GPS_SST_PRD_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 381: GPS_SST_PRD_2_Type Specification

5.1.3.2.43. Mod_Jul_Day_SST_PRD_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 382: Mod_Jul_Day_SST_PRD_2_Type Specification

5.1.3.2.44. Epoch_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 383: Epoch_Information_SST_PRD_2_Type Specification

5.1.3.2.45. List_of_Satellite_Descriptors_SST_PRD_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PRD_2_Type Max Occurs : unbounded

Table 384: List_of_Satellite_Descriptors_SST_PRD_2_Type Specification

5.1.3.2.46. Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 385: Satellite_Descriptor_SST_PRD_2_Type Specification

5.1.3.2.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRM_2_Type
2	**Transformation**	Transformation_SST_PRM_2_Type
3	**Time_Information**	Time_Information_SST_PRM_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRM_2_Type
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_SST_PRM_2_Type
7	**Subdaily_Model**	xs:string

Table 386: SST_PRM_2Type Specification

5.1.3.2.48. Original_Source_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PRM_2_Type

Table 387: Original_Source_SST_PRM_2_Type Specification

5.1.3.2.49. Format_SST_PRM_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 388: Format_SST_PRM_2_Type Specification

5.1.3.2.50. Transformation_SST_PRM_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 389: Transformation_SST_PRM_2_Type Specification

5.1.3.2.51. Time_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRM_2_Type

Table 390: Time_Information_SST_PRM_2_Type Specification

5.1.3.2.52. GPS_Time_SST_PRM_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRM_2_Type
2	**Stop**	xs:string

Table 391: GPS_Time_SST_PRM_2_Type Specification

5.1.3.2.53. Start_SST_PRM_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 392: Start_SST_PRM_2_Type Specification

5.1.3.2.54. Epoch_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**Reference**	xs:string

Table 393: Epoch_Information_SST_PRM_2_Type Specification

5.1.3.2.55. Nutation_SST_PRM_2_Type

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 394: Nutation_SST_PRM_2_Type Specification

5.1.3.2.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 395: GregorianType Specification

5.1.3.2.57. AUX_EGG_DB_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**q_ScaleFactor** Scalar value accounting for the conversion of the 32 bit signed integers extracted from the packet to engineering units	simpleValueRecord
2	**STR1_Mult_Cal_Quaternion** Multiplicative quaternion for Star Tracker 1	listOfValuesRecord
3	**STR2_Mult_Cal_Quaternion** Multiplicative quaternion for Star Tracker 2	listOfValuesRecord
4	**STR3_Mult_Cal_Quaternion** Multiplicative quaternion for Star Tracker 3	listOfValuesRecord
5	**STR1_Add_Cal_Quaternion** Additive quaternion for Star Tracker 1	listOfValuesRecord
6	**STR2_Add_Cal_Quaternion** Additive quaternion for Star Tracker 2	listOfValuesRecord
7	**STR3_Add_Cal_Quaternion** Additive quaternion for Star Tracker 3	listOfValuesRecord
8	**Poly_Order_dfac** Polynomial order for DFACS accelerometers	simpleValueRecord
9	**Acc_Coeff_dfac** Coefficient for DFACS polynomial correction	matrix3DValueType_A_XYZ
10	**K2F_DVA** Contribution to the quadratic factor from the DVA measured pre-flight	matrixValueType_A
11	**FLAG_CTR_FAIL** Contingency Flag for Electrodes failure	matrixValueType_A
12	**FLAG_ACC_FAIL** Contingency Flag for Accelerometer failure	listOfValuesRecord
13	**DIFF_GPS_UTC** Offset of UTC derived from AUX_OUTC to GPS system time	simpleValueRecord
14	**LEAP_S_OCCURRENCE_FLAG** Indicates whether a leap second jump occurs within the time validity interval of the AUX_EGG_DB file	simpleValueRecord
15	**UTC_LAST_LEAP_S**	simpleValueUTCRecord

#	Name/Description	Format
	UTC time of the next leap second. It is meaningful only for the AUX_EGG_DB file whose validity interval extends across a leap second event	
16	**N_LEAP_S** Number of leap seconds introduced from 6-Jan-1980	simpleValueRecord
17	**LEAP_SIGN** Sign and value of the leap second	simpleValueRecord
18	**NOM_SR** Nominal Sampling Rate for the EGG Packets	simpleValueRecord
19	**DFC_SR** Auxiliary Sampling Rate for the DFC Packets	simpleValueRecord
20	**MARGIN_SR** Margin for the deviation of the actual sampling rate from the nominal sampling rate	simpleValueRecord
21	**OFFSET_STR** Offset in time between EGG packets and STR packets	simpleValueRecord
22	**THRES_STR** Threshold for the difference between the time stamp of a Star Tracker Packet and an EGG Packet	simpleValueRecord
23	**NUM_PV** Numerator for the calibration factor for polarization voltages	simpleValueRecord
24	**ENUM_PV** Enumerator for the calibration factor for polarization voltages	simpleValueRecord
25	**OFFSET_PV** Offset for the calibration factor for polarization voltages	simpleValueRecord
26	**NUM_DV** Numerator for calibration factor for detection voltages	simpleValueRecord
27	**ENUM_DV** Enumerator for calibration factor for detection voltages	simpleValueRecord
28	**OFFSET_DV**	simpleValueRecord

#	Name/Description	Format
	Offset for the calibration of the detection voltages	
29	**PC_CTR** Polynomial coefficients for the calibration of the control voltages	listOfValuesRecord
30	**N_d_SC** Filter parameter for Science Filter correction. There are 2N_d_SC+1 values to be used to derive one filtered value	simpleValueRecord
31	**FILT_SC** Filter coefficients for the correction of the science filter	listOfValuesRecord
32	**N_d_LO** Filter parameter for Loop correction. There are 2N_d_LO+1 values to be used to derive one filtered value	simpleValueRecord
33	**FILT_LO** Filter coefficients for the correction of the loop	matrix3DValueType_A_XXXXYYZZ
34	**PC_NL_X** Polynomial coefficients for the correction of the ADC non-linearities. to be applied only to measurements from the X-electrodes	matrix3DValueType_A_XXXXYYZZ
35	**PC_NL_YZ** Polynomial coefficients for the correction of the ADC non-linearities. to be applied only to measurements from the Y- and Z-electrodes	matrix3DValueType_A_XXXXYYZZ
36	**ES_GAIN** Electrostatic gain. Transforms voltages to accelerations. The row correspond to the accelerometer. The columns to X1. X2. X3. X4. Y1. Y2. Z1. Z2 for the linear and FiZ1. FiZ2. FiY1. FiY2. ThetaX1. ThetaX2. ThetaX3. ThetaX4. PsiX1. PsiX2. PsiX3. PsiX4 for the angular	matrixValueType_A
37	**G_READ_X** Read out gain for x axis in AESRF	simpleValueRecord
38	**G_READ_YZ** Read out gain for y and z axis in AESRF	simpleValueRecord
39	**L_X** Baseline of OAG1	simpleValueRecord

#	Name/Description	Format
40	**L_Y** Baseline of OAG2	simpleValueRecord
41	**L_Z** Baseline of OAG3	simpleValueRecord
42	**R_AESRF_ARF** Rotation matrix that transforms the linear and angular accelerations from the AESRF to the ARF. one for each accelerometer	matrix3DValueType_A_XYZ
43	**IAR_EST_INI** Initial value for the estimate angular rate	listOfValuesRecord
44	**IAA_ERR_INI** Initial value for the estimate angular acceleration error	listOfValuesRecord
45	**IAA_DRF_INI** Initial value for the estimated angular acceleration drift error	listOfValuesRecord
46	**DRF_DRF_INI** Initial value of the estimated angular acceleration drift drift error	listOfValuesRecord
47	**ATT_ERR_INI** Initial value for the estimated attitude error	listOfValuesRecord
48	**CP_X_INIT** Initial state vector used for the derivation of the Kalman gain at current epoch. X-Component	listOfValuesRecord
49	**CP_Y_INIT** Initial state vector used for the derivation of the Kalman gain at current epoch. Y-Component	listOfValuesRecord
50	**CP_Z_INIT** Initial state vector used for the derivation of the Kalman gain at current epoch. Z-Component	listOfValuesRecord
51	**N_AR** Half the number of samples to be used for the integration of the gradiometer angular acceleration	simpleValueRecord
52	**C_K** Coefficient for the convolution used to derive the	listOfValuesRecord

#	Name/Description	Format
	AR_VAR_X. Y and Z	
53	**d_T_ST** Sample interval star tracker measurements	simpleValueRecord
54	**d_T_GRAD** Sample interval for derivation of d_PHI_GRAD	simpleValueRecord
55	**CP_X_SS** Steady state value of CP_X	listOfValuesRecord
56	**CP_Y_SS** Steady state value of CP_Y	listOfValuesRecord
57	**CP_Z_SS** Steady state value of CP_Z	listOfValuesRecord
58	**a_x** Coefficient used for the update of the estimator gain	simpleValueRecord
59	**a_y** Coefficient used for the update of the estimator gain	simpleValueRecord
60	**a_z** Coefficient used for the update of the estimator gain	simpleValueRecord
61	**b_x** Coefficient used for the update of the estimator gain	simpleValueRecord
62	**b_y** Coefficient used for the update of the estimator gain	simpleValueRecord
63	**b_z**	simpleValueRecord

#	Name/Description	Format
	Coefficient used for the update of the estimator gain	
64	**PERIOD_TRACE** Time span over which the Trace of the GGT is computed	simpleValueRecord
65	**S_RATE** Sampling Rate at which the GGT is provided (nom 1Hz)	simpleValueRecord
66	**MIN_MBW** Minimum frequency of the MBW	simpleValueRecord
67	**MAX_MBW** Maximum frequency of the MBW	simpleValueRecord
68	**N_Tr_SEP** Number of Segments Tr-FILT is separated	simpleValueRecord
69	**N_EL_Tr_SEP** Number contained in each segments of Tr-FILT	simpleValueRecord
70	**G_DPOS** Geometric gain and gain of detector for the two electrode pairs of the Y and Z electrodes (AESRF) First components G_DPOS Ai, i=1,2,3,4,5,6	matrixValueType_A
71	**GAP_E** Gap between proof mass and elecrodes. one for each electrode pair and accelerometer. The sequence is X1. X2. X3. X4. Y1. Y2. Z1. Z2 Ai, i=1,2,3,4,5,6	matrixValueType_A
72	**V_P** Polarization Voltages	listOfValuesRecord

#	Name/Description	Format
73	**Corr_Factor** Correction factor depending on the output channel the measurement is taken (DFACS or Science)	simpleValueRecord
74	**R_GRF_SSRF** Rotation matrix from star gradiometer reference frame to star sensor reference frame First components R_GRF_SSRF: SSi, i=1,2,3 Second components R_GRF_SSRF: X,Y,Z	matrix3DValueType_SS
75	**CUT_FREQ_X** Cut-off frequency for merging of the star tracker and gradiometer data. X component	simpleValueRecord
76	**CUT_FREQ_Y** Cut-off frequency for merging of the star tracker and gradiometer data. Y component	simpleValueRecord
77	**CUT_FREQ_Z** Cut-off frequency for merging of the star tracker and gradiometer data. Z component	simpleValueRecord
78	**CS** Matrices with Convergence factors of ICM solution First components CS: CS_i, i=1,2,3,4,5,6,7,8,9 Second components CS: Ai, i=1,2,3,4,5,6	matrix3DValueType_CS
79	**MAX_NUM_ITER_ICM** Maximum number of iteration for the ICM least square solution	simpleValueRecord
80	**SKIP_NP** Number of data points to be dropped at the start and at the end of the time series to be processed during the calibration	simpleValueRecord
81	**LOWER_LIMIT_FILT_OMEGA**	simpleValueRecord

#	Name/Description	Format
	Lower limit for low pass filter for angular rates from star tracker	
82	**UPPER_LIMIT_FILT_OMEGA** Upper limit for low pass filter for angular rates from star tracker	simpleValueRecord
83	**UPPER_LIMIT_OMEGA_DOT** Frequency from where on the Fourier transform of the angular accelerations is set to zero	simpleValueRecord
84	**N_BP** 2*N_BP+1 is the number of elements used for the Band-Pass Filter that is applied to the nominal common and differential mode accelerations	simpleValueRecord
85	**FILT_BP** Filter coefficients for the Band Pass Filter that is applied to the nominal common and differential mode accelerations	listOfValuesRecord
86	**N_LP** 2*N_LP+1 is the number of the elements used for the Low-Pass Filter that is applied to the nominal common and differential mode accelerations	simpleValueRecord
87	**FILT_LP** Filter coefficients for the Low Pass Filter that is applied to the nominal common and differential mode accelerations	listOfValuesRecord
88	**N_BP_OD** 2*N_BP_OD+1 is the number of elements used for the band pass filter that is applied to the star tracker derived angular accelerations First component N_BP_OD: Hx, Hy, Hz	simpleValueHxRecord
89	**FILT_BP_OD**	matrixValueType_H

#	Name/Description	Format
	Filter coefficients for the Band Pass Filter that is applied to the star tracker derived angular accelerations First components FILT_BP_OD: Hx, Hy, Hz	
90	**TrendLength** Number of points for the Linear regression to derive Offset and Slope ant the end and at the beginning of the time series	simpleValueRecord
91	**ICM_INI_14** Initial values for ICMs 14 in calibration step 1 of ICM processor First components ICM_INI_14: X, Y, Z	matrixValueType_Coord
92	**ICM_INI_25** Initial values for ICMs 25 in calibration step 1 of ICM processor First components ICM_INI_25: X, Y, Z	matrixValueType_Coord
93	**ICM_INI_36** Initial values for ICMs 36 in calibration step 1 of ICM processor First components ICM_INI_36: X, Y, Z	matrixValueType_Coord
94	**ICM_CONV_CRIT_14** Matrix that contains the thresholds for the convergence of the ICM element change from iteration to iteration for accelerometer pair 14 First components ICM_CONV_CRIT_14: X, Y, Z	matrixValueType_Coord
95	**ICM_CONV_CRIT_25** Matrix that contains the thresholds for the convergence of the ICM element change from iteration to iteration for accelerometer pair 25 First components ICM_CONV_CRIT_25: X, Y, Z	matrixValueType_Coord

#	Name/Description	Format
96	**ICM_CONV_CRIT_36** Matrix that contains the thresholds for the convergence of the ICM element change from iteration to iteration for accelerometer pair 36 First components ICM_CONV_CRIT_36: X, Y, Z	matrixValueType_Coord
97	**GAP_THRES** Threshold for the length of a gap to be tolerated for the restore parameters mode. If the gap is longer than the threshold, the KALMAN filter has to e reinitialized	simpleValueRecord
98	**GAP_THRES_STR_INT** Threshold for the length of a gap to be tolerated for STR data gaps	simpleValueRecord
99	**N_ORB** Number of Orbits to be processed in the angulat rate recontruction	simpleValueRecord
100	**p** Number of points to perform the linear regressions	simpleValueRecord
101	**THRES_1** Threshold #1 for loop step 10	simpleValueRecord
102	**THRES_2** Threshold #2 for loop step 10	simpleValueRecord
103	**THRES_CTR** Threshold for control voltages	simpleValueRecord
104	**THRES_ACC_DFACS** Threshold for accelerations for DFACS	simpleValueRecord
105	**THRES_PV** Threshold for Polarization Voltage	simpleValueRecord

#	Name/Description	Format
106	**THRES_DV** Threshold for Detection Voltage	simpleValueRecord
107	**THRES_ACC_NGA** Threshold for Nominal angular accelerations	simpleValueRecord
108	**THRES_ACC_NA** Threshold for Nominal angular accelerations	simpleValueRecord
109	**THRES_ACC_NCM** Threshold for difference between common mode accelerations	simpleValueRecord
110	**THRES_ACC_DFAC_NCM** Threshold for the difference between DFACS accelerations and nominal common mode accelerations	simpleValueRecord
111	**THRES_TRACE_GGT** Threshold for the trace of the GGT in the GRF	listOfValuesRecord
112	**LIM_ICM** Correction performed on the ICM elements at the end of loop	simpleValueRecord
113	**Tr_SubBands** Number of SubBands used to compute the final Trace	simpleValueRecord
114	**Tr_SubBandsLowLimit** List of Lower Limit of each one out of the Tr_SubBands	listOfValuesRecord
115	**Tr_SubBandsCentre** List of the central frequency of each one out of the Tr_SubBands	listOfValuesRecord
116	**Tr_SubBandsHighLimit**	listOfValuesRecord

