

KAGUYA (SELENE)

Product Format Description

- Charged Particle Spectrometer (CPS) -

Version 1.0

November 1, 2009

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# 1. Introduction

## 1.1 Purpose

This document describes the format\*<sup>2</sup> used for the catalog and product files for the Charged Particle Spectrometer \*<sup>1</sup>(CPS) that was board KAGUYA (SELENE). These files provided by Japan Aerospace Exploration Agency (JAXA).

\*1 : Refer to the following “Project Homepage of KAGUYA” and “Image Gallery of KAGUYA” used for the CPS mission.

- ✓ Project Homepage for KAGUYA  
[http://www.kaguva.jaxa.jp/en/equipment/cps\\_e.htm](http://www.kaguva.jaxa.jp/en/equipment/cps_e.htm)
- ✓ Image Gallery for KAGUYA  
[http://wms.selene.darts.isas.jaxa.jp/selene\\_viewer/en/observation\\_mission/cps/](http://wms.selene.darts.isas.jaxa.jp/selene_viewer/en/observation_mission/cps/)

\*2 : The data format used for SELENE is based on the PDS (Planetary Data System) by NASA. However, the data format is not fully compliant with the PDS format.

## 1.2 The composition of this format description

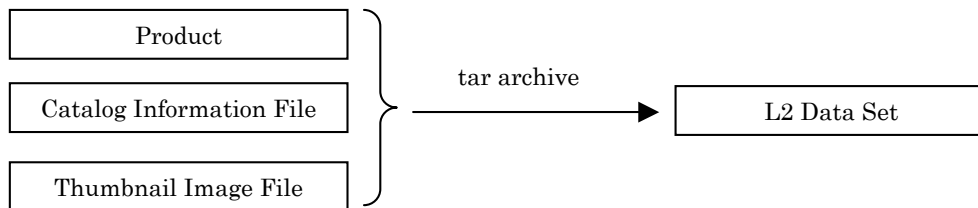
Table 1-1 shows the composition of this format description.

**Table 1-1 the composition of this format description**

No	INDEX	Title	Description content
1	Section 1.3	Table 1-2 CPS Products List	The name of the product, the object form, and the composition of the product are described as a product list illustrated by this description.
		Table 1-3 Product Description	Concerning each product shown in the No1 product list, the content included in data and the description of the observation method are illustrated.
2	Chapter X	“ Product Name”	Concerning the product shown in the No1 product list, rules used for file naming, label format, data object format and catalog information file format are described.
3	Section X.1	Rules used for File naming	Concerning the product shown in No2, the rules of file nomenclature is described.
4	Section X.2	Label Format	Concerning the product shown in No2, the label format is described.
5	Section X.3	Data Object Format	Concerning the product shown in No2, the data format of the data object is described. (The extension of the data file is unique in each product. Therefore, refer to the file nomenclature in No3. )
6	Section X.4	Catalog Information File Format	Concerning the product shown in No2, the format of the catalog information file (extension: .ctg ) of the product is described.
7	Chapter X+1		
		Same as above	

### 1.3 Data Set

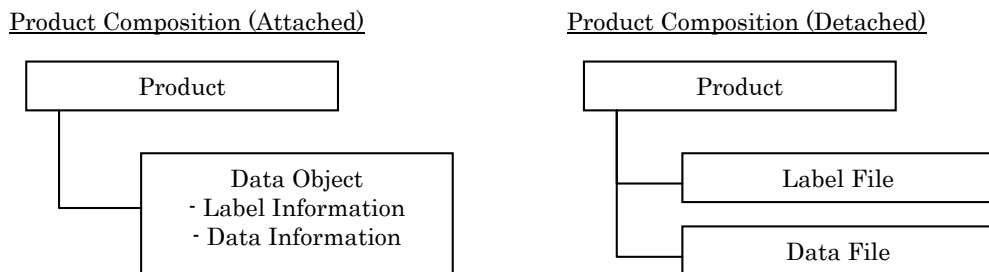
The Data Set refers to a set consisting of: Product, Catalog Information, and Thumbnail Image (JPEG format), which are tar-archived. This set is referred to as the “L2 Data Set”. The file extension is “SL2”. However, the thumbnail image may be omitted at the by composer’s judgment.



