

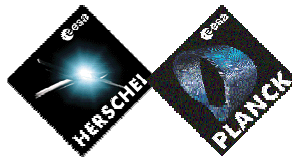
HERSCHEL / PLANCK

CIDL Herschel OBCP

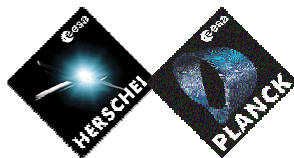
H-P-2-ASP-LI-1333

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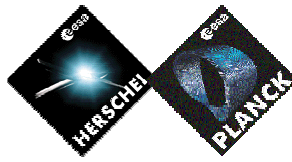


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ENREGISTREMENT DES EVOLUTIONS / CHANGE RECORDS

ISSUE	DATE	§ : DESCRIPTION DES EVOLUTIONS § : CHANGE RECORD	REDACTEUR AUTHOR
01	19/04/2007	Initial revision	NL
02	27/04/2007	Correction in EAT file Update of DB_OBCP_PACS_POWER_CYCLE according to new PACS FDIR document	NL
03	21/05/2007	Correction of length field in some EAT TCs	NL
04	28/05/2007	Remove empty fields in EAT TCs	NL
05	03/09/2007	Add SPIRE_OPE_RESUME and SPIRE_OPE_STOP	NL
06	25/10/2007	New delivery related to the update of the OCL interpreter in version 5.x	NL
07	23/11/2007	Correction of length of Load OBCP TCs in xml delivery	NL
08	07/12/2007	Correction of the size of parameter N in each last Load_OBCP TC	NL
09	04/02/2008	Remove Hard Reset in HIFI_Reset	NL
<u>10</u>	<u>21/02/2008</u>	<u>Corrections related to the NRB associated with NCR-3958</u>	<u>NL</u>



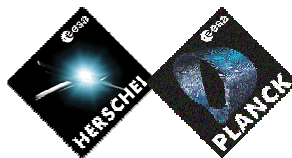
CHANGE TRACEABILITY since version 09

PARAGRAPH	CHANGE Description & Comments
<u>2.1</u>	<u>The OBCP Specifications document has been updated according to NRB associated to NCR-3958</u>
<u>3.3.3</u>	<u>Update of DB OBCP_H_PACS_SAFE according to NCR-3958</u>
<u>3.3.6</u>	<u>Disabled more EAT entries</u> <u>Note that the number of Load_TC has increased.</u>
<u>3.3.7</u>	<u>Disabled more EAT entries</u> <u>Note that the number of Load_TC has increased.</u>
<u>4</u>	<u>Update Events and EAT according to new HPSDB rules</u>



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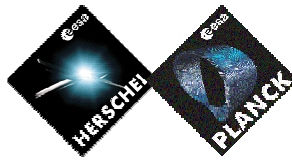


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1. INTRODUCTION

1.1 Purpose

This documents defines the configuration of OBCP environment for Herschel related to the delivery OBCP_HERSCHEL_v10.00 (corresponding to a Clearcase LABEL). This delivery is to be used on CDMU Herschel OBSW 3.x.x till 3.1.3.19

1.2 Data Flow

The source code of the OBCP is written in OCL language in a <OBCP_name>.ocl file. This file is compiled with OCL compiler version 5.1. The token image file (img_xxx.tok) output is used as input in "load_obcp" tool which is generating the xml file for HPSBD.

1.3 Validation

The OBCPs are not validated on ObcpTestTool because it is still not available, then on SVF 1.3.6 with the Herschel CDMU OBSW 3.1.3.19

2. DOCUMENTATION AND TERMINOLOGY

2.1 Applicable documents

Following documents must be applied when using this document, with the extend specified in the text.

The documents quoted in this section are referenced throughout the document by [ADi] as in the list below. If not specified, the latest available version is used.