#	Name/Description	Format
	List of Upper Limit of each one out of the Tr_SubBands	
117	**FILT_AA_GR** Filter coefficients for the Band Pass Filter that is applied to the star tracker derived angular accelerations	matrixValueType_Coord
118	**FILT_AR_GR** Filter for filer for gradiometer derived angular rates in AR	matrixValueType_Coord
119	**FILT_AR_SS** Filter for filer for star sensor derived angular rates in AR	matrixValueType_Coord
120	**FILT_Q_FU** Filter for filer for star sensor derived angular rates in AR	matrixValueType_Q
121	**FILT_Q_PR** Filter for filer for star sensor derived angular rates in AR	matrixValueType_Q
122	**H_12** Weighting matrix for quaternion combination H_12	matrixValueType_Coord
123	**H_13** Weighting matrix for quaternion combination H_13	matrixValueType_Coord
124	**H_23** Weighting matrix for quaternion combination H_23	matrixValueType_Coord
125	**H_a** Weighting matrix for quaternion combination H_23	matrixValueType_Coord

#	Name/Description	Format
126	**H_b** Weighting matrix for quaternion combination H_23	matrixValueType_Coord
127	**N_AA_GR** Filter length parameter for FILT_AA_GR	simpleValueRecord
128	**N_AR_SS** Filter length parameter for FILT_AR_SS	simpleValueRecord
129	**N_AR_GR** Filter length parameter for FILT_AR_GR	simpleValueRecord
130	**N_Q_FU** Filter length parameter for FILT_Q_FU	simpleValueRecord
131	**N_Q_PR** Filter length parameter for FILT_Q_PR	simpleValueRecord

Table 396: AUX_EGG_DB_Datablock_RecordType Specification

5.1.3.2.58. valueDoubleType

#	Name/Description	Format
1	value Double Type	xs:double **Attribute:** Name: "unit" Type: "xs:string" Use : "optional"

Table 397: valueDoubleType Specification

5.1.3.2.59. valueUTCType

#	Name/Description	Format
1	value UTC Type	xs:dateTime **Attribute:** Name: "unit" Type: "xs:string" Use : "optional"

Table 398: valueUTCType Specification

5.1.3.2.60. listOfValuesType

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Value**	valueDoubleType Max Occurs : unbounded

Table 399: listOfValuesType Specification

5.1.3.2.61. listArrayOfValuesType

#	Name/Description	Format
1	**List_of_Values**	listOfValuesType

Table 400: listArrayOfValuesType Specification

5.1.3.2.62. simpleValueRecord

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0
3	**Value**	valueDoubleType

Table 401: simpleValueRecord Specification

5.1.3.2.63. simpleValueUTCRecord

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0
3	**Value**	valueUTCType

Table 402: simpleValueUTCRecord Specification

5.1.3.2.64. simpleValueHxRecord

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0
3	**Hx**	Hx_Type
4	**Hy**	Hy_Type
5	**Hz**	Hz_Type

Table 403: simpleValueHxRecord Specification

5.1.3.2.65. Hx_Type

#	Name/Description	Format
1	**Value**	valueDoubleType

Table 404: Hx_Type Specification

5.1.3.2.66. Hy_Type

#	Name/Description	Format
1	**Value**	valueDoubleType

Table 405: Hy_Type Specification

5.1.3.2.67. Hz_Type

#	Name/Description	Format
1	**Value**	valueDoubleType

Table 406: Hz_Type Specification

5.1.3.2.68. listOfValuesRecord

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0
3	**List_of_Values**	listOfValuesType

Table 407: listOfValuesRecord Specification

5.1.3.2.69. matrixValueType_A

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 408: matrixValueType_A Specification

5.1.3.2.70. matrixValueType_Q

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 409: matrixValueType_Q Specification

5.1.3.2.71. matrixValueType_H

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 410: matrixValueType_H Specification

5.1.3.2.72. matrixValueType_Coord

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 411: matrixValueType_Coord Specification

5.1.3.2.73. matrix3DValueType_A_XXXXYYZZ

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 412: matrix3DValueType_A_XXXXYYZZ Specification

5.1.3.2.74. matrix3DValueType_A_XYZ

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 413: matrix3DValueType_A_XYZ Specification

5.1.3.2.75. matrix3DValueType_SS

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 414: matrix3DValueType_SS Specification

5.1.3.2.76. matrix3DValueType_CS

#	Name/Description	Format
1	**Description**	xs:string
2	**Note**	xs:string Min Occurs : 0

Table 415: matrix3DValueType_CS Specification

5.1.3.2.77. matrix3DValueAxesType_XXYYZZ

#	Name/Description	Format
1	**X1**	listArrayOfValuesType Min Occurs : 0
2	**X2**	listArrayOfValuesType Min Occurs : 0
3	**X3**	listArrayOfValuesType Min Occurs : 0
4	**X4**	listArrayOfValuesType Min Occurs : 0
5	**Y1**	listArrayOfValuesType Min Occurs : 0
6	**Y2**	listArrayOfValuesType Min Occurs : 0
7	**Z1**	listArrayOfValuesType Min Occurs : 0
8	**Z2**	listArrayOfValuesType Min Occurs : 0

Table 416: matrix3DValueAxesType_XXYYZZ Specification

5.1.3.2.78. matrix3DValueAxesType_XYZ

#	Name/Description	Format
1	**X**	listArrayOfValuesType
2	**Y**	listArrayOfValuesType
3	**Z**	listArrayOfValuesType

Table 417: matrix3DValueAxesType_XYZ Specification

5.1.3.2.79. matrix3DValueAxesType_A

#	Name/Description	Format
1	**A1**	listArrayOfValuesType
2	**A2**	listArrayOfValuesType
3	**A3**	listArrayOfValuesType
4	**A4**	listArrayOfValuesType
5	**A5**	listArrayOfValuesType
6	**A6**	listArrayOfValuesType

Table 418: matrix3DValueAxesType_A Specification

5.1.4. AUX_VC3_TM (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_VC3_TM file type in EEF format:

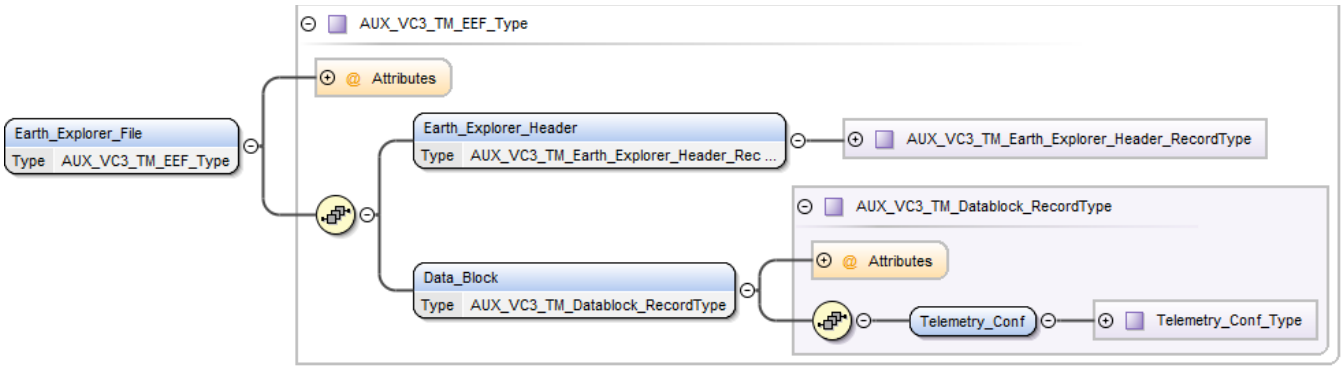

Figure 7: AUX_VC3_TM EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.1.4.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION This product contains the parameters to be extracted for the AUX_MON processor. OBJECTIVE It is used by the PDS to identify the parameters which will form the AUX_NOM_1b product.	AUX_VC3_TM_EEF_Type

#	Name/Description	Format
	FILE GENERATION FREQUENCY The file is generated to carry out the monitoring functions of the CMF. Therefore, updates will be done, if new monitoring functions are added to the CMF. FILE SCOPE Each file shall be valid as soon as transferred, and until the end of the mission or until a new update is transferred. DATA VOLUME Few KB.	

Table 419: Earth_Explorer_File Specification

5.1.4.2. Complex Types

5.1.4.2.1. AUX_VC3_TM_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_VC3_TM_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_VC3_TM_Datablock_RecordType

Table 420: AUX_VC3_TM_EEF_Type Specification

5.1.4.2.2. AUX_VC3_TM_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_VC3_TM_VariableHeaderType

Table 421: AUX_VC3_TM_Earth_Explorer_Header_RecordType Specification

5.1.4.2.3. AUX_VC3_TM_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	AUX_VC3_TM_SPHType Min Occurs : 0

Table 422: AUX_VC3_TM_VariableHeaderType Specification

5.1.4.2.4. AUX_VC3_TM_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: AUX_VC3_TM EGG_NOM_2 EGG_TRF_2 EGM_GOC_2	xs:string
2	**Original_Source**	Original_Source_Type_AUX_VC3_TM
3	**Time_Information**	Time_Information_Type_AUX_VC3_TM
4	**AUX_VC3_TM**	AUX_VC3_TM_SpecificType
5	**DSDs**	DSDs_Type_AUX_VC3_TM

Table 423: AUX_VC3_TM_SPHType Specification

5.1.4.2.5. Original_Source_Type_AUX_VC3_TM

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 424: Original_Source_Type_AUX_VC3_TM Specification

5.1.4.2.6. Time_Information_Type_AUX_VC3_TM

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_Type_AUX_VC3_TM
2	**Abs_Orbit**	Abs_Orbit_Type_AUX_VC3_TM

Table 425: Time_Information_Type_AUX_VC3_TM Specification

5.1.4.2.7. GPS_Time_Type_AUX_VC3_TM

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 426: GPS_Time_Type_AUX_VC3_TM Specification

5.1.4.2.8. Abs_Orbit_Type_AUX_VC3_TM

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 427: Abs_Orbit_Type_AUX_VC3_TM Specification

5.1.4.2.9. DSDs_Type_AUX_VC3_TM

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type_AUX_VC3_TM

Table 428: DSDs_Type_AUX_VC3_TM Specification

5.1.4.2.10. List_of_DSDs_Type_AUX_VC3_TM

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 429: List_of_DSDs_Type_AUX_VC3_TM Specification

5.1.4.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 430: Data_Set_DescriptorType Specification

5.1.4.2.12. AUX_VC3_TM_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 431: AUX_VC3_TM_SpecificType Specification

5.1.4.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRP_2

Table 432: SST_PRP_2Type Specification

5.1.4.2.14. Original_Source_Type_SST_PRP_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PRP_2

Table 433: Original_Source_Type_SST_PRP_2 Specification

5.1.4.2.15. Format_Type_SST_PRP_2

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 434: Format_Type_SST_PRP_2 Specification

5.1.4.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PKI_2
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_Type_SST_PKI_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PKI_2
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_Type_SST_PKI_2
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 435: SST_PKI_2Type Specification

5.1.4.2.17. Original_Source_Type_SST_PKI_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PKI_2

Table 436: Original_Source_Type_SST_PKI_2 Specification

5.1.4.2.18. Format_Type_SST_PKI_2

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string

#	Name/Description	Format
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 437: Format_Type_SST_PKI_2 Specification

5.1.4.2.19. Time_Information_Type_SST_PKI_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PKI_2

Table 438: Time_Information_Type_SST_PKI_2 Specification

5.1.4.2.20. GPS_Time_Type_SST_PKI_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PKI_2
2	**Stop**	xs:string

Table 439: GPS_Time_Type_SST_PKI_2 Specification

5.1.4.2.21. Start_Type_SST_PKI_2

#	Name/Description	Format
1	**GPS**	GPS_Type_SST_PKI_2
2	**Mod_Jul_Day**	Mod_Jul_Day_Type_SST_PKI_2
3	**Gregorian**	GregorianType

Table 440: Start_Type_SST_PKI_2 Specification

5.1.4.2.22. GPS_Type_SST_PKI_2

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 441: GPS_Type_SST_PKI_2 Specification

5.1.4.2.23. Mod_Jul_Day_Type_SST_PKI_2

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 442: Mod_Jul_Day_Type_SST_PKI_2 Specification

5.1.4.2.24. Epoch_Information_Type_SST_PKI_2

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 443: Epoch_Information_Type_SST_PKI_2 Specification

5.1.4.2.25. List_of_Satellite_Descriptors_Type_SST_PKI_2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_Type_SST_PKI_2 Max Occurs : unbounded

Table 444: List_of_Satellite_Descriptors_Type_SST_PKI_2 Specification

5.1.4.2.26. Satellite_Descriptor_Type_SST_PKI_2

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 445: Satellite_Descriptor_Type_SST_PKI_2 Specification

5.1.4.2.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PCV_2
2	**Var_Cov_Matrix**	Var_Cov_Matrix_Type_SST_PCV_2
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_Type_SST_PCV_2
4	**Time_Information**	Time_Information_Type_SST_PCV_2
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 446: SST_PCV_2Type Specification

5.1.4.2.28. Original_Source_Type_SST_PCV_2

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_Type_SST_PCV_2

Table 447: Original_Source_Type_SST_PCV_2 Specification

5.1.4.2.29. Format_Type_SST_PCV_2

#	Name/Description	Format
1	**Name** Format Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 448: Format_Type_SST_PCV_2 Specification

5.1.4.2.30. Var_Cov_Matrix_Type_SST_PCV_2

#	Name/Description	Format
1	**File_Name**	xs:string

Table 449: Var_Cov_Matrix_Type_SST_PCV_2 Specification

5.1.4.2.31. Corresponding_Kinematic_Orbit_Type_SST_PCV_2

#	Name/Description	Format
1	**File_Name**	xs:string

Table 450: Corresponding_Kinematic_Orbit_Type_SST_PCV_2 Specification

5.1.4.2.32. Time_Information_Type_SST_PCV_2

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_Type_SST_PCV_2
3	**GPS_Time**	GPS_Time_Type_SST_PCV_2

Table 451: Time_Information_Type_SST_PCV_2 Specification

5.1.4.2.33. Time_Step_Size_Type_SST_PCV_2

#	Name/Description	Format
1	Time Step Size Type SST_PCV_2	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 452: Time_Step_Size_Type_SST_PCV_2 Specification

5.1.4.2.34. GPS_Time_Type_SST_PCV_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PCV_2
2	**Stop**	xs:string

Table 453: GPS_Time_Type_SST_PCV_2 Specification

5.1.4.2.35. Start_Type_SST_PCV_2

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 454: Start_Type_SST_PCV_2 Specification

5.1.4.2.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRD_2
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_Type_SST_PRD_2

#	Name/Description	Format
4	**Epoch_Information**	Epoch_Information_Type_SST_PRD_2
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_Type_SST_PRD_2
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 455: SST_PRD_2Type Specification

5.1.4.2.37. Original_Source_Type_SST_PRD_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PRD_2

Table 456: Original_Source_Type_SST_PRD_2 Specification

5.1.4.2.38. Format_Type_SST_PRD_2

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 457: Format_Type_SST_PRD_2 Specification

5.1.4.2.39. Time_Information_Type_SST_PRD_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PRD_2

Table 458: Time_Information_Type_SST_PRD_2 Specification

5.1.4.2.40. GPS_Time_Type_SST_PRD_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PRD_2
2	**Stop**	xs:string

Table 459: GPS_Time_Type_SST_PRD_2 Specification

5.1.4.2.41. Start_Type_SST_PRD_2

#	Name/Description	Format
1	**GPS**	GPS_Type_SST_PRD_2
2	**Mod_Jul_Day**	Mod_Jul_Day_Type_SST_PRD_2
3	**Gregorian**	GregorianType

Table 460: Start_Type_SST_PRD_2 Specification

5.1.4.2.42. GPS_Type_SST_PRD_2

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 461: GPS_Type_SST_PRD_2 Specification