**Figure 1-1 composition of the L2 Data Set**

#### 1.3.1 Product

For product composition, two possible options are available. Product Composition – Attached consists of label information and data information in a single data file. Product Composition – detached consists of separate files for the label file and data file.



**Figure 1-2 Product Composition : Attached and Detached**

- (1) Label File (Data Object (Label Information))  
The Label File (Label Information) is storing as text format the information that identifies the Data File (Data Information).
  
- (2) Data File (Data Object (Data Information))  
The data File (Data Object (Data Information)) of the product are classified into the following four data types.

- a) **IMAGE** : image data  
An **IMAGE** is a two-dimensional array of values, all of the same type, each of which is referred to as a sample. **IMAGE** are normally processed with special display tools to produce a visual representation of the samples by assigning brightness levels or display colors to the values. An **IMAGE** consists of a series of lines, each containing the same number of samples.  
\*Refer to the PDS Standard Reference V3.8 Appendix A.20 "IMAGE".
  
- b) **TABLE** : tabular form data  
**TABLES** are a natural storage format for collections of data from many instruments. The **TABLE** is a uniform collection of rows containing ASCII or binary values stored in columns.  
\*Refer to the PDS Standard Reference V3.8 Appendix A.29 "TABLE".
  
- c) **SERIES** : time series data  
The **SERIES** is a sub-class of the **TABLE**. It is used for storing a sequence of measurements organized in a specific way. The sampling parameter keywords in the **SERIES** represent the variation between the **ROWS** of data.  
\*Refer to the PDS Standard Reference V3.8 Appendix A.24 "SERIES"
  
- d) **TEXT** : text data  
The **TEXT** describes a file which contains plain text.  
\*Refer to the PDS Standard Reference V3.8 Appendix A.30 "TEXT".

### 1.3.2 Catalog Information File

Catalog Information File is the information file attached to explain the general of the product and is used to search for the product from L2DB subsystem.

### 1.3.3 Thumbnail Image File

Thumbnail Image File is the reduced image of the data object, and is the JPEG format image. However, the thumbnail image may be omitted at the by composer's judgment.

## 1.4 CPS Products

The list of CPS products, which this document describes, is shown in Table 1-2. In addition, the description for each product is shown in Table 1-3.

**Table 1-2 CPS Products List**

Level*1	Product Name	Product ID	Data Type	Product Format*2
Standard	Rn intensity map	ARD_Rn_map	IMAGE	A
Standard	Po intensity map	ARD_Po_map	IMAGE	A
Higher Level	Special area map	ARD_Special_range	IMAGE	A
Standard	Time variation of Rn and Po fluxes (Graph)	ARD_counts_graph	IMAGE	A
	Time variation of Rn and Po fluxes	ARD_counts_data	SERIES	A
Standard	Flux variation of light particles (Graph)	PS_light_particle_graph	IMAGE	
	Flux variation of light particles	PS_light_particle_data	SERIES	
	Flux variation of heavy particles (Graph)	PS_heavy_particle_graph	IMAGE	
	Flux variation of heavy particles	PS_heavy_particle_data	SERIES	
	Flux variation of isotope data	PS_isotope_data	HISTGRAM	
Higher Level	Electron and Proton data in Special periods (Graph)	PS_event_graph	IMAGE	
	Electron and Proton data in Special periods	PS_event_data	SERIES	

□ : Map product

\*1 : Data obtained by equipments is not clear as it is, therefore various processings and correction treatment are necessary by the ground system. According to the difference in the process of processing and correction treatment, they can be classified to the standard processing and higher-level processing. The higher-level processing refers to the standard processing data to which various processing and correction treatment are conducted according to the research purpose et cetera.