Title	Reference	Issue	Date
[AD1] Payload Management & OBCP	H-P-1-ASPI-TN-1072	<u>5</u>	20/0 <u>2</u> /08
[AD2] Interface HPSDB/OBCP	H-P-1-ASP-TN-1279	3	21/02/07

Table 2.1-1 : Applicable documents

2.2 Reference documents

Following documents have been taken into account when writing this document or are mentioned in the text as complementary information.

The documents quoted in this section are referenced throughout the document by [RDi] as in the list below. If not specified, the latest available version is used.

Title	Reference	Issue	Date
[RD1] List of Acronyms	H-P-1-ASPI-LI-0077	-	

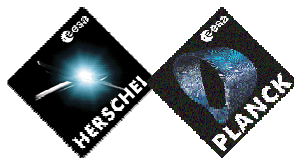


Table 2.2-1 : Reference documents

2.3 Glossary of terms and acronyms

If not defined below, terms and acronyms used are listed and defined in [RD1].

ASW	Application SoftWare
BSW	Basic SoftWare
CDMS	Command and Data Management Subsystem
CDMU	Central Data Management Unit
EAT	Event/Action Table
HPSDB	Herschel-Planck System Data-Base
ICD	Interface Control Document
OBCP	On-Board Control Procedure
OBSW	On-Board SoftWare
TBD	To Be Defined

3. HERSCHEL OBCP LIST

3.1 COMMON

3.1.1 DB_OBCP_H_MODE_PL_SC

OBCP_ID : 0x0001

Version : 04

Source File	MD5 Checksum
DB_OBCP_H_MODE_PL_SC.ocl	44fb6383903612c4b91ce5394fc14c9c

Delivered File	MD5 Checksum
OBCP_COM_1.xml	d28a01b04e6dd7486dd1b6d19b8fffd6

Checksum of the OBCP flying code : 0xA7E0

Update reason : Correction of PACS SAFE OBCP_ID called

List of the TCs to load this OBCP

DB_H_MODE_PL_SC_OBCP		
TC_ID	Short_Description	TC
C101	Obcp_0001_COM_01	load(18,1)
C102	Obcp_0001_COM_02	load(18,1)
C1FF	Obcp_0001_COM_FF	load(18,1)
C1ST	Obcp_0001_COM_ST	start(18,3)

Parameters needed for the Start_TC :

- None

3.2 SPIRE

3.2.1 DB_OBCP_H_SPIRE_DRCU_OFF

OBCP_ID : 0x1102

Version : 03

Source File	MD5 Checksum
DB_OBCP_H_SPIRE_DRCU_OFF.ocl	7d0d40364a21da35960407e88f206506

Delivered File	MD5 Checksum
OBCP_SPI_2.xml	206e0e1d13f8efb2bb0b1d5474f0ce6a

Checksum of the OBCP flying code : 0x43E0

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_SPIRE_DRCU_OFF		
TC_ID	Short_Description	TC
C201	Obcp_1102_SPI_01	load(18,1)
C202	Obcp_1102_SPI_02	load(18,1)
C203	Obcp_1102_SPI_03	load(18,1)
C204	Obcp_1102_SPI_04	load(18,1)
C2FF	Obcp_1102_SPI_FF	load(18,1)
C2ST	Obcp_1102_SPI_ST	start(18,3)

Parameters needed for the Start_TC :

- None

3.2.2 DB_OBCP_H_SPIRE_OFF

OBCP_ID : 0x1103

Version : 03

Source File	MD5 Checksum
DB_OBCP_H_SPIRE_OFF.ocl	349ea5d2baa677b741ecdca3d138c6ae