5.1.4.2.43. Mod_Jul_Day_Type_SST_PRD_2

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 462: Mod_Jul_Day_Type_SST_PRD_2 Specification

5.1.4.2.44. Epoch_Information_Type_SST_PRD_2

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 463: Epoch_Information_Type_SST_PRD_2 Specification

5.1.4.2.45. List_of_Satellite_Descriptors_Type_SST_PRD_2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_Type_SST_PRD_2 Max Occurs : unbounded

Table 464: List_of_Satellite_Descriptors_Type_SST_PRD_2 Specification

5.1.4.2.46. Satellite_Descriptor_Type_SST_PRD_2

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 465: Satellite_Descriptor_Type_SST_PRD_2 Specification

5.1.4.2.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRM_2
2	**Transformation**	Transformation_Type_SST_PRM_2
3	**Time_Information**	Time_Information_Type_SST_PRM_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PRM_2
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_Type_SST_PRM_2
7	**Subdaily_Model**	xs:string

Table 466: SST_PRM_2Type Specification

5.1.4.2.48. Original_Source_Type_SST_PRM_2

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_Type_SST_PRM_2

Table 467: Original_Source_Type_SST_PRM_2 Specification

5.1.4.2.49. Format_Type_SST_PRM_2

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 468: Format_Type_SST_PRM_2 Specification

5.1.4.2.50. Transformation_Type_SST_PRM_2

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 469: Transformation_Type_SST_PRM_2 Specification

5.1.4.2.51. Time_Information_Type_SST_PRM_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PRM_2

Table 470: Time_Information_Type_SST_PRM_2 Specification

5.1.4.2.52. Start_Type_SST_PRM_2

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 471: Start_Type_SST_PRM_2 Specification

5.1.4.2.53. GPS_Time_Type_SST_PRM_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PRM_2
2	**Stop**	xs:string

Table 472: GPS_Time_Type_SST_PRM_2 Specification

5.1.4.2.54. Epoch_Information_Type_SST_PRM_2

#	Name/Description	Format
1	**Reference**	xs:string

Table 473: Epoch_Information_Type_SST_PRM_2 Specification

5.1.4.2.55. Nutation_Type_SST_PRM_2

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 474: Nutation_Type_SST_PRM_2 Specification

5.1.4.2.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 475: GregorianType Specification

5.1.4.2.57. AUX_VC3_TM_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**Telemetry_Conf**	Telemetry_Conf_Type

Table 476: AUX_VC3_TM_Datablock_RecordType Specification

5.1.4.2.58. Telemetry_Conf_Type

#	Name/Description	Format
1	**List_of_ISPInfos**	ISPInfosType
2	**ParametersInfo**	listOfISPsType

Table 477: Telemetry_Conf_Type Specification

5.1.4.2.59. ISPInfosType

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**ISPInfo**	ISPInfo_Type Max Occurs : unbounded

Table 478: ISPInfosType Specification

5.1.4.2.60. ISPInfo_Type

#	Name/Description	Format
1	**APID**	APID_Type
2	**TelemetryType**	xs:integer
3	**TelemetrySubType**	xs:integer
4	**SID**	xs:integer

Table 479: ISPInfo_Type Specification

5.1.4.2.61. APID_Type

#	Name/Description	Format
1	APID Type	xs:double **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 480: APID_Type Specification

5.1.4.2.62. listOfISPsType

#	Name/Description	Format
1	**List_of_ISPs**	List_of_ISPs_Type

Table 481: listOfISPsType Specification

5.1.4.2.63. List_of_ISPs_Type

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**ISP**	ISPType Max Occurs : unbounded

Table 482: List_of_ISPs_Type Specification

5.1.4.2.64. ISPType

#	Name/Description	Format
1	**SID**	xs:integer
2	**APID**	xs:integer
3	**List_of_Params**	List_of_Params_Type

Table 483: ISPType Specification

5.1.4.2.65. List_of_Params_Type

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**Param**	paramType Max Occurs : unbounded

Table 484: List_of_Params_Type Specification

5.1.4.2.66. paramType

#	Name/Description	Format
1	**Name**	xs:string
2	**Size**	xs:integer
3	**Offset_Bytes**	xs:integer
4	**Offset_Bits**	xs:integer
5	**Description**	xs:string
6	**PTC**	xs:integer
7	**PFC**	xs:integer
8	**Calibration_Type** The allowed values are: Enumerated parameters (E) Curve based calibration (C) Polynomial calibration (P)	
9	**List_of_POLs**	List_of_POLs_Type
10	**List_of_Texts**	List_of_Texts_Type
11	**Curve**	Curve_Type

Table 485: paramType Specification

5.1.4.2.67. Curve_Type

#	Name/Description	Format
1	**Unit**	xs:string
2	**List_of_X_Vals**	List_of_X_Vals_Type
3	**List_of_Y_Vals**	List_of_Y_Vals_Type

Table 486: Curve_Type Specification

5.1.4.2.68. List_of_Y_Vals_Type

Section filled only in the case in which the Calibration_Type is set to C

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**Y_Val**	xs:float Min Occurs : 0 Max Occurs : unbounded

Table 487: List_of_Y_Vals_Type Specification

5.1.4.2.69. List_of_X_Vals_Type

Section filled only in the case in which the Calibration_Type is set to C

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**X_Val**	xs:integer Min Occurs : 0 Max Occurs : unbounded

Table 488: List_of_X_Vals_Type Specification

5.1.4.2.70. List_of_Texts_Type

Section filled only in the case in which the Calibration_Type is set to E

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**Text**	Text_Type Min Occurs : 0 Max Occurs : unbounded

Table 489: List_of_Texts_Type Specification

5.1.4.2.71. Text_Type

#	Name/Description	Format
1	**From**	xs:integer
2	**To**	xs:integer
3	**Val**	xs:string

Table 490: Text_Type Specification

5.1.4.2.72. List_of_POLs_Type

Section filled only in the case in which the Calibration_Type is set to P

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**POL**	xs:float Min Occurs : 0

Table 491: List_of_POLs_Type Specification

5.2. Data Structures for file types in HDR format

The data structures have been classified by file type in the following sub-sections:

5.2.1. AUX_TCHI__ (HDR)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_TCHI__ file type in HDR format:

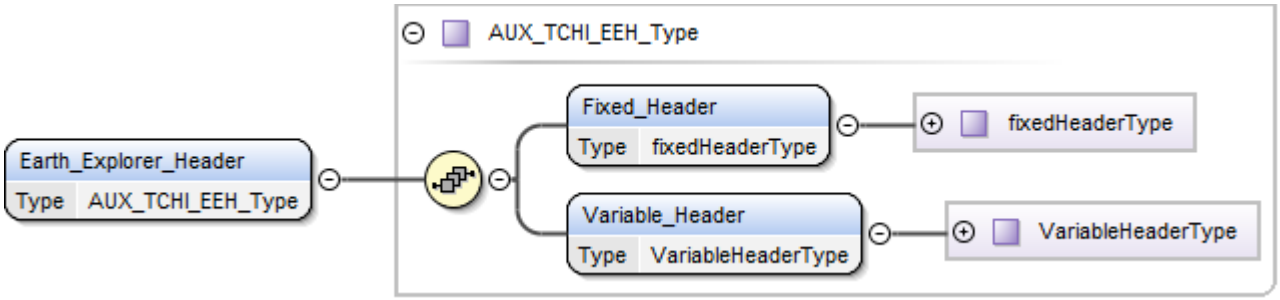

Figure 8: AUX_TCHI__ HDR organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.2.1.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_Header** The XML Header file contains information identifying the product and easy to read as based on a standard syntax accessed by common tools available for visualising its content. The XML syntax has been chosen for the scope of the PDS. The XML Header file is composed by: * a Fixed Header	AUX_TCHI_EEH_Type

#	Name/Description	Format
	* a Variable Header The Fixed Header is the common header for all files in the GOCE Ground Segment. That means it is applied to all files flowing amongst the sub-systems composing the PDS. The Variable Header is the header with format and content depending on the file type and kind of product.	

Table 492: Earth_Explorer_Header Specification

5.2.1.2. Simple Types

5.2.1.2.1. Restricted_Rel_Time_Asc_NodeType

Base Type	Format
xs:decimal	Total Digits : "10" Fraction Digits: "6"

Table 493: Restricted_Rel_Time_Asc_NodeType Specification

5.2.1.2.2. Restricted_LatLonType

Base Type	Format
xs:integer	Total Digits : "10"

Table 494: Restricted_LatLonType Specification

5.2.1.3. Complex Types

5.2.1.3.1. AUX_TCHI_EEH_Type

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	VariableHeaderType

Table 495: AUX_TCHI_EEH_Type Specification

5.2.1.3.2. VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	SPHType Min Occurs : 0

Table 496: VariableHeaderType Specification

5.2.1.3.3. SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header Possible values: AUX_TCHI__ SPECIFIC HEADER EGG_AUX_0_ SPECIFIC HEADER	xs:string
2	**Sensing_Start** UTC start time of data sensing.	LongTimeType Min Occurs : 0
3	**Sensing_Stop** UTC stop time of data sensing.	LongTimeType Min Occurs : 0
4	**Rel_Time_ASC_Node_Start** Relative time since crossing ascending node time relative to start time of data sensing.	Rel_Time_Asc_NodeType Min Occurs : 0
5	**Rel_Time_ASC_Node_Stop** Time of the ascending node relative to stop time of data sensing. Relative time since crossing ascending node time relative to stop time of data sensing.	Rel_Time_Asc_NodeType Min Occurs : 0
6	**Equator_Cross_Time** Time of equator crossing at the ascending node relative to the sensing start time.	LongTimeType Min Occurs : 0
7	**Equator_Cross_Long** Longitude of equator crossing at the ascending node relative to the sensing start time (positive East, 0 = Greenwich) referred to WGS84.	LatLonType Min Occurs : 0
8	**Ascending_Flag** Orbit orientation at the sensing start time. Ascending (A) Descending (D) Possible values: A D	xs:string Min Occurs : 0
9	**Product_Location**	Product_Location_Type Min Occurs : 0
10	**Product_Conf_Data**	Product_Conf_Data_Type Min Occurs : 0
11	**DSDs**	DSDs_Type

Table 497: SPHType Specification

5.2.1.3.4. Product_Location_Type

#	Name/Description	Format
1	**Start_Lat** Latitude of first satellite nadir point at the Sensing	LatLonType

#	Name/Description	Format
	Start time (positive North)	
2	**Start_Long** Longitude of first satellite nadir point at the Sensing Start time (positive East, 0 = Greenwich)	LatLonType
3	**Stop_Lat** Latitude of first satellite nadir point at the Sensing Stop time (positive North)	LatLonType
4	**Stop_Long** Longitude of first satellite nadir point at the Sensing Stop time (positive East, 0 = Greenwich)	LatLonType

Table 498: Product_Location_Type Specification

5.2.1.3.5. Product_Conf_Data_Type

#	Name/Description	Format
1	**Num_ISPs** Number of ISPs in the Level 0	xs:integer Total Digits : 7
2	**Num_Missing_ISPs** Number of missing ISPs	xs:integer Total Digits : 7
3	**Num_Error_ISPs** Number of ISPs containing CRC errors	xs:integer Total Digits : 7
4	**Num_Discarded_ISPs** Number of ISPs discarded	xs:integer Total Digits : 7
5	**Num_RS_ISPs** Number of ISPs with Reed-Solomon correction in the Level 0.	xs:integer Total Digits : 7
6	**Num_RS_Corrections** Number of symbols corrected with Reed-Solomon in the product.	xs:integer Total Digits : 7

Table 499: Product_Conf_Data_Type Specification

5.2.1.3.6. DSDs_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type

Table 500: DSDs_Type Specification

5.2.1.3.7. List_of_DSDs_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType

#	Name/Description	Format
		Max Occurs : unbounded

Table 501: List_of_DSDs_Type Specification

5.2.1.3.8. Rel_Time_Asc_NodeType

#	Name/Description	Format
1	Relative Time Ascending Node Type	Restricted_Rel_Time_Asc_NodeType **Attribute:** Name: "unit" Type: "xs:NCName" Use : "required"

Table 502: Rel_Time_Asc_NodeType Specification

5.2.1.3.9. LatLonType

#	Name/Description	Format
1	Latitude Longitude Type	Restricted_LatLonType **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 503: LatLonType Specification

5.2.1.3.10. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string Min Occurs : 0 Max Length : 28 bytes
2	**Data_Set_Type** Type of Data Set. Measurement (M) or Reference (R) Possible values: M R	xs:NCName Min Occurs : 0
3	**File_Name** Name of Reference File	xs:string Min Occurs : 0 Max Length : 62 bytes
4	**Data_Set_Offset** Offset in bytes from the beginning of the file (MPH+SPH including DSD) This field will be filled only for measurement Data Set.	SizeType Min Occurs : 0
5	**Data_Set_Size**	SizeType

#	Name/Description	Format
	Size of the Data Set This field will be filled only for measurement Data Set	Min Occurs : 0
6	**Num_of_Records** Number of records in the Data Set (filled only for measurements Data Set)	xs:integer Min Occurs : 0 Total Digits : 11
7	**Record_Size** Size in bytes of a record	SizeType Min Occurs : 0
8	**Byte_Order** Byte ordering information. It describes the endianess of the data set. 3210 (Big-endian) 0123 (Little-endian) For the Reference DSD this field is empty	xs:unsignedShort Min Occurs : 0 Total Digits : 4

Table 504: Data_Set_DescriptorType Specification

5.2.2. MPL_OBPL__ (HDR)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an MPL_OBPL__ file type in HDR format:

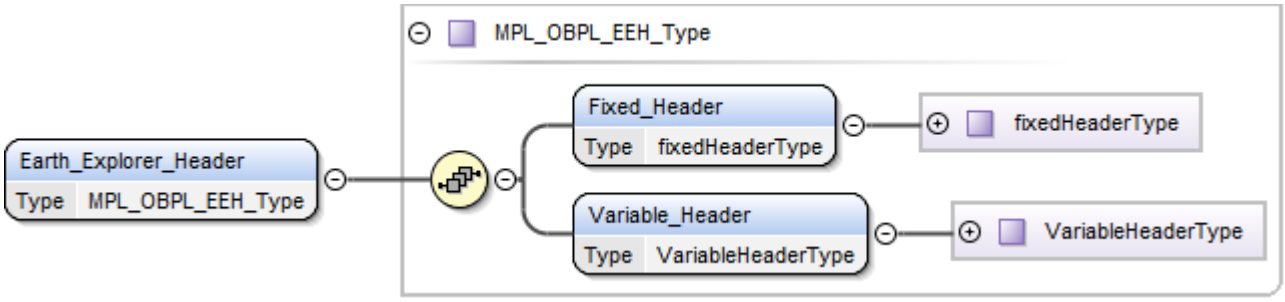

Figure 9: MPL_OBPL__ HDR organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.2.2.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_Header** The XML Header file contains information identifying the product and easy to read as based on a standard syntax accessed by common tools available for visualising its content. The XML syntax has been chosen for the scope of the PDS.	MPL_OBPL_EEH_Type

#	Name/Description	Format
	The XML Header file is composed by: * a Fixed Header * a Variable Header The Fixed Header is the common header for all files in the GOCE Ground Segment. That means it is applied to all files flowing amongst the sub-systems composing the PDS. The Variable Header is the header with format and content depending on the file type and kind of product.	