\*2 Product Format : A - Attached, D - Detached

**Table 1-3 Product Description**

Product Name	Descriptions
Rn intensity map	Rn flux mapping data estimated from the ARD instrument observation data on the satellite orbit
Po intensity map	Po flux mapping data estimated from the ARD instrument observation data on the satellite orbit
Special area map	Po/Rn flux ratio mapping data in special area on lunar surface estimated from the ARD instrument observation data on the satellite orbit
Time variation of Rn and Po fluxes (Graph)	Rn and Po counts data by the ARD instrument on the satellite orbit (counts vs time)
Time variation of Rn and Po fluxes	Rn and Po counts data by the ARD instrument on the satellite orbit
Flux variation of light particles (Graph)	Electron, Proton and He fluxes by the PS instruments on the satellite orbit (fluxes vs time)
Flux variation of light particles	Electron, Proton and He fluxes by the PS instruments on the satellite orbit
Flux variation of heavy particles (Graph)	Heavy ion fluxes by the PS instruments on the satellite orbit (fluxes vs time)
Flux variation of heavy particles	Heavy ion fluxes by the PS instruments on the satellite orbit
Flux variation of isotope data	Isotope ratios for heavy ions by the PS instruments on the satellite orbit
Electron and Proton data in Special periods (Graph)	Electron and Proton fluxes when high flux events occurred (fluxes vs time)
Electron and Proton data in Special periods	Electron and Proton fluxes when high flux events occurred

□ : Map product



## 2. Rn intensity map

### 2.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 2.2 Label Format

The Label format for the IMAGE object used for the Rn intensity map product is shown in Table 2-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 2-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 2-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 2.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>

<b>Image Data Object Format Description Part( /* IMAGE */ )</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 "IMAGE".
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X
21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X.X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part( /* IMAGE_MAP_PROJECTION */ )</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

**<Example of Label : Rn intensity map >**

```
/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE = BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END
```

## 2.3 Data Object Format

T.B.D

## 2.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 2-2.

**Table 2-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 2.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 2.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Rn intensity map >**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

### 3. Po intensity map

#### 3.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

#### 3.2 Label Format

The Label format for the IMAGE object used for the Po intensity map product is shown in Table 3-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 3-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 3-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 3.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char(	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>
<b>Image Data Object Format Description Part&gt;(* IMAGE *)</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 “IMAGE”.
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X

21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X.X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part(/* IMAGE_MAP_PROJECTION *)</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

**<Example of Label : Po intensity map>**

```
/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE = BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END
```

### 3.3 Data Object Format

T.B.D



### 3.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 3-2.

**Table 3-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 3.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 3.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Po intensity map >**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 4. Special area map

### 4.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 4.2 Label Format

The Label format for the IMAGE object used for the Special area map product is shown in Table 4-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 4-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 4-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 4.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>

<b>Image Data Object Format Description Part( /* IMAGE */ )</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 "IMAGE".
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X
21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X.X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part( /* IMAGE_MAP_PROJECTION */ )</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

**<Example of Label : Special area map>**

```
/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE= BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END
```

### 4.3 Data Object Format

T.B.D

## 4.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 4-2.

**Table 4-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 4.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 4.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level")
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID")
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Special area map >**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 5. Time variation of Rn and Po fluxes (Graph)

### 5.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 5.2 Label Format

The Label format for the IMAGE object used for the Time variation of Rn and Po fluxes (Graph) product is shown in Table 5-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 5-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 5-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 5.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char(	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>



<b>Image Data Object Format Description Part( /* IMAGE */ )</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 "IMAGE".
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X
21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X.X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part( /* IMAGE_MAP_PROJECTION */ )</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

**<Example of Label : Time variation of Rn and Po fluxes (Graph)>**

```
/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE = BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END
```

### 5.3 Data Object Format

T.B.D

## 5.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 5-2.

**Table 5-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 5.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 5.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Time variation of Rn and Po fluxes  
(Graph)>**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 6. Time variation of Rn and Po fluxes

### 6.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 6.2 Label Format

The Label format for the SERIES object used for the Time variation of Rn and Po fluxes product is shown in Table 6-1. The Label for the SERIES object includes: Standard Item and Data Object Format Description Part.

In Table 6-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 6-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 6.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^SERIES = %d <BYTES>	int	XXX <BYTES>
<b>END statement</b>				
		END		

**<Example of Label : Time variation of Rn and Po fluxes >**

```

/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_counts_data.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_counts_data
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "ARD counts data"
^IMAGE = 321 <BYTES>
END

```

### 6.3 Data Object Format

T.B.D

### 6.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 6-2.

**Table 6-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA....AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 6.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA....AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the instrument	InstrumentName	AAAA....AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA....AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Time variation of Rn and Po fluxes >**