Delivered File	MD5 Checksum
OBCP_SPI_3.xml	439910ea52f7feb5c3b5582c69a0ea77

Checksum of the OBCP flying code : 0xDAE9

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_SPIRE_DRCU_OFF		
TC_ID	Short_Description	TC
C301	Obcp_1103_SPI_01	load(18,1)
C302	Obcp_1103_SPI_02	load(18,1)
C203	Obcp_1103_SPI_03	load(18,1)
C304	Obcp_1103_SPI_04	load(18,1)
C305	Obcp_1103_SPI_05	load(18,1)
C306	Obcp_1103_SPI_06	load(18,1)
C307	Obcp_1103_SPI_07	load(18,1)
C308	Obcp_1103_SPI_08	load(18,1)

C309	Obcp_1103_SPI_09	load(18,1)
C3FF	Obcp_1103_SPI_FF	load(18,1)
C3ST	Obcp_1103_SPI_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_000) : PID_SPIRE_SUBS_ID_CMD (370 by default)
- Parameter 2 (DID_OBCP_32_OFFSET_001) : PID_SPIRE_SUBS_ID_META (100 by default)

3.2.3 DB_OBCP_H_SPIRE_OFF_CTRL

OBCP_ID : 0x1104

Version : 03

Source File	MD5 Checksum
DB_OBCP_H_SPIRE_OFF_CTRL.ocl	fb75268de857830a6aa5cb4d76a5c313

Delivered File	MD5 Checksum
OBCP_SPI_4.xml	eec4bcdb94bda73b021983debb707979

Checksum of the OBCP flying code : 0X73B9

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_SPIRE_OFF_CTRL		
TC_ID	Short_Description	TC
C401	Obcp_1104_SPI_01	load(18,1)
C402	Obcp_1104_SPI_02	load(18,1)
C403	Obcp_1104_SPI_03	load(18,1)
C404	Obcp_1104_SPI_04	load(18,1)
C405	Obcp_1104_SPI_05	load(18,1)
C406	Obcp_1104_SPI_06	load(18,1)
C407	Obcp_1104_SPI_07	load(18,1)
C408	Obcp_1104_SPI_08	load(18,1)
C409	Obcp_1104_SPI_09	load(18,1)
C40A	Obcp_1104_SPI_0A	load(18,1)
C4FF	Obcp_1104_SPI_FF	load(18,1)
C4ST	Obcp_1104_SPI_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_000) : PID_SPIRE_SUBS_ID_CMD (370 by default)
- Parameter 2 (DID_OBCP_32_OFFSET_001) : PID_SPIRE_SUBS_ID_META (100 by default)

3.2.4 DB_OBCP_H_SPIRE_STANDBY

OBCP_ID : 0x1105

Version : 03

Source File	MD5 Checksum
DB_OBCP_H_SPIRE_STANDBY.ocl	74e6b58076357c0e90f2a64c1a138edf

Delivered File	MD5 Checksum
OBCP_SPI_5.xml	7cf94c5e69c6c78add2fafa7bf519ea0

Checksum of the OBCP flying code : 0x4DAA

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_SPIRE_STANDBY		
TC_ID	Short_Description	TC
C501	Obcp_1105_SPI_01	load(18,1)
C502	Obcp_1105_SPI_02	load(18,1)
C503	Obcp_1105_SPI_03	load(18,1)
C504	Obcp_1105_SPI_04	load(18,1)
C505	Obcp_1105_SPI_05	load(18,1)
C5FF	Obcp_1105_SPI_FF	load(18,1)
C5ST	Obcp_1105_SPI_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_000) : SPIRE_SUBS_ID_CMD (370 by default)
- Parameter 2 (DID_OBCP_32_OFFSET_001) : SPIRE_SUBS_ID_META (100 by default)

3.2.5 DB_OBCP_H_SPIRE_OPE_STOP

OBCP_ID : 0x1106

Version : 03

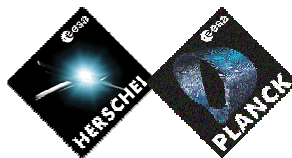
Source File	MD5 Checksum
DB_OBCP_H_SPIRE_OPE_STOP.ocl	a5f6485e6050c753013788cfa538b5fd