Table 505: Earth_Explorer_Header Specification

5.2.2.2. Simple Types

5.2.2.2.1. RestrictedRel_Time_Asc_NodeType

Base Type	Format
xs:decimal	Total Digits : "10" Fraction Digits: "6"

Table 506: RestrictedRel_Time_Asc_NodeType Specification

5.2.2.2.2. RestrictedLatLonType

Base Type	Format
xs:integer	Total Digits : "10"

Table 507: RestrictedLatLonType Specification

5.2.2.3. Complex Types

5.2.2.3.1. MPL_OBPL_EEH_Type

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	VariableHeaderType

Table 508: MPL_OBPL_EEH_Type Specification

5.2.2.3.2. VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0

#	Name/Description	Format
2	**SPH**	SPHType Min Occurs : 0

Table 509: VariableHeaderType Specification

5.2.2.3.3. SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header Possible values: MPL_OBPL__ SPECIFIC HEADER EGG_AUX_0_ SPECIFIC HEADER	xs:string
2	**Sensing_Start** UTC start time of data sensing.	LongTimeType Min Occurs : 0
3	**Sensing_Stop** UTC stop time of data sensing.	LongTimeType Min Occurs : 0
4	**Rel_Time_ASC_Node_Start** Relative time since crossing ascending node time relative to start time of data sensing.	Rel_Time_Asc_NodeType Min Occurs : 0
5	**Rel_Time_ASC_Node_Stop** Time of the ascending node relative to stop time of data sensing. Relative time since crossing ascending node time relative to stop time of data sensing.	Rel_Time_Asc_NodeType Min Occurs : 0
6	**Equator_Cross_Time** Time of equator crossing at the ascending node relative to the sensing start time.	LongTimeType Min Occurs : 0
7	**Equator_Cross_Long** Longitude of equator crossing at the ascending node relative to the sensing start time (positive East, 0 = Greenwich) referred to WGS84.	LatLonType Min Occurs : 0
8	**Ascending_Flag** Orbit orientation at the sensing start time. Ascending (A) Descending (D) Possible values: A D	xs:string Min Occurs : 0
9	**Product_Location**	Product_Location_Type Min Occurs : 0
10	**Product_Conf_Data**	Product_Conf_Data_Type Min Occurs : 0
11	**DSDs**	DSDs_Type

Table 510: SPHType Specification

5.2.2.3.4. Product_Location_Type

#	Name/Description	Format
1	**Start_Lat** Latitude of first satellite nadir point at the Sensing Start time (positive North)	LatLonType
2	**Start_Long** Longitude of first satellite nadir point at the Sensing Start time (positive East, 0 = Greenwich)	LatLonType
3	**Stop_Lat** Latitude of first satellite nadir point at the Sensing Stop time (positive North)	LatLonType
4	**Stop_Long** Longitude of first satellite nadir point at the Sensing Stop time (positive East, 0 = Greenwich)	LatLonType

Table 511: Product_Location_Type Specification

5.2.2.3.5. Product_Conf_Data_Type

#	Name/Description	Format
1	**Num_ISPs** Number of ISPs in the Level 0	xs:integer Total Digits : 7
2	**Num_Missing_ISPs** Number of missing ISPs	xs:integer Total Digits : 7
3	**Num_Error_ISPs** Number of ISPs containing CRC errors	xs:integer Total Digits : 7
4	**Num_Discarded_ISPs** Number of ISPs discarded	xs:integer Total Digits : 7
5	**Num_RS_ISPs** Number of ISPs with Reed-Solomon correction in the Level 0.	xs:integer Total Digits : 7
6	**Num_RS_Corrections** Number of symbols corrected with Reed-Solomon in the product.	xs:integer Total Digits : 7

Table 512: Product_Conf_Data_Type Specification

5.2.2.3.6. DSDs_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type

Table 513: DSDs_Type Specification

5.2.2.3.7. List_of_DSDs_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 514: List_of_DSDs_Type Specification

5.2.2.3.8. Rel_Time_Asc_NodeType

#	Name/Description	Format
1	Relative Time Ascending Node Type	RestrictedRel_Time_Asc_NodeType **Attribute:** Name: "unit" Type: "xs:NCName" Use : "required"

Table 515: Rel_Time_Asc_NodeType Specification

5.2.2.3.9. LatLonType

#	Name/Description	Format
1	Latitude Longitude Type	RestrictedLatLonType **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 516: LatLonType Specification

5.2.2.3.10. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string Min Occurs : 0 Max Length : 28 bytes
2	**Data_Set_Type** Type of Data Set. Measurement (M) or Reference (R) Possible values: M R	xs:NCName Min Occurs : 0
3	**File_Name** Name of Reference File	xs:string Min Occurs : 0 Max Length : 62 bytes
4	**Data_Set_Offset** Offset in bytes from the beginning of the file (MPH+SPH including DSD) This field will be filled only for measurement Data	SizeType Min Occurs : 0

#	Name/Description	Format
	Set.	
5	**Data_Set_Size** Size of the Data Set This field will be filled only for measurement Data Set	SizeType Min Occurs : 0
6	**Num_of_Records** Number of records in the Data Set (filled only for measurements Data Set)	xs:integer Min Occurs : 0 Total Digits : 11
7	**Record_Size** Size in bytes of a record	SizeType Min Occurs : 0
8	**Byte_Order** Byte ordering information. It describes the endianess of the data set. 3210 (Big-endian) 0123 (Little-endian) For the Reference DSD this field is empty	xs:unsignedShort Min Occurs : 0 Total Digits : 4

Table 517: Data_Set_DescriptorType Specification

5.2.3. TLM_HKTM__ (HDR)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an TLM_HKTM__ file type in HDR format:

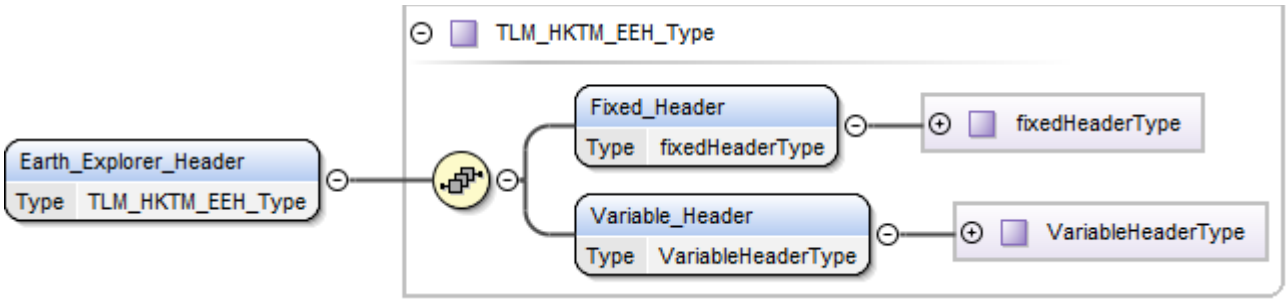

Figure 10: TLM_HKTM__ HDR organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.2.3.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_Header** The XML Header file contains information identifying the product and easy to read as based on a standard syntax accessed by common tools available for visualising its content.	TLM_HKTM_EEH_Type

#	Name/Description	Format
	The XML syntax has been chosen for the scope of the PDS. The XML Header file is composed by: * a Fixed Header * a Variable Header The Fixed Header is the common header for all files in the GOCE Ground Segment. That means it is applied to all files flowing amongst the sub-systems composing the PDS. The Variable Header is the header with format and content depending on the file type and kind of product.	

Table 518: Earth_Explorer_Header Specification

5.2.3.2. Simple Types

5.2.3.2.1. Rel_Time_Asc_NodeType

Base Type	Format
xs:decimal	Total Digits : "10" Fraction Digits: "6"

Table 519: Rel_Time_Asc_NodeType Specification

5.2.3.2.2. LatLonType

Base Type	Format
xs:integer	Total Digits : "10"

Table 520: LatLonType Specification

5.2.3.3. Complex Types

5.2.3.3.1. VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	SPHType Min Occurs : 0

Table 521: VariableHeaderType Specification

5.2.3.3.2. TLM_HKTM_EEH_Type

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	VariableHeaderType

Table 522: TLM_HKTM_EEH_Type Specification

5.2.3.3.3. SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header Possible values: TLM_HKTM__ SPECIFIC HEADER EGG_AUX_0_ SPECIFIC HEADER	xs:string
2	**Sensing_Start** UTC start time of data sensing.	LongTimeType Min Occurs : 0
3	**Sensing_Stop** UTC stop time of data sensing.	LongTimeType Min Occurs : 0
4	**Rel_Time_ASC_Node_Start** Relative time since crossing ascending node time relative to start time of data sensing.	Restricted_Rel_Time_Asc_NodeType Min Occurs : 0
5	**Rel_Time_ASC_Node_Stop** Time of the ascending node relative to stop time of data sensing. Relative time since crossing ascending node time relative to stop time of data sensing.	Restricted_Rel_Time_Asc_NodeType Min Occurs : 0
6	**Equator_Cross_Time** Time of equator crossing at the ascending node relative to the sensing start time.	LongTimeType Min Occurs : 0
7	**Equator_Cross_Long** Longitude of equator crossing at the ascending node relative to the sensing start time (positive East, 0 = Greenwich) referred to WGS84.	Restricted_LatLonType Min Occurs : 0
8	**Ascending_Flag** Orbit orientation at the sensing start time. Ascending (A) Descending (D) Possible values: A D	xs:string Min Occurs : 0
9	**Product_Location**	Product_Location_Type Min Occurs : 0
10	**Product_Conf_Data**	Product_Conf_Data_Type Min Occurs : 0
11	**DSDs**	DSDs_Type

Table 523: SPHType Specification

5.2.3.3.4. Product_Location_Type

#	Name/Description	Format
1	**Start_Lat** Latitude of first satellite nadir point at the Sensing Start time (positive North)	Restricted_LatLonType
2	**Start_Long** Longitude of first satellite nadir point at the Sensing Start time (positive East, 0 = Greenwich)	Restricted_LatLonType
3	**Stop_Lat** Latitude of first satellite nadir point at the Sensing Stop time (positive North)	Restricted_LatLonType
4	**Stop_Long** Longitude of first satellite nadir point at the Sensing Stop time (positive East, 0 = Greenwich)	Restricted_LatLonType

Table 524: Product_Location_Type Specification

5.2.3.3.5. Product_Conf_Data_Type

#	Name/Description	Format
1	**Num_ISPs** Number of ISPs in the Level 0	xs:integer Total Digits : 7
2	**Num_Missing_ISPs** Number of missing ISPs	xs:integer Total Digits : 7
3	**Num_Error_ISPs** Number of ISPs containing CRC errors	xs:integer Total Digits : 7
4	**Num_Discarded_ISPs** Number of ISPs discarded	xs:integer Total Digits : 7
5	**Num_RS_ISPs** Number of ISPs with Reed-Solomon correction in the Level 0.	xs:integer Total Digits : 7
6	**Num_RS_Corrections** Number of symbols corrected with Reed-Solomon in the product.	xs:integer Total Digits : 7

Table 525: Product_Conf_Data_Type Specification

5.2.3.3.6. DSDs_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type

Table 526: DSDs_Type Specification

5.2.3.3.7. List_of_DSDs_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 527: List_of_DSDs_Type Specification

5.2.3.3.8. Restricted_Rel_Time_Asc_NodeType

#	Name/Description	Format
1	Restricted Relative Time Ascending Node Type	Rel_Time_Asc_NodeType **Attribute:** Name: "unit" Type: "xs:NCName" Use : "required"

Table 528: Restricted_Rel_Time_Asc_NodeType Specification

5.2.3.3.9. Restricted_LatLonType

#	Name/Description	Format
1	Restricted Latitude Longitude Type	LatLonType **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 529: Restricted_LatLonType Specification

5.2.3.3.10. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string Min Occurs : 0 Max Length : 28 bytes
2	**Data_Set_Type** Type of Data Set. Measurement (M) or Reference (R) Possible values: M R	xs:NCName Min Occurs : 0
3	**File_Name** Name of Reference File	xs:string Min Occurs : 0 Max Length : 62 bytes
4	**Data_Set_Offset** Offset in bytes from the beginning of the file (MPH+SPH including DSD)	SizeType Min Occurs : 0

#	Name/Description	Format
	This field will be filled only for measurement Data Set.	
5	**Data_Set_Size** Size of the Data Set This field will be filled only for measurement Data Set	SizeType Min Occurs : 0
6	**Num_of_Records** Number of records in the Data Set (filled only for measurements Data Set)	xs:integer Min Occurs : 0 Total Digits : 11
7	**Record_Size** Size in bytes of a record	SizeType Min Occurs : 0
8	**Byte_Order** Byte ordering information. It describes the endianess of the data set. 3210 (Big-endian) 0123 (Little-endian) For the Reference DSD this field is empty	xs:unsignedShort Min Occurs : 0 Total Digits : 4

Table 530: Data_Set_DescriptorType Specification

5.3. Data Structures for file types in DBL format

The data structures have been classified by file type in the following sub-sections:

5.3.1. AUX_TCHI__ (DBL)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_TCHI__ file type in DBL format:

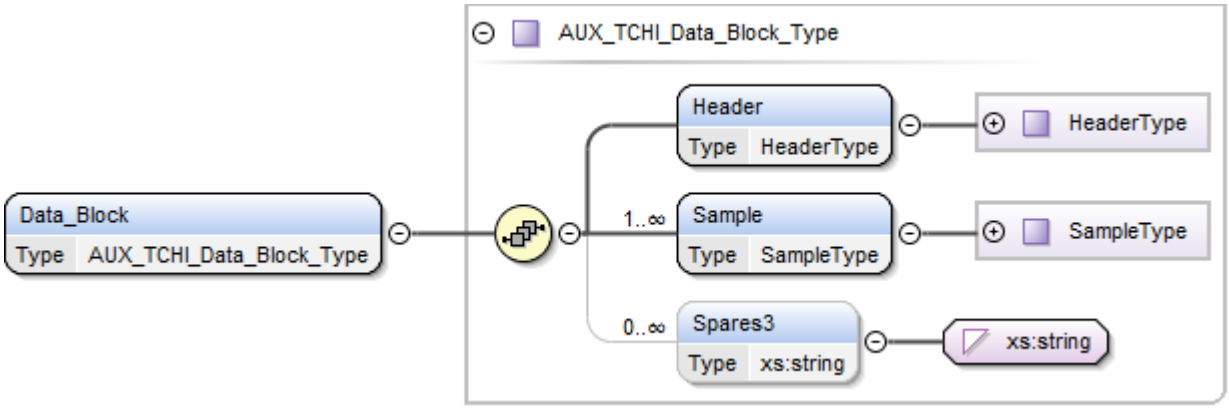

Figure 11: AUX_TCHI__ DBL organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.3.1.1. Root Element

#	Name/Description	Format
1	**Data_Block**	AUX_TCHI_Data_Block_Type

Table 531: Data_Block Specification

5.3.1.2. Complex Types

5.3.1.2.1. AUX_TCHI_Data_Block_Type

#	Name/Description	Format
1	**Header**	HeaderType
2	**Sample**	SampleType Min Occurs : 1 Max Occurs : unbounded
3	**Spares3**	xs:string Min Occurs : 0 Max Occurs : unbounded

Table 532: AUX_TCHI_Data_Block_Type Specification

5.3.1.2.2. HeaderType

#	Name/Description	Format
1	**History**	xs:string
2	**Printout**	xs:string
3	**Spares1**	xs:string
4	**Fields**	xs:string
5	**Separator**	xs:string
6	**Spares2**	xs:string

Table 533: HeaderType Specification

5.3.1.2.3. SampleType

#	Name/Description	Format
1	**Name**	xs:string 11
2	**Description**	xs:string 25
3	**Sequence**	xs:string 9
4	**ReleaseTime**	xs:string 19
5	**ExecutionTime**	xs:string 22
6	**S**	xs:string

#	Name/Description	Format
		2
7	**D**	xs:string 2
8	**C**	xs:string 2
9	**G**	xs:string 2
10	**B**	xs:string 2
11	**IL**	xs:string 3
12	**ST**	xs:string 3
13	**Source**	xs:string 9
14	**UpdateTime**	xs:string 22
15	**R**	xs:string 2
16	**GTO**	xs:string 4
17	**A**	xs:string 2
18	**SS**	xs:string 4
19	**_1122**	xs:string 4
20	**CC**	xs:string 3

