

TITLE: ENVISAT-1 PRODUCTS SPECIFICATIONS

VOLUME 17: EXTRACTED INSTRUMENT HEADERS

WRITTEN BY: I. McLeod _____
 (signature / date)

CHECKED BY: R. Dale _____

APPROVED BY: B. Robertson _____

AUTHORISED BY: J. McArdle _____

DOCUMENT CATEGORY: 7 Approval Review Information

THOMSON-CSF
 APPROVAL:

SUMMARY: This document specifies the ENVISAT-1 products.
 DRL 3-3 of contract 27/11/95-761.

The information contained in this document is the sole and exclusive property of MacDonald, Dettwiler and Associates Ltd. and shall not be disclosed by the recipient to third persons without the prior written consent of MacDonald, Dettwiler and Associates Ltd.

Company internal reference: 50-7316 Proposition:



THIS PAGE INTENTIONALLY LEFT BLANK

**CHANGE RECORD**

ISSUE	REVISION	DATE	CHANGE STATUS	ORIGIN
1	A	12/01/96	Issue 1	
1	B	16/02/96	<p>SCR #16, CR #16 Issue 1, Revision B</p> <p>Reason for Change:</p> <p>Updated to reflect information in PO-TN-ESA-GS-0381 and to address RIDs of Feb. 2/96 pertaining to the Level 0 structure.</p> <p>MPH, SPH, DSD, and DSR structures modified.</p> <p>Table added showing generalized Level 0 product structure.</p> <p>RIDs Addressed:</p> <p>ESA/0001: FEP header defined ESA/0002: PF-Host time stamp clarified</p> <p>ESA/0004: Processing PCD added ESA/0006: AF PCD ADS and DSD added</p> <p>ESA/0007: page A-3 updated ESA/0008: page B-3 updated</p> <p>ESA/0009: Table 8.1.1 modified ESA/0011: TBD changed to Range/Doppler</p> <p>ESA/0013: FEP header defined ESA/0014: Table 8.4.7.4-2 corrected</p> <p>CSF/1: filename in MPH corrected CSF/2: page A-3 updated</p>	

ISSUE	REVISION	DATE	CHANGE STATUS	ORIGIN
1	C	04/04/96	CSF/3: MPH PCD information updated CSF/5: DSD added to Level 0 SPH CSF/6: Section on AATSR updated and re-issued CSF/8: AATSR_O Summary Sheet updated SCR #38, CR #38 Issue 1, Revision C Reason for Change: Updated Sections 1-6, 17 and Annex A to reflect changes discussed at the Products Review Meeting #1, March 5-8, 1996, as per action item "AI MDA 6 April 96" from PO-MN-ESA-00416, Pg. 35.	Products Review Meeting #1
2	A	20/05/96	SCR #71, CR #71 Issue 2 Separate volume created. First issue of this section.	
2	B	02/09/96	SCR #102, CR #102 Issue 2, Revision B Reason for Change: SPH format updated and Field Description GADS added.	Products Review Meeting #2
3	A	10/02/97	SCR #133, CR #133 Issue 3 Reason for Change: Updated after ESA review.	ESA RIDs



**MACDONALD
DETTWILER**

ENVISAT PAYLOAD DATA SEGMENT

Ref: PO-RS-MDA-GS-2009

Is.: 3 Rev.: A Date: 10/02/97 Page: B.1

REGISTER OF CHANGES

Affected pages:

17-2, 17-3



**MACDONALD
DETTWILER**

ENVISAT PAYLOAD DATA SEGMENT

Ref: PO-RS-MDA-GS-2009

Is.: 3 Rev.: A Date: 10/02/97 Page: B.2

THIS PAGE INTENTIONALLY LEFT BLANK



TABLE OF CONTENTS

17	EXTRACTED INSTRUMENT HEADERS	17-1
17.1	NAMING CONVENTION	17-1
17.2	EXTRACTED INSTRUMENT HEADERS (EIH) PRODUCT FORMAT	17-1
17.2.1	EIH SPH	17-2
17.2.2	EIH Fields Description GADS	17-3
17.2.3	EIH MDS	17-4



**MACDONALD
DETTWILER**

ENVISAT PAYLOAD DATA SEGMENT

Ref: PO-RS-MDA-GS-2009

Is.: 3 Rev.: A Date: 10/02/97 Page: C.2

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

	Table17.2.1-1	EIH SPH	17-2
	Table17.2.2-1	EIH Fields Description GADS	17-3
	Table17.2.3-1	EIH MDS	17-4



**MACDONALD
DETTWILER**

ENVISAT PAYLOAD DATA SEGMENT

Ref: PO-RS-MDA-GS-2009

Is.: 3 Rev.: A Date: 10/02/97 Page: E.2

THIS PAGE INTENTIONALLY LEFT BLANK

17 EXTRACTED INSTRUMENT HEADERS

The Extracted Instrument Headers Product is intended for ESA internal use only. It is produced on request, 1 day from data sensing, and contains selected source packet fields of a selected instrument for a selected time interval. The product is extracted over a given time period from the Level 0 data for the instrument of interest. Individual fields may be selected by specifying the byte offset to the field of interest and the length in bytes of the field of interest.