Delivered File	MD5 Checksum
OBCP_SPI_6.xml	5167503c9053ef229df8426a43611d04

Checksum of the OBCP flying code : 0xF210

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP



DB_OBCP_H_SPIRE_STANDBY		
TC_ID	Short_Description	TC
C601	Obcp_1106_SPI_01	load(18,1)
C602	Obcp_1106_SPI_02	load(18,1)
C603	Obcp_1106_SPI_03	load(18,1)
C604	Obcp_1106_SPI_04	load(18,1)
C6FF	Obcp_1106_SPI_FF	load(18,1)
C6ST	Obcp_1106_SPI_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_000) : SPIRE_SUBS_ID_CMD (370 by default)
- Parameter 2 (DID_OBCP_32_OFFSET_001) : SPIRE_SUBS_ID_META (100 by default)

3.2.6 DB_OBCP_H_SPIRE_OPE_RESUME

OBCP_ID : 0x1107

Version : 05

Source File	MD5 Checksum
DB_OBCP_H_SPIRE_OPE_RESUME.ocl	3f6f1be32d8bdc3b08b8a2d7efd18cdd

Delivered File	MD5 Checksum
OBCP_SPI_7.xml	0f215f11ddff9d52732f21a4f4a7f5c6

Checksum of the OBCP flying code : 0x2076

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_SPIRE_STANDBY		
TC_ID	Short_Description	TC
C701	Obcp_1107_SPI_01	load(18,1)
C702	Obcp_1107_SPI_02	load(18,1)
C703	Obcp_1107_SPI_03	load(18,1)
C704	Obcp_1107_SPI_04	load(18,1)
C7FF	Obcp_1107_SPI_FF	load(18,1)
C7ST	Obcp_1107_SPI_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 2 (DID_OBCP_32_OFFSET_001) : SPIRE_SUBS_ID_META (100 by default)

3.3 PACS

3.3.1 PACS_normal_off

This OBCP is a sub-procedure called by :

- DB_OBCP_H_PACS_SAFE (for the moment)
- DB_OBCP_H_PACS_NORMAL_OFF
- DB_OBCP_H_PACS_POWER_CYCLE
-

OBCP_ID : 0x9000

Version : 03

Source File	MD5 Checksum
PACS_normal_off.ocl	dfd2a3128cd692a93cbb6161a661db53

Delivered File	MD5 Checksum
OBCP_COM_0.xml	f4a4a6ea3a92472604ad7138d30f7a1d

Checksum of the OBCP flying code : 0xED0F

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP :

PACS_normal_off		
TC_ID	Short_Description	TC
C001	Obcp_9000_COM_01	load(18,1)
C002	Obcp_9000_COM_02	load(18,1)
C003	Obcp_9000_COM_03	load(18,1)
C004	Obcp_9000_COM_04	load(18,1)
C005	Obcp_9000_COM_05	load(18,1)
C006	Obcp_9000_COM_06	load(18,1)
C007	Obcp_9000_COM_07	load(18,1)
C008	Obcp_9000_COM_08	load(18,1)
C009	Obcp_9000_COM_09	load(18,1)
C00A	Obcp_9000_COM_0A	load(18,1)
C00B	Obcp_9000_COM_0B	load(18,1)
C00C	Obcp_9000_COM_0C	load(18,1)
C00D	Obcp_9000_COM_0D	load(18,1)
C00E	Obcp_9000_COM_0E	load(18,1)
C00F	Obcp_9000_COM_0F	load(18,1)
C0FF	Obcp_9000_COM_FF	load(18,1)

Parameters needed for the Start_TC :

- None

Note : The start TC exist in HPSDB, but is not listed because it has not to be used by the ground.