Table 534: SampleType Specification

5.3.2. MPL_OBPL__ (DBL)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an MPL_OBPL__ file type in DBL format:

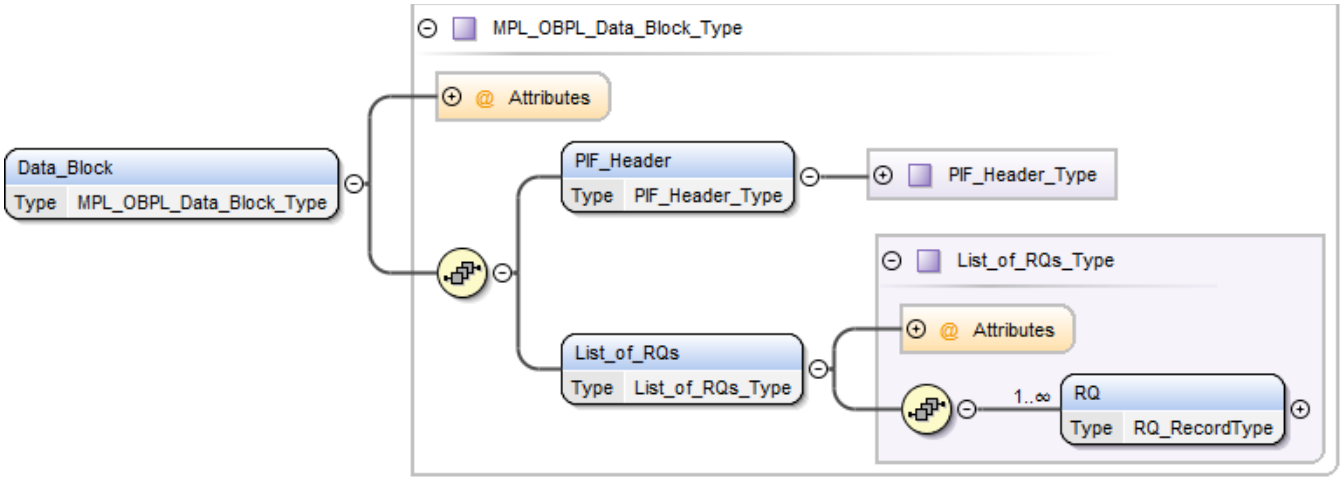

Figure 12: MPL_OBPL__ DBL organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.3.2.1. Root Element

#	Name/Description	Format
1	**Data_Block** Gravity Gradients in the Gradiometer Reference Frame (GRF) corrected for temporal gravity field variations and validated against external gravity data. Outliers and data gaps are identified and external calibration is performed. Representation: Time series Reference Frame: GRF (HPF GOCE standards apply) Time System: GPS time (HPF GOCE standards apply) Spatial Coverage: Not applicable Temporal Coverage: 1 day Spatial Resolution: 8 km along-track Temporal Resolution: 1 s Units: S.I. (1/s2 for the gravity gradients and the corrections) Latency: 2 weeks	MPL_OBPL_Data_Block_Type

Table 535: Data_Block Specification

5.3.2.2. Complex Types

5.3.2.2.1. MPL_OBPL_Data_Block_Type

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**PIF_Header**	PIF_Header_Type
2	**List_of_RQs**	List_of_RQs_Type

Table 536: MPL_OBPL_Data_Block_Type Specification

5.3.2.2.2. PIF_Header_Type

#	Name/Description	Format
1	**PIF_File_Type**	xs:string
2	**PIF_Start**	xs:string
3	**PIF_File_Version**	xs:integer
4	**PIF_Status**	xs:string
5	**PIF_Replan_Time**	xs:string
6	**PIF_SPF_Version**	xs:integer
7	**PIF_PPF_Version**	xs:integer
8	**PIF_OPF_Version**	xs:integer
9	**PIF_MTF_Version**	xs:integer
10	**PIF_WODB_Version**	xs:string
11	**PIF_RC_Version**	xs:integer
12	**PIF_KUP_Version**	xs:integer
13	**PIF_SI_Version**	xs:integer

Table 537: PIF_Header_Type Specification

5.3.2.2.3. List_of_RQs_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**RQ**	RQ_RecordType Max Occurs : unbounded

Table 538: List_of_RQs_Type Specification

5.3.2.2.4. RQ_RecordType

#	Name/Description	Format
1	**RQ_Name**	xs:string
2	**RQ_Description**	xs:string
3	**RQ_Source**	xs:string
4	**RQ_Destination**	xs:string
5	**RQ_Type**	xs:string
6	**RQ_Start_Time**	xs:string
7	**RQ_Status**	xs:string
8	**RQ_Subsystem**	xs:string
9	**RQ_Parent_Event**	RQ_Parent_Event_Type
10	**List_of_RQ_Parameters**	List_of_RQ_Parameters_Type

Table 539: RQ_RecordType Specification

5.3.2.2.5. List_of_RQ_Parameters_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**RQ_Parameter**	RQ_Parameter_RecordType Min Occurs : 0 Max Occurs : unbounded

Table 540: List_of_RQ_Parameters_Type Specification

5.3.2.2.6. RQ_Parent_Event_Type

#	Name/Description	Format
1	**EV_Name**	xs:string

#	Name/Description	Format
2	**EV_Source**	xs:string
3	**EV_Time**	xs:string
4	**EV_ID**	xs:string

Table 541: RQ_Parent_Event_Type Specification

5.3.2.2.7. RQ_Parameter_RecordType

#	Name/Description	Format
1	**RQ_Parameter_Name**	xs:string
2	**RQ_Parameter_Description**	xs:string
3	**RQ_Parameter_Representation**	xs:string
4	**RQ_Parameter_Radix**	xs:string
5	**RQ_Parameter_Unit**	xs:string
6	**RQ_Parameter_Value**	xs:string

Table 542: RQ_Parameter_RecordType Specification

5.3.3. TLM_HKTM (DBL)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an TLM_HKTM file type in DBL format:

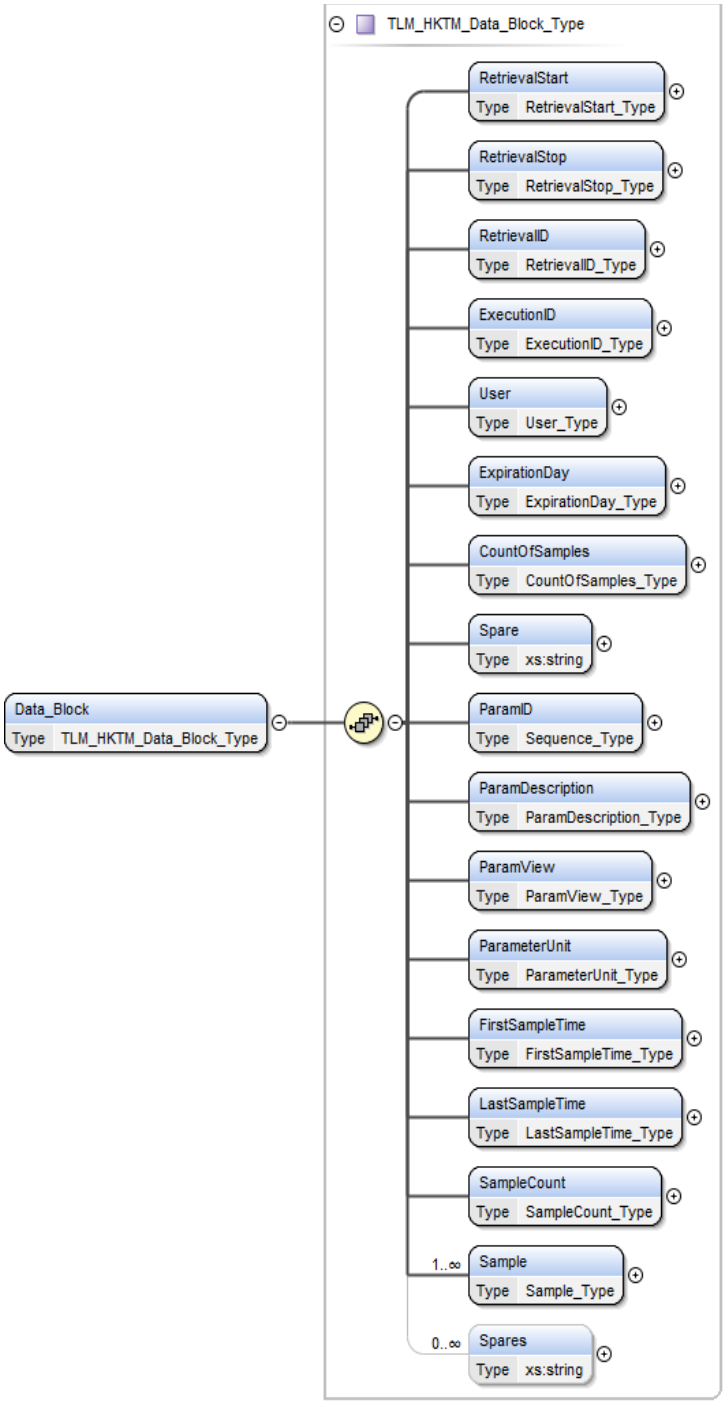

Figure 13: TLM_HKTM DBL organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

5.3.3.1. Simple Types

5.3.3.1.1. RetrievalStart_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	15	Possible values: Retrieval start

Table 543: RetrievalStart_Tag_Type Specification

5.3.3.1.2. RetrievalStop_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	14	Possible values: Retrieval stop

Table 544: RetrievalStop_Tag_Type Specification

5.3.3.1.3. RetrievalID_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	12	Possible values: Retrieval ID

Table 545: RetrievalID_Tag_Type Specification

5.3.3.1.4. ExecutionID_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	12	Possible values: Execution ID

Table 546: ExecutionID_Tag_Type Specification

5.3.3.1.5. User_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	4	Possible values: User

Table 547: User_Tag_Type Specification

5.3.3.1.6. ExpirationDay_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	14	Possible values: Expiration Day

Table 548: ExpirationDay_Tag_Type Specification

5.3.3.1.7. CountOfSamples_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	16	Possible values: Count of samples

Table 549: CountOfSamples_Tag_Type Specification

5.3.3.1.8. ParamDescription_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	17	Possible values: Param Description

Table 550: ParamDescription_Tag_Type Specification

5.3.3.1.9. ParamView_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	10	Possible values: Param View

Table 551: ParamView_Tag_Type Specification

5.3.3.1.10. ParameterUnit_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	14	Possible values: Parameter Unit

Table 552: ParameterUnit_Tag_Type Specification

5.3.3.1.11. FirstSampleTime_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	17	Possible values: First Sample Time

Table 553: FirstSampleTime_Tag_Type Specification

5.3.3.1.12. LastSampleTime_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	16	Possible values: Last Sample Time

Table 554: LastSampleTime_Tag_Type Specification

5.3.3.1.13. SampleCount_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	12	Possible values: Sample Count

Table 555: SampleCount_Tag_Type Specification

5.3.3.1.14. Root Element

#	Name/Description	Format
1	**Data_Block**	TLM_HKTM_Data_Block_Type

Table 556: Data_Block Specification

5.3.3.2. Complex Types

5.3.3.2.1. TLM_HKTM_Data_Block_Type

#	Name/Description	Format
1	**RetrievalStart**	RetrievalStart_Type
2	**RetrievalStop**	RetrievalStop_Type
3	**RetrievalID**	RetrievalID_Type
4	**ExecutionID**	ExecutionID_Type
5	**User**	User_Type
6	**ExpirationDay**	ExpirationDay_Type
7	**CountOfSamples**	CountOfSamples_Type
8	**Spare**	xs:string
9	**ParamID**	Sequence_Type
10	**ParamDescription**	ParamDescription_Type
11	**ParamView**	ParamView_Type
12	**ParameterUnit**	ParameterUnit_Type
13	**FirstSampleTime**	FirstSampleTime_Type
14	**LastSampleTime**	LastSampleTime_Type
15	**SampleCount**	SampleCount_Type
16	**Sample**	Sample_Type Max Occurs : unbounded
17	**Spares**	xs:string Min Occurs : 0 Max Occurs : unbounded

Table 557: TLM_HKTM_Data_Block_Type Specification

5.3.3.2.2. RetrievalStart_Type

#	Name/Description	Format
1	**Tag**	RetrievalStart_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : 1

Table 558: RetrievalStart_Type Specification

5.3.3.2.3. RetrievalStop_Type

#	Name/Description	Format
1	**Tag**	RetrievalStop_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : 1

Table 559: RetrievalStop_Type Specification

5.3.3.2.4. RetrievalID_Type

#	Name/Description	Format
1	**Tag**	RetrievalID_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 560: RetrievalID_Type Specification

5.3.3.2.5. ExecutionID_Type

#	Name/Description	Format
1	**Tag**	ExecutionID_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 561: ExecutionID_Type Specification

5.3.3.2.6. User_Type

#	Name/Description	Format
1	**Tag**	User_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : 1

Table 562: User_Type Specification

5.3.3.2.7. ExpirationDay_Type

#	Name/Description	Format
1	**Tag**	ExpirationDay_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 563: ExpirationDay_Type Specification

5.3.3.2.8. CountOfSamples_Type

#	Name/Description	Format
1	**Tag**	CountOfSamples_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 564: CountOfSamples_Type Specification

5.3.3.2.9. Sequence_Type

#	Name/Description	Format
1	**Spare**	xs:string
2	**Value**	xs:string Max Occurs : unbounded

Table 565: Sequence_Type Specification

5.3.3.2.10. ParamDescription_Type

#	Name/Description	Format
1	**Tag**	ParamDescription_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 566: ParamDescription_Type Specification

5.3.3.2.11. ParamView_Type

#	Name/Description	Format
1	**Tag**	ParamView_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 567: ParamView_Type Specification

5.3.3.2.12. ParameterUnit_Type

#	Name/Description	Format
1	**Tag**	ParameterUnit_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 568: ParameterUnit_Type Specification

5.3.3.2.13. FirstSampleTime_Type

#	Name/Description	Format
1	**Tag**	FirstSampleTime_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 569: FirstSampleTime_Type Specification

5.3.3.2.14. LastSampleTime_Type

#	Name/Description	Format
1	**Tag**	LastSampleTime_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 570: LastSampleTime_Type Specification

5.3.3.2.15. SampleCount_Type

#	Name/Description	Format
1	**Tag**	SampleCount_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : unbounded

Table 571: SampleCount_Type Specification

5.3.3.2.16. Sample_Type

#	Name/Description	Format
1	**SampleTime**	xs:string Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 572: Sample_Type Specification

6. SST Specific Data Structures

This section contains the data structures defined by the XML schemas (with or without DFDL annotations) schemas used to represent the information of the GOCE L1 auxiliary files associated to the SST instrument.