DataFileName = ARD\_counts\_data.img  
DataFileSize = 8960  
DataFileFormat = PDS  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_counts\_data  
ProductVersion = 1.0  
AccessLevel = 3  
StartDateTime = 2005-08-01T00:00:00.000000Z  
EndDateTime = 2005-08-01T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 7. Flux variation of light particles (Graph)

### 7.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 7.2 Label Format

The Label format for the IMAGE object used for the Flux variation of light particles (Graph) product is shown in Table 7-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 7-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 7-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 7.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>



<b>Image Data Object Format Description Part( /* IMAGE */ )</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 "IMAGE".
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X
21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X.X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part( /* IMAGE_MAP_PROJECTION */ )</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

**<Example of Label : Flux variation of light particles (Graph)>**

```
/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE = BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END
```

### 7.3 Data Object Format

T.B.D

## 7.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 7-2.

**Table 7-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 7.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 7.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level")
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID")
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Flux variation of light particles  
(Graph)>**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 8. Flux variation of light particles

### 8.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 8.2 Label Format

The Label format for the SERIES object used for the Flux variation of light particles product is shown in Table 8-1. The Label for the SERIES object includes: Standard Item and Data Object Format Description Part.

In Table 8-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 8-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 8.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^SERIES = %d <BYTES>	int	XXX <BYTES>
<b>END statement</b>				
		END		

**<Example of Label : Flux variation of light particles >**

```

/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_counts_data.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_counts_data
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "ARD counts data"
^IMAGE = 321 <BYTES>
END

```

### 8.3 Data Object Format

T.B.D

### 8.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 8-2.

**Table 8-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA....AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 8.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA....AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the instrument	InstrumentName	AAAA....AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA....AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Flux variation of light particles >**

DataFileName = ARD\_counts\_data.img  
DataFileSize = 8960  
DataFileFormat = PDS  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_counts\_data  
ProductVersion = 1.0  
AccessLevel = 3  
StartDateTime = 2005-08-01T00:00:00.000000Z  
EndDateTime = 2005-08-01T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 9. Flux variation of heavy particles (Graph)

### 9.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 9.2 Label Format

The Label format for the IMAGE object used for the Flux variation of heavy particles (Graph) product is shown in Table 9-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 9-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 9-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 9.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>



<b>Image Data Object Format Description Part( /* IMAGE */ )</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 "IMAGE".
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X
21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part( /* IMAGE_MAP_PROJECTION */ )</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

**<Example of Label : Flux variation of heavy particles (Graph)>**

```
/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE = BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END
```

### 9.3 Data Object Format

T.B.D

## 9.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 9-2.

**Table 9-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 9.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 9.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Flux variation of heavy particles  
(Graph)>**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 10. Flux variation of heavy particles

### 10.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 10.2 Label Format

The Label format for the SERIES object used for the Flux variation of heavy particles product is shown in Table 10-1. The Label for the SERIES object includes: Standard Item and Data Object Format Description Part.

In Table 10-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 10-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 10.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^SERIES = %d <BYTES>	int	XXX <BYTES>
<b>END statement</b>				
		END		

**<Example of Label : Flux variation of heavy particles >**

```

/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_counts_data.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_counts_data
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "ARD counts data"
^IMAGE = 321 <BYTES>
END

```

### 10.3 Data Object Format

T.B.D

### 10.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 10-2.

**Table 10-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA....AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 10.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA....AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the instrument	InstrumentName	AAAA....AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA....AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Flux variation of heavy particles >**

DataFileName = ARD\_counts\_data.img  
DataFileSize = 8960  
DataFileFormat = PDS  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_counts\_data  
ProductVersion = 1.0  
AccessLevel = 3  
StartDateTime = 2005-08-01T00:00:00.000000Z  
EndDateTime = 2005-08-01T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 11. Flux variation of isotope data

### 11.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 11.2 Label Format

The Label format for the SERIES object used for the Flux variation of isotope data product is shown in Table 11-1. The Label for the SERIES object includes: Standard Item and Data Object Format Description Part.