3.3.2 PACS_switch_on_CSS

This OBCP is a sub-procedure called by :

- DB_OBCP_H_ PACS_POWER_CYCLE
-

OBCP_ID : 0x900F

Version : 05

Source File	MD5 Checksum
PACS_switch_on_CSS.ocl	e8ffa95dd8438331e05316c881f151e

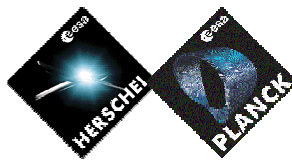
Delivered File	MD5 Checksum
OBCP_COM_F.xml	cf2b9aebd05da29a4144240b8a68cc74

Checksum of the OBCP flying code : 0x6D79

Update reason : Modified some comments

List of the TCs to load this OBCP :

PACS_normal_off		
TC_ID	Short_Description	TC
CF01	Obcp_900F_COM_01	load(18,1)
CF02	Obcp_900F_COM_02	load(18,1)
CF03	Obcp_900F_COM_03	load(18,1)
CF04	Obcp_900F_COM_04	load(18,1)
CF05	Obcp_900F_COM_05	load(18,1)
CF06	Obcp_900F_COM_06	load(18,1)
CF07	Obcp_900F_COM_07	load(18,1)
CF08	Obcp_900F_COM_08	load(18,1)
CF09	Obcp_900F_COM_09	load(18,1)
CF0A	Obcp_900F_COM_0A	load(18,1)
CF0B	Obcp_900F_COM_0B	load(18,1)
CF0C	Obcp_900F_COM_0C	load(18,1)
CF0D	Obcp_900F_COM_0D	load(18,1)
CF0E	Obcp_900F_COM_0E	load(18,1)
CF0F	Obcp_900F_COM_0F	load(18,1)
CF10	Obcp_900F_COM_10	load(18,1)
CF11	Obcp_900F_COM_11	load(18,1)
CF12	Obcp_900F_COM_12	load(18,1)



CF13	Obcp_900F_COM_13	load(18,1)
CF14	Obcp_900F_COM_14	load(18,1)
CF15	Obcp_900F_COM_15	load(18,1)
CF16	Obcp_900F_COM_16	load(18,1)
CF17	Obcp_900F_COM_17	load(18,1)
CF18	Obcp_900F_COM_18	load(18,1)
CF19	Obcp_900F_COM_19	load(18,1)
CF1A	Obcp_900F_COM_1A	load(18,1)
CF1B	Obcp_900F_COM_1B	load(18,1)
CF1C	Obcp_900F_COM_1C	load(18,1)
CF1D	Obcp_900F_COM_1D	load(18,1)
CF1E	Obcp_900F_COM_1E	load(18,1)
CF1F	Obcp_900F_COM_1F	load(18,1)
CFFF	Obcp_900F_COM_FF	load(18,1)

Parameters needed for the Start_TC :
- PACS_Side (by parameter passing)

Note : The start TC exist in HPSDB, but is not listed because it has not to be used by the ground.

3.3.3 DB_OBCP_H_PACS_SAFE

OBCP_ID : 0x1208

Version : 07

Source File	MD5 Checksum
DB_OBCP_H_PACS_SAFE.ocl	<u>f3f0c26a959e3d868afbb9fe9d4e5fef</u>

Delivered File	MD5 Checksum
OBCP_PAC_8.xml	<u>6efc5478d4d56b8afe3953fed26fd0cb</u>

Checksum of the OBCP flying code : 0x6BA2

Update reason : Corrected NCR-3958 and disabled more EAT entries to avoid conflict.

List of the TCs to load this OBCP :

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
C801	Obcp_1208_PAC_01	load(18,1)
C802	Obcp_1208_PAC_02	load(18,1)
C803	Obcp_1208_PAC_03	load(18,1)
C804	Obcp_1208_PAC_04	load(18,1)
C805	Obcp_1208_PAC_05	load(18,1)
C806	Obcp_1208_PAC_06	load(18,1)

C807	Obcp_1208_PAC_07	load(18,1)
C808	Obcp_1208_PAC_08	load(18,1)
C809	Obcp_1208_PAC_09	load(18,1)
C80A	Obcp_1208_PAC_0A	load(18,1)
C80B	Obcp_1208_PAC_0B	load(18,1)
C80C	Obcp_1208_PAC_0C	load(18,1)
C8FF	Obcp_1208_PAC_FF	load(18,1)
C8ST	Obcp_1208_PAC_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_050) : PACS_SUBS_ID_CMD (90 by default)

Important : This OBCP needs that PACS_ NORMAL_OFF and PACS_IMMEDIATE_OFF OBCPs are loaded.