6.1. Data Structures for file types in EEF format

The data structures have been classified by file type in the following sub-sections:

6.1.1. AUX_ICB_1b (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_ICB_1b file type in EEF format:

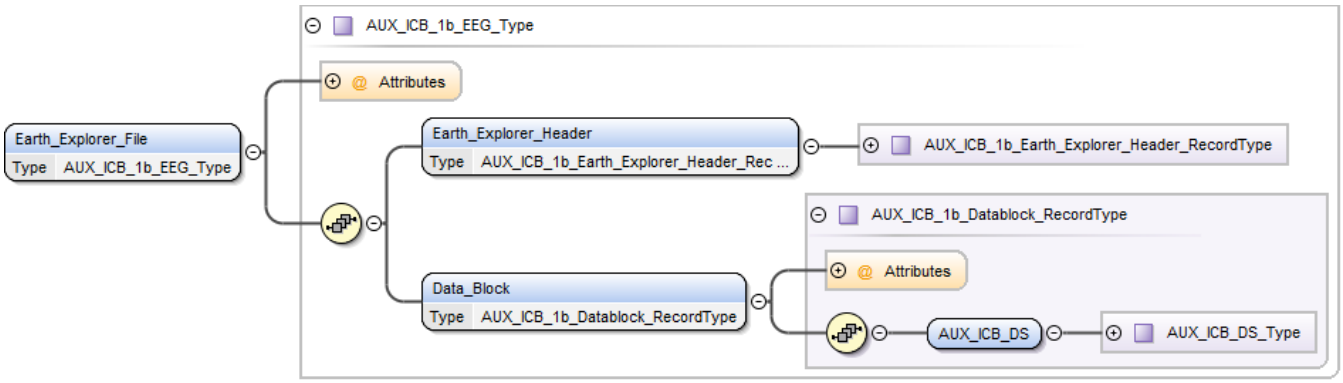

Figure 14: AUX_ICB_1b EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

6.1.1.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION This product contains the Inter Channel Bias correction parameters. OBJECTIVE It is used by the PDS to perform the Interchannel Bias Correction. FILE GENERATION FREQUENCY The last available valid file is transferred to the PDS. FILE SCOPE Each file shall be valid as soon as transferred, and until the end of the mission or until a new update	AUX_ICB_1b_EEG_Type

#	Name/Description	Format
	is transferred. DATA VOLUME A few kbytes.	

Table 573: Earth_Explorer_File Specification

6.1.1.2. Complex Types

6.1.1.2.1. AUX_ICB_1b_EEG_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_ICB_1b_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_ICB_1b_Datablock_RecordType

Table 574: AUX_ICB_1b_EEG_Type Specification

6.1.1.2.2. AUX_ICB_1b_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_ICB_1b_VariableHeaderType

Table 575: AUX_ICB_1b_Earth_Explorer_Header_RecordType Specification

6.1.1.2.3. AUX_ICB_1b_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	AUX_ICB_1b_SPHType Min Occurs : 0

Table 576: AUX_ICB_1b_VariableHeaderType Specification

6.1.1.2.4. AUX_ICB_1b_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values:	xs:string

#	Name/Description	Format
	AUX_ICB_1b EGG_NOM_2 EGG_TRF_2 EGM_GOC_2	
2	**Original_Source**	Original_Source_AUX_ICB_1b_Type
3	**Time_Information**	Time_Information_AUX_ICB_1b_Type
4	**AUX_ICB_1b**	AUX_ICB_1b_SpecificType
5	**DSDs**	DSDs_AUX_ICB_1b_Type

Table 577: AUX_ICB_1b_SPHType Specification

6.1.1.2.5. Original_Source_AUX_ICB_1b_Type

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 578: Original_Source_AUX_ICB_1b_Type Specification

6.1.1.2.6. Time_Information_AUX_ICB_1b_Type

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_AUX_ICB_1b_Type
2	**Abs_Orbit**	Abs_Orbit_AUX_ICB_1b_Type

Table 579: Time_Information_AUX_ICB_1b_Type Specification

6.1.1.2.7. GPS_Time_AUX_ICB_1b_Type

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 580: GPS_Time_AUX_ICB_1b_Type Specification

6.1.1.2.8. Abs_Orbit_AUX_ICB_1b_Type

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 581: Abs_Orbit_AUX_ICB_1b_Type Specification

6.1.1.2.9. DSDs_AUX_ICB_1b_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_AUX_ICB_1b_Type

#	Name/Description	Format

Table 582: DSDs_AUX_ICB_1b_Type Specification

6.1.1.2.10. List_of_DSDs_AUX_ICB_1b_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 583: List_of_DSDs_AUX_ICB_1b_Type Specification

6.1.1.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 584: Data_Set_DescriptorType Specification

6.1.1.2.12. AUX_ICB_1b_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type
5	**SST_PRM_2**	SST_PRM_2Type

Table 585: AUX_ICB_1b_SpecificType Specification

6.1.1.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRP_2_Type

Table 586: SST_PRP_2Type Specification

6.1.1.2.14. Original_Source_SST_PRP_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRP_2_Type

Table 587: Original_Source_SST_PRP_2_Type Specification

6.1.1.2.15. Format_SST_PRP_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 588: Format_SST_PRP_2_Type Specification

6.1.1.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PKI_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PKI_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PKI_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PKI_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 589: SST_PKI_2Type Specification

6.1.1.2.17. Original_Source_SST_PKI_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PKI_2_Type

Table 590: Original_Source_SST_PKI_2_Type Specification

6.1.1.2.18. Format_SST_PKI_2_Type_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string

#	Name/Description	Format
		Max Length : 1 bytes

Table 591: Format_SST_PKI_2_Type_SST_PKI_2_Type Specification

6.1.1.2.19. Time_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PKI_2_Type

Table 592: Time_Information_SST_PKI_2_Type Specification

6.1.1.2.20. GPS_Time_SST_PKI_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PKI_2_Type
2	**Stop**	xs:string

Table 593: GPS_Time_SST_PKI_2_Type Specification

6.1.1.2.21. Start_SST_PKI_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PKI_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PKI_2_Type
3	**Gregorian**	GregorianType

Table 594: Start_SST_PKI_2_Type Specification

6.1.1.2.22. GPS_SST_PKI_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 595: GPS_SST_PKI_2_Type Specification

6.1.1.2.23. Mod_Jul_Day_SST_PKI_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 596: Mod_Jul_Day_SST_PKI_2_Type Specification

6.1.1.2.24. Epoch_Information_SST_PKI_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 597: Epoch_Information_SST_PKI_2_Type Specification

6.1.1.2.25. List_of_Satellite_Descriptors_SST_PKI_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PKI_2_Type Max Occurs : unbounded

Table 598: List_of_Satellite_Descriptors_SST_PKI_2_Type Specification

6.1.1.2.26. Satellite_Descriptor_SST_PKI_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 599: Satellite_Descriptor_SST_PKI_2_Type Specification

6.1.1.2.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PCV_2_Type
2	**Var_Cov_Matrix**	Var_Cov_Matrix_SST_PCV_2_Type
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_SST_PCV_2_Type
4	**Time_Information**	Time_Information_SST_PCV_2_Type
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 600: SST_PCV_2Type Specification

6.1.1.2.28. Original_Source_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PKI_2_Type

Table 601: Original_Source_SST_PCV_2_Type Specification

6.1.1.2.29. Format_SST_PKI_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Covariance	xs:string
2	**Version**	xs:string

Table 602: Format_SST_PKI_2_Type Specification

6.1.1.2.30. Var_Cov_Matrix_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 603: Var_Cov_Matrix_SST_PCV_2_Type Specification

6.1.1.2.31. Corresponding_Kinematic_Orbit_SST_PCV_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string

Table 604: Corresponding_Kinematic_Orbit_SST_PCV_2_Type Specification

6.1.1.2.32. Time_Information_SST_PCV_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_SST_PCV_2_Type
3	**GPS_Time**	GPS_Time_SST_PCV_2_Type

Table 605: Time_Information_SST_PCV_2_Type Specification

6.1.1.2.33. Time_Step_Size_SST_PCV_2_Type

#	Name/Description	Format
1	Time Step Size SST_PCV_2_ Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 606: Time_Step_Size_SST_PCV_2_Type Specification

6.1.1.2.34. GPS_Time_SST_PCV_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PCV_2_Type
2	**Stop**	xs:string

Table 607: GPS_Time_SST_PCV_2_Type Specification

6.1.1.2.35. Start_SST_PCV_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 608: Start_SST_PCV_2_Type Specification

6.1.1.2.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRD_2_Type
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_SST_PRD_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRD_2_Type
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string

#	Name/Description	Format
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_SST_PRD_2_Type
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 609: SST_PRD_2Type Specification

6.1.1.2.37. Original_Source_SST_PRD_2_Type

#	Name/Description	Format
1	**Format**	Format_SST_PRD_2_Type

Table 610: Original_Source_SST_PRD_2_Type Specification

6.1.1.2.38. Format_SST_PRD_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 611: Format_SST_PRD_2_Type Specification

6.1.1.2.39. Time_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRD_2_Type

Table 612: Time_Information_SST_PRD_2_Type Specification

6.1.1.2.40. GPS_Time_SST_PRD_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRD_2_Type
2	**Stop**	xs:string

Table 613: GPS_Time_SST_PRD_2_Type Specification

6.1.1.2.41. Start_SST_PRD_2_Type

#	Name/Description	Format
1	**GPS**	GPS_SST_PRD_2_Type
2	**Mod_Jul_Day**	Mod_Jul_Day_SST_PRD_2_Type
3	**Gregorian**	GregorianType

Table 614: Start_SST_PRD_2_Type Specification

6.1.1.2.42. GPS_SST_PRD_2_Type

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 615: GPS_SST_PRD_2_Type Specification

6.1.1.2.43. Mod_Jul_Day_SST_PRD_2_Type

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 616: Mod_Jul_Day_SST_PRD_2_Type Specification

6.1.1.2.44. Epoch_Information_SST_PRD_2_Type

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 617: Epoch_Information_SST_PRD_2_Type Specification

6.1.1.2.45. List_of_Satellite_Descriptors_SST_PRD_2_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_SST_PRD_2_Type Max Occurs : unbounded

Table 618: List_of_Satellite_Descriptors_SST_PRD_2_Type Specification

6.1.1.2.46. Satellite_Descriptor_SST_PRD_2_Type

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 619: Satellite_Descriptor_SST_PRD_2_Type Specification

6.1.1.2.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_SST_PRM_2_Type
2	**Transformation**	Transformation_SST_PRM_2_Type
3	**Time_Information**	Time_Information_SST_PRM_2_Type
4	**Epoch_Information**	Epoch_Information_SST_PRM_2_Type
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_SST_PRM_2_Type
7	**Subdaily_Model**	xs:string

Table 620: SST_PRM_2Type Specification

6.1.1.2.48. Original_Source_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_SST_PRM_2_Type

Table 621: Original_Source_SST_PRM_2_Type Specification

6.1.1.2.49. Format_SST_PRM_2_Type

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 622: Format_SST_PRM_2_Type Specification

6.1.1.2.50. Transformation_SST_PRM_2_Type

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 623: Transformation_SST_PRM_2_Type Specification

6.1.1.2.51. Time_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_SST_PRM_2_Type

Table 624: Time_Information_SST_PRM_2_Type Specification

6.1.1.2.52. GPS_Time_SST_PRM_2_Type

#	Name/Description	Format
1	**Start**	Start_SST_PRM_2_Type
2	**Stop**	xs:string

Table 625: GPS_Time_SST_PRM_2_Type Specification

6.1.1.2.53. Start_SST_PRM_2_Type

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 626: Start_SST_PRM_2_Type Specification

6.1.1.2.54. Epoch_Information_SST_PRM_2_Type

#	Name/Description	Format
1	**Reference**	xs:string

Table 627: Epoch_Information_SST_PRM_2_Type Specification

6.1.1.2.55. Nutation_SST_PRM_2_Type

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 628: Nutation_SST_PRM_2_Type Specification

6.1.1.2.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 629: GregorianType Specification

6.1.1.2.57. AUX_ICB_1b_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**AUX_ICB_DS**	AUX_ICB_DS_Type

Table 630: AUX_ICB_1b_Datablock_RecordType Specification

6.1.1.2.58. AUX_ICB_1i_Type

#	Name/Description	Format
1	**List_of_PARAMETERs**	parameterType

Table 631: AUX_ICB_1i_Type Specification

6.1.1.2.59. AUX_ICB_DS_Type

#	Name/Description	Format
1	**AUX_ICB_1i**	AUX_ICB_1i_Type

Table 632: AUX_ICB_DS_Type Specification

6.1.1.2.60. parameterType

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**PARAMETER**	PARAMETER_Type Min Occurs : 12 Max Occurs : 12

Table 633: parameterType Specification

6.1.1.2.61. parameterComponentType

#	Name/Description	Format
1	parameter Component Type	xs:double **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 634: parameterComponentType Specification

6.1.1.2.62. PARAMETER_Type

#	Name/Description	Format
1	**ICB_P1** ICB at P1	parameterComponentType
2	**ICB_P2** ICB at P2	parameterComponentType
3	**ICB_CA** ICB at P2	parameterComponentType

Table 635: PARAMETER_Type Specification

6.1.2. AUX_ANT_OS (EEF)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_ANT_OS file type in EEF format:

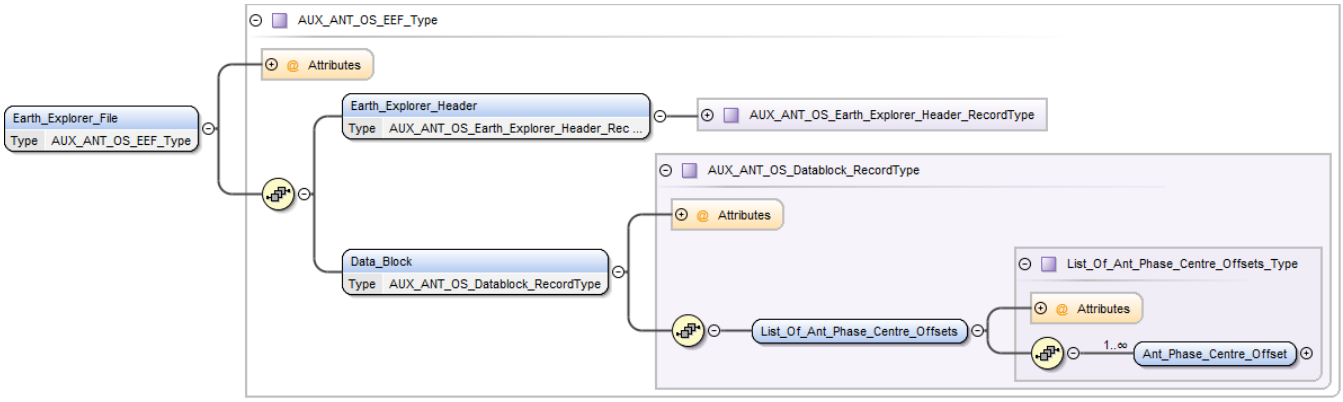

Figure 15: AUX_ANT_OS EEF organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

6.1.2.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_File** FILE DESCRIPTION This file contains the antenna phase centre offsets	AUX_ANT_OS_EEF_Type

#	Name/Description	Format
	of the GPS satellites tracked. OBJECTIVE It is used by the PDS to support the ground processing software. FILE GENERATION FREQUENCY This file is not updated during the mission. FILE SCOPE Each file shall be valid as soon as transferred, and until the end of the mission or until a new update is transferred. DATA VOLUME A few kbytes.	

Table 636: Earth_Explorer_File Specification

6.1.2.2. Complex Types

6.1.2.2.1. AUX_ANT_OS_EEF_Type

Attribute:

Name	Use	Type
schemaVersion	optional	xs:string

Attribute:

Name	Use	Type
schemaLocation	optional	xs:string

#	Name/Description	Format
1	**Earth_Explorer_Header**	AUX_ANT_OS_Earth_Explorer_Header_RecordType
2	**Data_Block**	AUX_ANT_OS_Datablock_RecordType

Table 637: AUX_ANT_OS_EEF_Type Specification

6.1.2.2.2. AUX_ANT_OS_Earth_Explorer_Header_RecordType

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	AUX_ANT_OS_VariableHeaderType

Table 638: AUX_ANT_OS_Earth_Explorer_Header_RecordType Specification

6.1.2.2.3. AUX_ANT_OS_VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0

#	Name/Description	Format
2	**SPH**	AUX_ANT_OS_SPHType Min Occurs : 0

Table 639: AUX_ANT_OS_VariableHeaderType Specification

6.1.2.2.4. AUX_ANT_OS_SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header. Equal to File_Type (see fixed header) Possible values: AUX_ANT_OS	xs:string
2	**Original_Source**	Original_Source_Type_AUX_ANT_OS
3	**Time_Information**	Time_Information_Type_AUX_ANT_OS
4	**AUX_ANT_OS**	AUX_ANT_OS_SpecificType
5	**DSDs**	DSDs_Type_AUX_ANT_OS

Table 640: AUX_ANT_OS_SPHType Specification

6.1.2.2.5. Time_Information_Type_AUX_ANT_OS

#	Name/Description	Format
1	**GPS_Time**	GPS_Time_Type_AUX_ANT_OS
2	**Abs_Orbit**	Abs_Orbit_Type_AUX_ANT_OS

Table 641: Time_Information_Type_AUX_ANT_OS Specification

6.1.2.2.6. GPS_Time_Type_AUX_ANT_OS

#	Name/Description	Format
1	**Start**	xs:decimal Total Digits : 20 Fraction Digits: 9
2	**Stop**	xs:decimal Total Digits : 20 Fraction Digits: 9

Table 642: GPS_Time_Type_AUX_ANT_OS Specification

6.1.2.2.7. Abs_Orbit_Type_AUX_ANT_OS

#	Name/Description	Format
1	**Start**	xs:integer
2	**Stop**	xs:integer

Table 643: Abs_Orbit_Type_AUX_ANT_OS Specification

6.1.2.2.8. Original_Source_Type_AUX_ANT_OS

#	Name/Description	Format
1	**Product** Prod. name of orig. src. in HPF format	xs:NCName

Table 644: Original_Source_Type_AUX_ANT_OS Specification

6.1.2.2.9. DSDs_Type_AUX_ANT_OS

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type_AUX_ANT_OS

Table 645: DSDs_Type_AUX_ANT_OS Specification

6.1.2.2.10. List_of_DSDs_Type_AUX_ANT_OS

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 646: List_of_DSDs_Type_AUX_ANT_OS Specification