In Table 11-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 11-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 13.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^SERIES = %d <BYTES>	int	XXX <BYTES>
<b>END statement</b>				
		END		

**<Example of Label : Flux variation of isotope data>**

```

/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_counts_data.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_counts_data
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "ARD counts data"
^IMAGE = 321 <BYTES>
END

```



### 11.3 Data Object Format

T.B.D

### 11.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 11-2.

**Table 11-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA....AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 13.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA....AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the instrument	InstrumentName	AAAA....AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA....AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Flux variation of isotope data>**

DataFileName = ARD\_counts\_data.img  
DataFileSize = 8960  
DataFileFormat = PDS  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_counts\_data  
ProductVersion = 1.0  
AccessLevel = 3  
StartDateTime = 2005-08-01T00:00:00.000000Z  
EndDateTime = 2005-08-01T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 12. Electron and Proton data in Special periods (Graph)

### 12.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 12.2 Label Format

The Label format for the IMAGE object used for the Electron and Proton data in Special periods (Graph) product is shown in Table 12-1. The Label for the IMAGE object includes: Standard Item, Image Data Object Format Description Part and IMAGE\_MAP\_PROJECTION Object Description Part.

In Table 12-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 12-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 11.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^IMAGE = %d <BYTES>	int	XXXX <BYTES>

<b>Image Data Object Format Description Part( /* IMAGE */ )</b>				
		OBJECT = IMAGE		
12	Band storage type	BAND_STORAGE_TYPE = %s	char	BAND_SEQUENTIAL [STATIC]  *Refer to the PDS Standard Reference V3.5 Appendix A.19 "IMAGE".
13	Number of bands	BANDS = %d	smallint	X
14	Maximum of the data	DERIVED_MAXIMUM = %f	float	XXX.X
15	Minimum of the data	DERIVED_MINIMUM = %f	float	XXX.X
16	Compression class and encoding type	ENCODING_TYPE = %s	char	N/A [STATIC]
17	Horizontal pixel count of image	LINE_SAMPLES = %d	int	XXX
18	Vertical pixel count of image	LINES = %d	int	XX
19	Alternative value of missing value	MISSING_CONSTANT = %s	char	X
20	Offset	OFFSET = %f	float	X.X
21	Significant bit mask	SAMPLE_BIT_MASK = %s	char	11111111 [STATIC]
22	Pixel bit length	SAMPLE_BITS = %d	int	X
23	Pixel type	SAMPLE_TYPE = %s	char	MSB_UNSIGNED_INTEGER [STATIC]  * Refer to the PDS Standard Reference V3.5 Appendix C.2 for further information about "MSB_UNSIGNED_INTEGER".
24	Scaling factor	SCALING_FACTOR = %f	float	X
25	Stretched Flag	STRETCHED_FLAG = %s	char	FALSE [STATIC]
		END_OBJECT = IMAGE		
<b>IMAGE_MAP_PROJECTION Object Description Part( /* IMAGE_MAP_PROJECTION */ )</b>				
		OBJECT = IMAGE_MAP_PROJECTION		
26	Semi-major axis of the ellipsoidal body	A_AXIS_RADIUS = %f<KM>	float	1734.400<KM> [STATIC]
27	medial axis of ellipsoidal body	B_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
28	Semi-minor axis of ellipsoidal body	C_AXIS_RADIUS = %f<KM>	float	1737.400<KM> [STATIC]
29	Name of coordinate system	COORDINATE_SYSTEM_NAME = "%s"	char	"PLANETOCENTRIC" [STATIC]
30	Type of coordinate system	COORDINATE_SYSTEM_TYPE = "%s"	char	"BODY-FIXED ROTATING" [STATIC]
31	Easternmost longitude	EASTERNMOST_LONGITUDE = %f	float	360.0 [STATIC]
32	Westernmost longitude	WESTERNMOST_LONGITUDE = %f	float	0.0 [STATIC]
33	Maximum latitude	MAXIMUM_LATITUDE = %f	float	90.0 [STATIC]
34	Minimum latitude	MINIMUM_LATITUDE = %f	float	-90.0 [STATIC]
35	Map projection type	MAP_PROJECTION_TYPE = "%s"	char	SIMPLE_CYLINDRICAL [STATIC]
36	Resolution	MAP_RESOLUTION = %f<PIXEL/DEGREE>	float	0.5 <PIXEL/DEGREE> [STATIC]
37	Direction of positive longitude	POSITIVE_LONGITUDE_DIRECTION = "%s"	char	EAST [STATIC]
		END_OBJECT = IMAGE_MAP_PROJECTION		
<b>END statement</b>				
		END		