For example, selecting “Field Offsets” of 12 and 1234 along with “Field Lengths” of 4 and 100 will cause the extraction of bytes 12 - 15 and bytes 1234 - 1333 of each MDSR in the region of interest of the file. The region of interest is specified by either a start and stop sensing time or a ground segment reference start and stop time.

17.1 NAMING CONVENTION

The naming convention will be as specified in Volume 4.

17.2 EXTRACTED INSTRUMENT HEADERS (EIH) PRODUCT FORMAT

The Extracted Instrument Header Product will consist of an MPH, and SPH (containing 2 DSDs), an Offset Description GADS, and an MDS containing the selected fields of the selected MDSRs. The MPH will be identical to the MPH of the

Level 0 product from which the data is being extracted, except for the time and positioning information which are updated to reflect the extracted region.

17.2.1 EIH SPH

All EIH products will share a common SPH format which is described below. The SPH uses an ASCII format as described in Volume 5.

Table 17.2.1-1 EIH SPH

Field #	Description	units	Byte length	Data Type	Dim.
1	SPH_DESCRIPTOR=	keyword	15	uc	15
	quotation mark (“	-	1	uc	1
	SPH Descriptor ASCII string describing the product. (e.g., ASARØImageØModeØHeaderØØØØØØØØ)	-	28	uc	28
	quotation mark (“	-	1	uc	1
	newline character	terminator	1	uc	1
2	START_SENSING_TIME=	keyword	19	uc	19
	quotation mark (“	-	1	uc	1
	Sensing Time of first MDSR in product in UTC format.	UTC	27	uc	27
	quotation mark (“	-	1	uc	1
	newline character	terminator	1	uc	1
3	START_GSRT=	keyword	11	uc	11
	quotation mark (“	-	1	uc	1
	Ground station reference time of first MDSR in product in UTC format.	UTC	27	uc	27
	quotation mark (“	-	1	uc	1
	newline character	terminator	1	uc	1
4	STOP_SENSING_TIME=	keyword	18	uc	18
	quotation mark (“	-	1	uc	1
	Sensing Time of last MDSR in product in UTC format.	UTC	27	uc	27
	quotation mark (“	-	1	uc	1
	newline character	terminator	1	uc	1

Table17.2.1-1 EIH SPH

Field #	Description	units	Byte length	Data Type	Dim.
5	STOP_GSRT=	keyword	10	uc	10
	quotation mark (“)	-	1	uc	1
	Ground station reference time of last MDSR in product in UTC format.	UTC	27	uc	27
	quotation mark (“)	-	1	uc	1
	newline character	terminator	1	uc	1
6	NUM_FIELDS=	keyword	11	uc	11
	Total number of extracted fields from each MDSR. (N)	-	6	As	1
	newline character	terminator	1	uc	1
7	Spare (blank characters (Ø))	-	50	uc	50
	newline character	terminator	1	uc	1
8	DSD for the Fields Description GADS As defined in Volume 5.	-	280	dsd	1
9	DSD for MDS As defined in Volume 5.	-	280	dsd	1
Total		-	853		

17.2.2 EIH Fields Description GADS

The EIH GADS lists the position and size of each extracted data field. The format is shown below. There may be up to N extracted fields.

Table17.2.2-1 EIH Fields Description GADS

Field #	Description	units	Byte length	Data Type	Dim.
1	Field Offsets This array contains the number of bytes offset from the beginning of the MDSR to the first byte in the field extracted from the MDSR for every field extracted.	-	N	us	variable
2	Field Lengths Number of bytes in the extracted field. Each value given corresponds to the field described in the field offsets list above. There is one field length entry for each field offset entry.	-	N	us	variable
Total		-	Variable		

17.2.3 EIH MDS

The MDS of the EIH consists of extracted data. The two time stamps of the Level 0 product (sensing time followed by ground segment reference time) are always retained as the first 24 bytes of each extracted MDSR. The remaining bytes are composed of the extracted data. The amount of extracted data is equal for every extracted MDSR so all MDSRs are the same length. The number of MDSRs in the product depends on the size of the extracted region requested. Thus the contents of each MDSR is shown below.

Table17.2.3-1 EIH MDS

Field #	Description	units	Byte length	Data Type	Dim.
1	Sensing Time of MDSR	-	12	mjd	1
2	Ground Segment Reference time of MDSR	-	12	mjd	1
3	Data from first extracted field	variable	variable	variable	variable
4	Data from second extracted field (if requested)	variable	variable	variable	variable
5	Data from third extracted field (if requested)	variable	variable	variable	variable
6	Data from fourth extracted field (if requested)	variable	variable	variable	variable
7				
8	Data from Nth extracted field (if requested)	variable	variable	variable	variable
Total		-	variable		

DISTRIBUTION LIST

NAME	COPY	NAME	COPY
I. MCLEOD	X	THOMSON-CSF	3X
GEO-INFO LIBRARY	X	ESRIN	3X
		ESTEC	1X