6.1.2.2.11. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string
2	**Data_Set_Type** Type of Data Set. Possible values: I O S	xs:NCName
3	**File_Name** Name of Reference File	xs:string Max Length : 62 bytes
4	**Num_Epochs**	xs:integer
5	**MD5**	xs:string

Table 647: Data_Set_DescriptorType Specification

6.1.2.2.12. AUX_ANT_OS_SpecificType

#	Name/Description	Format
1	**SST_PRP_2**	SST_PRP_2Type
2	**SST_PKI_2**	SST_PKI_2Type
3	**SST_PCV_2**	SST_PCV_2Type
4	**SST_PRD_2**	SST_PRD_2Type

#	Name/Description	Format
5	**SST_PRM_2**	SST_PRM_2Type

Table 648: AUX_ANT_OS_SpecificType Specification

6.1.2.2.13. SST_PRP_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRP_2Type

Table 649: SST_PRP_2Type Specification

6.1.2.2.14. Original_Source_Type_SST_PRP_2Type

#	Name/Description	Format
1	**Format**	Format_Type_SST_PRP_2Type

Table 650: Original_Source_Type_SST_PRP_2Type Specification

6.1.2.2.15. Format_Type_SST_PRP_2Type

#	Name/Description	Format
1	**Name** Format Name Possible values: PDF	xs:string
2	**Version**	xs:string

Table 651: Format_Type_SST_PRP_2Type Specification

6.1.2.2.16. SST_PKI_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PKI_2
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_Type_SST_PKI_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PKI_2
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_Type_SST_PKI_2
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 652: SST_PKI_2Type Specification

6.1.2.2.17. Time_Information_Type_SST_PKI_2

#	Name/Description	Format
1	**System**	xs:string

#	Name/Description	Format
2	**GPS_Time**	GPS_Time_Type_SST_PKI_2

Table 653: Time_Information_Type_SST_PKI_2 Specification

6.1.2.2.18. GPS_Time_Type_SST_PKI_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PKI_2
2	**Stop** Empty	xs:string

Table 654: GPS_Time_Type_SST_PKI_2 Specification

6.1.2.2.19. Start_Type_SST_PKI_2

#	Name/Description	Format
1	**GPS**	GPS_Type_SST_PKI_2
2	**Mod_Jul_Day**	Mod_Jul_Day_Type_SST_PKI_2
3	**Gregorian**	GregorianType

Table 655: Start_Type_SST_PKI_2 Specification

6.1.2.2.20. GPS_Type_SST_PKI_2

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 656: GPS_Type_SST_PKI_2 Specification

6.1.2.2.21. Mod_Jul_Day_Type_SST_PKI_2

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 657: Mod_Jul_Day_Type_SST_PKI_2 Specification

6.1.2.2.22. Epoch_Information_Type_SST_PKI_2

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 658: Epoch_Information_Type_SST_PKI_2 Specification

6.1.2.2.23. List_of_Satellite_Descriptors_Type_SST_PKI_2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_Type_SST_PKI_2 Max Occurs : unbounded

Table 659: List_of_Satellite_Descriptors_Type_SST_PKI_2 Specification

6.1.2.2.24. Satellite_Descriptor_Type_SST_PKI_2

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 660: Satellite_Descriptor_Type_SST_PKI_2 Specification

6.1.2.2.25. Original_Source_Type_SST_PKI_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PKI_2

Table 661: Original_Source_Type_SST_PKI_2 Specification

6.1.2.2.26. Format_Type_SST_PKI_2

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 662: Format_Type_SST_PKI_2 Specification

6.1.2.2.27. SST_PCV_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PCV_2
2	**Var_Cov_Matrix**	Var_Cov_Matrix_Type_SST_PCV_2
3	**Corresponding_Kinematic_Orbit**	Corresponding_Kinematic_Orbit_Type_SST_PCV_2
4	**Time_Information**	Time_Information_Type_SST_PCV_2
5	**RMS_of_Unit_Weight**	xs:float
6	**Parameters**	xs:string

Table 663: SST_PCV_2Type Specification

6.1.2.2.28. Original_Source_Type_SST_PCV_2

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_Type_SST_PCV_2

Table 664: Original_Source_Type_SST_PCV_2 Specification

6.1.2.2.29. Format_Type_SST_PCV_2

#	Name/Description	Format
1	**Name** Format Name	xs:string

#	Name/Description	Format
	Possible values: Covariance	
2	**Version**	xs:string

Table 665: Format_Type_SST_PCV_2 Specification

6.1.2.2.30. Var_Cov_Matrix_Type_SST_PCV_2

#	Name/Description	Format
1	**File_Name**	xs:string

Table 666: Var_Cov_Matrix_Type_SST_PCV_2 Specification

6.1.2.2.31. Corresponding_Kinematic_Orbit_Type_SST_PCV_2

#	Name/Description	Format
1	**File_Name**	xs:string

Table 667: Corresponding_Kinematic_Orbit_Type_SST_PCV_2 Specification

6.1.2.2.32. Time_Information_Type_SST_PCV_2

#	Name/Description	Format
1	**System**	xs:string
2	**Time_Step_Size**	Time_Step_Size_Type_SST_PCV_2
3	**GPS_Time**	GPS_Time_Type_SST_PCV_2

Table 668: Time_Information_Type_SST_PCV_2 Specification

6.1.2.2.33. Time_Step_Size_Type_SST_PCV_2

#	Name/Description	Format
1	Time Step Size Type SST_PCV_2	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "required"

Table 669: Time_Step_Size_Type_SST_PCV_2 Specification

6.1.2.2.34. GPS_Time_Type_SST_PCV_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PCV_2
2	**Stop** Empty	xs:string

Table 670: GPS_Time_Type_SST_PCV_2 Specification

6.1.2.2.35. Start_Type_SST_PCV_2

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 671: Start_Type_SST_PCV_2 Specification

6.1.2.2.36. SST_PRD_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRD_2
2	**Pos_or_Vel** Position or Velocity Possible values: P V	xs:string
3	**Time_Information**	Time_Information_Type_SST_PRD_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PRD_2
5	**Data_Used**	xs:string
6	**Coordinate_Sys**	xs:string
7	**Orbit_Type**	xs:string
8	**Agency**	xs:string
9	**List_of_Satellite_Descriptors**	List_of_Satellite_Descriptors_Type_SST_PRD_2
10	**Base_for_Pos_or_Vel**	xs:float
11	**Base_for_Clk_or_Rate**	xs:float
12	**Comments**	xs:string

Table 672: SST_PRD_2Type Specification

6.1.2.2.37. Original_Source_Type_SST_PRD_2

#	Name/Description	Format
1	**Format**	Format_Type_SST_PRD_2

Table 673: Original_Source_Type_SST_PRD_2 Specification

6.1.2.2.38. Format_Type_SST_PRD_2

#	Name/Description	Format
1	**Name** Format Name Possible values: SP3c	xs:string
2	**Version**	xs:string
3	**Type**	xs:string Max Length : 1 bytes

Table 674: Format_Type_SST_PRD_2 Specification

6.1.2.2.39. Time_Information_Type_SST_PRD_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PRD_2

Table 675: Time_Information_Type_SST_PRD_2 Specification

6.1.2.2.40. GPS_Time_Type_SST_PRD_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PRD_2
2	**Stop**	xs:string

#	Name/Description	Format
	Empty	

Table 676: GPS_Time_Type_SST_PRD_2 Specification

6.1.2.2.41. Start_Type_SST_PRD_2

#	Name/Description	Format
1	**GPS**	GPS_Type_SST_PRD_2
2	**Mod_Jul_Day**	Mod_Jul_Day_Type_SST_PRD_2
3	**Gregorian**	GregorianType

Table 677: Start_Type_SST_PRD_2 Specification

6.1.2.2.42. GPS_Type_SST_PRD_2

#	Name/Description	Format
1	**Week**	xs:integer
2	**Seconds_of_Week**	xs:decimal

Table 678: GPS_Type_SST_PRD_2 Specification

6.1.2.2.43. Mod_Jul_Day_Type_SST_PRD_2

#	Name/Description	Format
1	**Day**	xs:integer
2	**Fractional_Day**	xs:decimal

Table 679: Mod_Jul_Day_Type_SST_PRD_2 Specification

6.1.2.2.44. Epoch_Information_Type_SST_PRD_2

#	Name/Description	Format
1	**Num_Epochs**	xs:integer
2	**Interval**	xs:float

Table 680: Epoch_Information_Type_SST_PRD_2 Specification

6.1.2.2.45. List_of_Satellite_Descriptors_Type_SST_PRD_2

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Satellite_Descriptor**	Satellite_Descriptor_Type_SST_PRD_2 Max Occurs : unbounded

Table 681: List_of_Satellite_Descriptors_Type_SST_PRD_2 Specification

6.1.2.2.46. Satellite_Descriptor_Type_SST_PRD_2

#	Name/Description	Format
1	**Satellite_ID**	xs:string
2	**Accuracy**	xs:string

Table 682: Satellite_Descriptor_Type_SST_PRD_2 Specification

6.1.2.2.47. SST_PRM_2Type

#	Name/Description	Format
1	**Original_Source**	Original_Source_Type_SST_PRM_2
2	**Transformation**	Transformation_Type_SST_PRM_2
3	**Time_Information**	Time_Information_Type_SST_PRM_2
4	**Epoch_Information**	Epoch_Information_Type_SST_PRM_2
5	**Pole_File**	xs:string
6	**Nutation**	Nutation_Type_SST_PRM_2
7	**Subdaily_Model**	xs:string

Table 683: SST_PRM_2Type Specification

6.1.2.2.48. Original_Source_Type_SST_PRM_2

#	Name/Description	Format
1	**System**	xs:string
2	**Creator**	xs:string
3	**Creator_Version**	xs:string
4	**Creation_Date**	xs:string
5	**Format**	Format_Type_SST_PRM_2

Table 684: Original_Source_Type_SST_PRM_2 Specification

6.1.2.2.49. Format_Type_SST_PRM_2

#	Name/Description	Format
1	**Name** Format Name Possible values: Rotation	xs:string
2	**Version**	xs:string

Table 685: Format_Type_SST_PRM_2 Specification

6.1.2.2.50. Transformation_Type_SST_PRM_2

#	Name/Description	Format
1	**File_Name**	xs:string
2	**Direction**	xs:string

Table 686: Transformation_Type_SST_PRM_2 Specification

6.1.2.2.51. Time_Information_Type_SST_PRM_2

#	Name/Description	Format
1	**System**	xs:string
2	**GPS_Time**	GPS_Time_Type_SST_PRM_2

Table 687: Time_Information_Type_SST_PRM_2 Specification

6.1.2.2.52. GPS_Time_Type_SST_PRM_2

#	Name/Description	Format
1	**Start**	Start_Type_SST_PRM_2
2	**Stop** Empty	xs:string

Table 688: GPS_Time_Type_SST_PRM_2 Specification

6.1.2.2.53. Start_Type_SST_PRM_2

#	Name/Description	Format
1	**Gregorian**	GregorianType

Table 689: Start_Type_SST_PRM_2 Specification

6.1.2.2.54. Epoch_Information_Type_SST_PRM_2

#	Name/Description	Format
1	**Reference**	xs:string

Table 690: Epoch_Information_Type_SST_PRM_2 Specification

6.1.2.2.55. Nutation_Type_SST_PRM_2

#	Name/Description	Format
1	**Model**	xs:string
2	**Offsets**	xs:string

Table 691: Nutation_Type_SST_PRM_2 Specification

6.1.2.2.56. GregorianType

#	Name/Description	Format
1	**Year**	xs:integer
2	**Month**	xs:integer
3	**Day_of_Month**	xs:integer
4	**Hour**	xs:integer
5	**Minute**	xs:integer
6	**Second**	xs:float

Table 692: GregorianType Specification

6.1.2.2.57. AUX_ANT_OS_Datablock_RecordType

Attribute:

Name	Use	Type
type	required	xs:string

#	Name/Description	Format
1	**List_Of_Ant_Phase_Centre_Offsets**	List_Of_Ant_Phase_Centre_Offsets_Type

Table 693: AUX_ANT_OS_Datablock_RecordType Specification

6.1.2.2.58. List_Of_Ant_Phase_Centre_Offsets_Type

Attribute:

Name	Use	Type
count		xs:integer

#	Name/Description	Format
1	**Ant_Phase_Centre_Offset**	AntPhhaseCentreOffsetRecordType Max Occurs : unbounded

Table 694: List_Of_Ant_Phase_Centre_Offsets_Type Specification

6.1.2.2.59. AntPhhaseCentreOffsetRecordType

#	Name/Description	Format
1	**Prn**	recordValueIntegerType
2	**Phc_Offset**	recordValueStringType

Table 695: AntPhhaseCentreOffsetRecordType Specification

6.1.2.2.60. recordValueIntegerType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	ValueInteger_Type

Table 696: recordValueIntegerType Specification

6.1.2.2.61. ValueInteger_Type

#	Name/Description	Format
1	Value Integer Type	xs:integer **Attribute:** Name: "unit" Type: "xs:string" Use : "optional"

Table 697: ValueInteger_Type Specification

6.1.2.2.62. recordValueStringType

#	Name/Description	Format
1	**Description**	xs:string
2	**Value**	ValueString_Type

Table 698: recordValueStringType Specification

6.1.2.2.63. ValueString_Type

#	Name/Description	Format
1	Value String Type	xs:string **Attribute:** Name: "unit" Type: "xs:string" Use : "optional"

Table 699: ValueString_Type Specification

6.2. Data Structures for file types in HDR format

The data structures have been classified by file type in the following sub-sections:

6.2.1. AUX_OUTC_ (HDR)

Next figure provides an overview of how the high level complex structures and basic types are

organised to describe the information of an AUX_OUTC_ file type in HDR format:

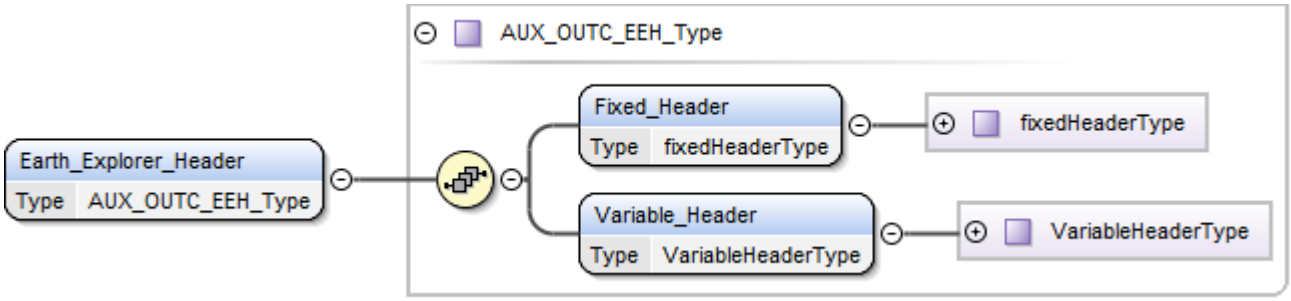

Figure 16: AUX_OUTC_ HDR organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

6.2.1.1. Root Element

#	Name/Description	Format
1	**Earth_Explorer_Header** The XML Header file contains information identifying the product and easy to read as based on a standard syntax accessed by common tools available for visualising its content. The XML syntax has been chosen for the scope of the PDS. The XML Header file is composed by: * a Fixed Header * a Variable Header The Fixed Header is the common header for all files in the GOCE Ground Segment. That means it is applied to all files flowing amongst the sub-systems composing the PDS. The Variable Header is the header with format and content depending on the file type and kind of product.	AUX_OUTC_EEH_Type

Table 700: Earth_Explorer_Header Specification

6.2.1.2. Simple Types

6.2.1.2.1. RestrictedRel_Time_Asc_NodeType

Base Type	Format
xs:decimal	Total Digits : "10" Fraction Digits: "6"