*<Example of Label : Electron and Proton data in Special periods (Graph)>*

```

/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_Rn_map.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_Rn_map
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "Radon"
^IMAGE = 1238 <BYTES>

/* IMAGE */
OBJECT = IMAGE
  BAND_STORAGE_TYPE = BAND_SEQUENTIAL
  BANDS = 1
  DERIVED_MAXIMUM = 255
  DERIVED_MINIMUM = 0
  ENCODING_TYPE = N/A
  LINE_SAMPLES = 180
  LINES = 90
  MISSING_CONSTANT = 0
  OFFSET = 0.0
  SAMPLE_BIT_MASK = 11111111
  SAMPLE_BITS = 8
  SAMPLE_TYPE = MSB_UNSIGNED_INTEGER
  SCALING_FACTOR = 1
  STRETCHED_FLAG = FALSE
END_OBJECT = IMAGE

/* IMAGE_MAP_PROJECTION */
OBJECT = IMAGE_MAP_PROJECTION
  A_AXIS_RADIUS = 1734.400<KM>
  B_AXIS_RADIUS = 1737.400<KM>
  C_AXIS_RADIUS = 1737.400<KM>
  COORDINATE_SYSTEM_NAME = "PLANETOCENTRIC"
  COORDINATE_SYSTEM_TYPE = "BODY-FIXED ROTATING"
  EASTERNMOST_LONGITUDE = 360.0
  WESTERNMOST_LONGITUDE = 0.0
  MAXIMUM_LATITUDE = 90.0
  MINIMUM_LATITUDE = -90.0
  MAP_PROJECTION_TYPE = SIMPLE_CYLINDRICAL
  MAP_RESOLUTION = 0.5 <PIXEL/DEGREE>
  POSITIVE_LONGITUDE_DIRECTION = EAST
END_OBJECT = IMAGE_MAP_PROJECTION

END

```

## 12.3 Data Object Format

T.B.D

## 12.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 12-2.

**Table 12-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 11.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA...AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the thumbnail file	ThumbnailFileName	AAAA...AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 11.1 "Rules used for File naming".)
Size of the thumbnail file	ThumbnailFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the thumbnail file	ThumbnailFileFormat	AAAA (Up to 4 digits)	JPEG Format	JPEG [STATIC]
Name of the instrument	InstrumentName	AAAA...AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA...AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA...AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

**<Example of Catalog Information : Electron and Proton data in Special periods (Graph)>**

DataFileName = ARD\_Rn\_map.img  
DataFileSize = 17437  
DataFileFormat = PDS  
  
ThumbnailFileName = ARD\_Rn\_map.jpg  
ThumbnailFileSize = 5694  
ThumbnailFileFormat = JPEG  
InstrumentName = CPS  
ProcessingLevel = Standard  
ProductID = ARD\_Rn\_map  
ProductVersion = 1.0  
AccessLevel = 4  
StartDateTime = 2005-07-01T00:00:00.000000Z  
EndDateTime = 2005-10-31T23:59:59.999999Z  
UpperLeftLatitude = 90.0  
UpperLeftLongitude = 0.0  
UpperRightLatitude = 90.0  
UpperRightLongitude = 360.0  
LowerLeftLatitude = -90.0  
LowerLeftLongitude = 0.0  
LowerRightLatitude = -90.0  
LowerRightLongitude = 360.0

## 13. Electron and Proton data in Special periods

### 13.1 Rules used for File naming

The nomenclature used for Label, Data Object and Catalog Information File the CPS product files are described below. In addition, the file names are case-independent.

T.B.D

### 13.2 Label Format

The Label format for the SERIES object used for the Electron and Proton data in Special periods product is shown in Table 13-1. The Label for the SERIES object includes: Standard Item and Data Object Format Description Part.

In Table 13-1 with the exception of the Values expressed as “STATIC”, the numerical values and the character strings corresponding to the type of the product etc., are set.

**Table 13-1 Label Format**

No	Items	Elements	Types	Values
<b>Standard Item</b>				
1	PDS version number	PDS_VERSION_ID = %s	char	PDS3 [STATIC]
2	Record format of the file	RECORD_TYPE = %s	char	UNDEFINED [STATIC]
3	File name	FILE_NAME = %s	char	See Section 12.1 “Rules used for File naming”.
4	Name of the mission	MISSION_NAME = %s	char	SELENE [STATIC]
5	Name of the spacecraft	SPACECRAFT_NAME = %s	char	SELENE-M [STATIC]
6	Name of the instrument	INSTRUMENT_NAME = %s	char	CPS [STATIC]
7	Product ID	PRODUCT_SET_ID = %s	char	See Table 1-2 “Product_ID”.
8	Product version number	PRODUCT_VERSION_ID = %s	char	X.X
9	Target name	TARGET_NAME = %s	char	MOON [STATIC]
10	Comment	COMMENT_TEXT = "%s"	char	
11	Starting position of the series object	^SERIES = %d <BYTES>	int	XXX <BYTES>
<b>END statement</b>				
		END		

**<Example of Label : Electron and Proton data in Special periods>**

```

/* BASIC */
PDS_VERSION_ID = PDS3
RECORD_TYPE = UNDEFINED
FILE_NAME = ARD_counts_data.img
MISSION_NAME = SELENE
SPACECRAFT_NAME = SELENE-M
INSTRUMENT_NAME = CPS
PRODUCT_SET_ID = ARD_counts_data
PRODUCT_VERSION_ID = 1.0
TARGET_NAME = MOON
COMMENT_TEXT = "ARD counts data"
^IMAGE = 321 <BYTES>
END

```



### 13.3 Data Object Format

T.B.D

### 13.4 Catalog Information File Format

The Catalog Information File Format is shown in Table 13-2.

**Table 13-2 Catalog Information File Format**

Item Name	Elements	Format of Value	Range of Value	Values
Name of the data file (*1)	DataFileName	AAAA....AAAA (Up to 31 digits)	alphanumeric characters	dependent on the product (See Section 12.1 "Rules used for File naming".)
Size of the data file	DataFileSize	NNNNNNNNNNNN (Up to 12 digits)	unit:<byte>	dependent on the product
File format of the data file	DataFileFormat	AAAA....AAAA (Up to 16 digits)	character strings	PDS [STATIC]
Name of the instrument	InstrumentName	AAAA....AAAA (Up to 16 digits)	character strings	CPS [STATIC]
Processing level	ProcessingLevel	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product (See Table 1-2 "Level" )
Product ID	ProductID	AAAA....AAAA (Up to 30 digits)	character strings	dependent on the product (See Table 1-2 "Product_ID" )
Version number of the product	ProductVersion	AAAA....AAAA (Up to 16 digits)	character strings	dependent on the product
Access level	AccessLevel	N	the value of 0-4	N/A
Start time	StartDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Stop time	EndDateTime	yyyy-mm-ddT hh:mm:ss.ssssssZ	DATE & TIME	dependent on the product
Upper left latitude of the scene	UpperLeftLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper left longitude of the scene	UpperLeftLongitude	NNN.NNNNNN	0-360	0.0 [STATIC]
Upper right latitude of the scene	UpperRightLatitude	SNN.NNNNNN	-90-90	90.0 [STATIC]
Upper right longitude of the scene	UpperRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower left latitude of the scene	LowerLeftLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower left longitude of the scene	LowerLeftLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]
Lower right latitude of the scene	LowerRightLatitude	SNN.NNNNNN	-90-90	-90.0 [STATIC]
Lower right longitude of the scene	LowerRightLongitude	NNN.NNNNNN	0-360	360.0 [STATIC]

(\*1) "DataFileName" is the stored file name of the product. For the detached format, this is the stored file name.

***<Example of Catalog Information : Electron and Proton data in Special periods >***

DataFileName	= ARD_counts_data.img
DataFileSize	= 8960
DataFileFormat	= PDS
InstrumentName	= CPS
ProcessingLevel	= Standard
ProductID	= ARD_counts_data
ProductVersion	= 1.0
AccessLevel	= 3
StartDateTime	= 2005-08-01T00:00:00.000000Z
EndDateTime	= 2005-08-01T23:59:59.999999Z
UpperLeftLatitude	= 90.0
UpperLeftLongitude	= 0.0
UpperRightLatitude	= 90.0
UpperRightLongitude	= 360.0
LowerLeftLatitude	= -90.0
LowerLeftLongitude	= 0.0
LowerRightLatitude	= -90.0
LowerRightLongitude	= 360.0