Table 701: RestrictedRel_Time_Asc_NodeType Specification

6.2.1.2.2. RestrictedLatLonType

Base Type	Format
xs:integer	Total Digits : "10"

Table 702: RestrictedLatLonType Specification

6.2.1.3. Complex Types

6.2.1.3.1. AUX_OUTC_EEH_Type

#	Name/Description	Format
1	**Fixed_Header**	fixedHeaderType
2	**Variable_Header**	VariableHeaderType

Table 703: AUX_OUTC_EEH_Type Specification

6.2.1.3.2. VariableHeaderType

#	Name/Description	Format
1	**MPH**	MPHType Min Occurs : 0
2	**SPH**	SPHType Min Occurs : 0

Table 704: VariableHeaderType Specification

6.2.1.3.3. SPHType

#	Name/Description	Format
1	**SPH_Descriptor** Name describing the Specific Product Header Possible values: AUX_OUTC__ SPECIFIC HEADER EGG_AUX_0_ SPECIFIC HEADER	xs:string
2	**Sensing_Start** UTC start time of data sensing.	LongTimeType Min Occurs : 0
3	**Sensing_Stop** UTC stop time of data sensing.	LongTimeType Min Occurs : 0
4	**Rel_Time_ASC_Node_Start** Relative time since crossing ascending node time relative to start time of data sensing.	Rel_Time_Asc_NodeType Min Occurs : 0
5	**Rel_Time_ASC_Node_Stop** Time of the ascending node relative to stop time of data sensing. Relative time since crossing ascending node time	Rel_Time_Asc_NodeType Min Occurs : 0

#	Name/Description	Format
	relative to stop time of data sensing.	
6	**Equator_Cross_Time** Time of equator crossing at the ascending node relative to the sensing start time.	LongTimeType Min Occurs : 0
7	**Equator_Cross_Long** Longitude of equator crossing at the ascending node relative to the sensing start time (positive East, 0 = Greenwich) referred to WGS84.	LatLonType Min Occurs : 0
8	**Ascending_Flag** Orbit orientation at the sensing start time: Ascending (A) Descending (D) Possible values: A D	xs:string Min Occurs : 0
9	**Product_Location**	Product_Location_Type Min Occurs : 0
10	**Product_Conf_Data**	Product_Conf_Data_Type Min Occurs : 0
11	**DSDs**	DSDs_Type

Table 705: SPHType Specification

6.2.1.3.4. Product_Location_Type

#	Name/Description	Format
1	**Start_Lat** Latitude of first satellite nadir point at the Sensing Start time (positive North)	LatLonType
2	**Start_Long** Longitude of first satellite nadir point at the Sensing Start time (positive East, 0 = Greenwich)	LatLonType
3	**Stop_Lat** Latitude of first satellite nadir point at the Sensing Stop time (positive North)	LatLonType
4	**Stop_Long** Longitude of first satellite nadir point at the Sensing Stop time (positive East, 0 = Greenwich)	LatLonType

Table 706: Product_Location_Type Specification

6.2.1.3.5. Product_Conf_Data_Type

#	Name/Description	Format
1	**Num_ISPs** Number of ISPs in the Level 0	xs:integer Total Digits : 7
2	**Num_Missing_ISPs** Number of missing ISPs	xs:integer Total Digits : 7

#	Name/Description	Format
3	**Num_Error_ISPs** Number of ISPs containing CRC errors	xs:integer Total Digits : 7
4	**Num_Discarded_ISPs** Number of ISPs discarded	xs:integer Total Digits : 7
5	**Num_RS_ISPs** Number of ISPs with Reed-Solomon correction in the Level 0.	xs:integer Total Digits : 7
6	**Num_RS_Corrections** Number of symbols corrected with Reed-Solomon in the product.	xs:integer Total Digits : 7

Table 707: Product_Conf_Data_Type Specification

6.2.1.3.6. DSDs_Type

#	Name/Description	Format
1	**List_of_DSDs** Number of Data Sets	List_of_DSDs_Type

Table 708: DSDs_Type Specification

6.2.1.3.7. List_of_DSDs_Type

Attribute:

Name	Use	Type
count	required	xs:integer

#	Name/Description	Format
1	**Data_Set_Descriptor**	Data_Set_DescriptorType Max Occurs : unbounded

Table 709: List_of_DSDs_Type Specification

6.2.1.3.8. Rel_Time_Asc_NodeType

#	Name/Description	Format
1	Relative Time Ascending Node Type	RestrictedRel_Time_Asc_NodeType **Attribute:** Name: "unit" Type: "xs:NCName" Use : "required"

Table 710: Rel_Time_Asc_NodeType Specification

6.2.1.3.9. LatLonType

#	Name/Description	Format
1	Latitude Longitude Type	RestrictedLatLonType **Attribute:** Name: "unit"

#	Name/Description	Format
		Type: "xs:string" Use : "required"

Table 711: LatLonType Specification

6.2.1.3.10. Data_Set_DescriptorType

#	Name/Description	Format
1	**Data_Set_Name** Name describing the Data Set	xs:string Min Occurs : 0 Max Length : 28 bytes
2	**Data_Set_Type** Type of Data Set. Measurement (M) or Reference (R) Possible values: M R	xs:NCName Min Occurs : 0
3	**File_Name** Name of Reference File	xs:string Min Occurs : 0 Max Length : 62 bytes
4	**Data_Set_Offset** Offset in bytes from the beginning of the file (MPH+SPH including DSD) This field will be filled only for measurement Data Set.	SizeType Min Occurs : 0
5	**Data_Set_Size** Size of the Data Set This field will be filled only for measurement Data Set	SizeType Min Occurs : 0
6	**Num_of_Records** Number of records in the Data Set (filled only for measurements Data Set)	xs:integer Min Occurs : 0 Total Digits : 11
7	**Record_Size** Size in bytes of a record	SizeType Min Occurs : 0
8	**Byte_Order** Byte ordering information. It describes the endianess of the data set. 3210 (Big-endian) 0123 (Little-endian) For the Reference DSD this field is empty	xs:unsignedShort Min Occurs : 0 Total Digits : 4

Table 712: Data_Set_DescriptorType Specification

6.3. Data Structures for file types in DBL format

The data structures have been classified by file type in the following sub-sections:

6.3.1. AUX_OUTC_ (DBL)

Next figure provides an overview of how the high level complex structures and basic types are organised to describe the information of an AUX_OUTC_ file type in HDR format:

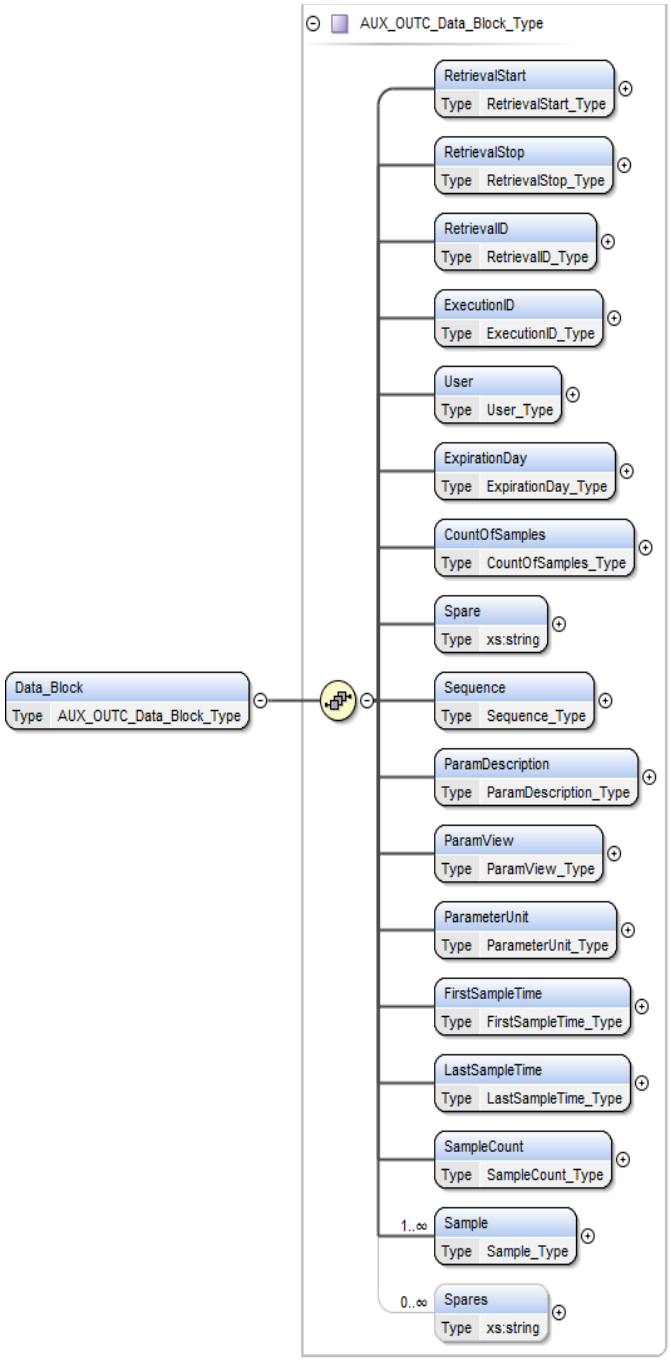

Figure 17: AUX_OUTC_ DBL organisation overview

A detailed description of each complex type used for the representation information of this auxiliary file type is given in next sub-sections.

6.3.1.1. Simple Types

6.3.1.1.1. RetrievalStart_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	15	Possible values: Retrieval start

Table 713: RetrievalStart_Tag_Type Specification

6.3.1.1.2. RetrievalStop_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	14	Possible values: Retrieval stop

Table 714: RetrievalStop_Tag_Type Specification

6.3.1.1.3. RetrievalID_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	12	Possible values: Retrieval ID

Table 715: RetrievalID_Tag_Type Specification

6.3.1.1.4. ExecutionID_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	12	Possible values: Execution ID

Table 716: ExecutionID_Tag_Type Specification

6.3.1.1.5. User_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	4	Possible values: User

Table 717: User_Tag_Type Specification

6.3.1.1.6. ExpirationDay_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	14	Possible values: Expiration Day

Table 718: ExpirationDay_Tag_Type Specification

6.3.1.1.7. CountOfSamples_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	16	Possible values: Count of samples

Table 719: CountOfSamples_Tag_Type Specification

6.3.1.1.8. ParamDescription_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	17	Possible values: Param Description

Table 720: ParamDescription_Tag_Type Specification

6.3.1.1.9. ParamView_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	10	Possible values: Param View

Table 721: ParamView_Tag_Type Specification

6.3.1.1.10. ParameterUnit_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	14	Possible values: Parameter Unit

Table 722: ParameterUnit_Tag_Type Specification

6.3.1.1.11. FirstSampleTime_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	17	Possible values: First Sample Time

Table 723: FirstSampleTime_Tag_Type Specification

6.3.1.1.12. LastSampleTime_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	16	Possible values: Last Sample Time

Table 724: LastSampleTime_Tag_Type Specification

6.3.1.1.13. SampleCount_Tag_Type

Base Type	Length (bytes)	Comments
xs:string	12	Possible values: Sample Count

Table 725: SampleCount_Tag_Type Specification

6.3.1.1.14. Root Element

#	Name/Description	Format
1	**Data_Block**	AUX_OUTC_Data_Block_Type

Table 726: Data_Block Specification

6.3.1.2. Complex Types

6.3.1.2.1. AUX_OUTC_Data_Block_Type

#	Name/Description	Format
1	**RetrievalStart**	RetrievalStart_Type
2	**RetrievalStop**	RetrievalStop_Type
3	**RetrievalID**	RetrievalID_Type
4	**ExecutionID**	ExecutionID_Type
5	**User**	User_Type
6	**ExpirationDay**	ExpirationDay_Type
7	**CountOfSamples**	CountOfSamples_Type
8	**Spare**	xs:string
9	**Sequence**	Sequence_Type
10	**ParamDescription**	ParamDescription_Type
11	**ParamView**	ParamView_Type
12	**ParameterUnit**	ParameterUnit_Type
13	**FirstSampleTime**	FirstSampleTime_Type
14	**LastSampleTime**	LastSampleTime_Type
15	**SampleCount**	SampleCount_Type
16	**Sample**	Sample_Type Max Occurs : unbounded
17	**Spares**	xs:string Min Occurs : 0 Max Occurs : unbounded

Table 727: AUX_OUTC_Data_Block_Type Specification

6.3.1.2.2. RetrievalStart_Type

#	Name/Description	Format
1	**Tag**	RetrievalStart_Tag_Type Max Occurs : 1
2	**Value**	xs:dateTime Max Occurs : 1

Table 728: RetrievalStart_Type Specification

6.3.1.2.3. RetrievalStop_Type

#	Name/Description	Format
1	**Tag**	RetrievalStop_Tag_Type Max Occurs : 1
2	**Value**	xs:dateTime Max Occurs : 1

Table 729: RetrievalStop_Type Specification

6.3.1.2.4. RetrievalID_Type

#	Name/Description	Format
1	**Tag**	RetrievalID_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 730: RetrievalID_Type Specification

6.3.1.2.5. ExecutionID_Type

#	Name/Description	Format
1	**Tag**	ExecutionID_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 731: ExecutionID_Type Specification

6.3.1.2.6. User_Type

#	Name/Description	Format
1	**Tag**	User_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : 1

Table 732: User_Type Specification

6.3.1.2.7. ExpirationDay_Type

#	Name/Description	Format
1	**Tag**	ExpirationDay_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 733: ExpirationDay_Type Specification

6.3.1.2.8. CountOfSamples_Type

#	Name/Description	Format
1	**Tag**	CountOfSamples_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : 1

Table 734: CountOfSamples_Type Specification

6.3.1.2.9. Sequence_Type

#	Name/Description	Format
1	**Spare**	xs:string
2	**Value**	xs:string Max Occurs : unbounded

Table 735: Sequence_Type Specification

6.3.1.2.10. ParamDescription_Type

#	Name/Description	Format
1	**Tag**	ParamDescription_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 736: ParamDescription_Type Specification

6.3.1.2.11. ParamView_Type

#	Name/Description	Format
1	**Tag**	ParamView_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 737: ParamView_Type Specification

6.3.1.2.12. ParameterUnit_Type

#	Name/Description	Format
1	**Tag**	ParameterUnit_Tag_Type Max Occurs : 1
2	**Value**	xs:string Max Occurs : unbounded

Table 738: ParameterUnit_Type Specification

6.3.1.2.13. FirstSampleTime_Type

#	Name/Description	Format
1	**Tag**	FirstSampleTime_Tag_Type Max Occurs : 1
2	**Value**	xs:dateTime Max Occurs : unbounded

Table 739: FirstSampleTime_Type Specification

6.3.1.2.14. LastSampleTime_Type

#	Name/Description	Format
1	**Tag**	LastSampleTime_Tag_Type Max Occurs : 1
2	**Value**	xs:dateTime Max Occurs : unbounded

Table 740: LastSampleTime_Type Specification

6.3.1.2.15. SampleCount_Type

#	Name/Description	Format
1	**Tag**	SampleCount_Tag_Type Max Occurs : 1
2	**Value**	xs:integer Max Occurs : unbounded

Table 741: SampleCount_Type Specification

6.3.1.2.16. Sample_Type

#	Name/Description	Format
1	**SampleTime**	xs:dateTime Max Occurs : 1
2	**UTC_0_COARSE**	xs:integer Max Occurs : 1

#	Name/Description	Format
3	**UTC_0_FINE**	xs:integer Max Occurs : 1
4	**OBT_0_COARSE**	xs:integer Max Occurs : 1
5	**OBT_0_FINE**	xs:integer Max Occurs : 1
6	**TCO_GRADIENT**	xs:decimal Max Occurs : 1
7	**TCO_OFFSET**	xs:string Max Occurs : 1
8	**TCO_VALIDITY**	xs:integer Max Occurs : 1
9	**TCO_VAL_THRESH**	xs:integer Max Occurs : 1
10	**TCO_ACCURACY**	xs:integer Max Occurs : 1
11	**TCO_ACC_THRESH**	xs:integer Max Occurs : 1

Table 742: Sample_Type Specification