3.3.4 DB_OBCP_H_PACS_BOLC_OFF

OBCP_ID : 0x1209

Version : 03

Source File	MD5 Checksum
DB_OBCP_H_PACS_BOLC_OFF.ocl	2136a76b80943c57d3a42bcacea518cb

Delivered File	MD5 Checksum
OBCP_PAC_9.xml	41685e95cc0029036987220bd8624f48

Checksum of the OBCP flying code : 0x6578

Update reason : Modify some comments

List of the TCs to load this OBCP :

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
C901	Obcp_1209_PAC_01	load(18,1)
C902	Obcp_1209_PAC_02	load(18,1)
C903	Obcp_1209_PAC_03	load(18,1)
C904	Obcp_1209_PAC_04	load(18,1)
C905	Obcp_1209_PAC_05	load(18,1)
C906	Obcp_1209_PAC_06	load(18,1)
C9FF	Obcp_1209_PAC_FF	load(18,1)
C9ST	Obcp_1209_PAC_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_050) : PACS_SUBS_ID_CMD (90 by default)

3.3.5 DB_OBCP_H_PACS_POWER_CYCLE

OBCP_ID : 0x120A

Version : 05

Source File	MD5 Checksum
DB_OBCP_H_PACS_POWER_CYCLE.ocl	7e364ea7c1f7aaf34b98f03ea58d0eec

Delivered File	MD5 Checksum
OBCP_PAC_A.xml	a5a464969fe30e45ec4986f55c022838

Checksum of the OBCP flying code : 0x46E9

Update reason : Add the read of PL_SIDE to pass the value to PACS_switch_ON_CCS

List of the TCs to load this OBCP :

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
CA01	Obcp_120A_PAC_01	load(18,1)
CA02	Obcp_120A_PAC_02	load(18,1)
CA03	Obcp_120A_PAC_03	load(18,1)
CA04	Obcp_120A_PAC_04	load(18,1)
CA05	Obcp_120A_PAC_05	load(18,1)
CAFF	Obcp_120A_PAC_FF	load(18,1)
CAST	Obcp_120A_PAC_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_050) : PACS_SUBS_ID_CMD (90 by default)
- Parameter 2 (DID_OBCP_32_OFFSET_051) : PACS_PL_SIDE (NOMINAL by default)

Important : This OBCP needs that PACS_normal_off and PACS_switch_on_CCS OBCPs are loaded.

3.3.6 DB_OBCP_H_PACS_IMMEDIATE_OFF

OBCP_ID : 0x120B

Version : 04

Source File	MD5 Checksum
DB_OBCP_H_PACS_IMMEDIATE_OFF.ocl	<u>0f2f17406cba35a7b72bd5a6d50fa4f1</u>



Delivered File	MD5 Checksum
OBCP_PAC_B.xml	<u>fa95da0675ef4063ee8732611af3e737</u>

Checksum of the OBCP flying code : 0x3601

Update reason : Disabled more EAT entries

List of the TCs to load this OBCP :

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
CB01	Obcp_120B_PAC_01	load(18,1)
CB02	Obcp_120B_PAC_02	load(18,1)
CB03	Obcp_120B_PAC_03	load(18,1)
CB04	Obcp_120B_PAC_04	load(18,1)
CB05	Obcp_120B_PAC_05	load(18,1)
CB06	Obcp_120B_PAC_06	load(18,1)
CB07	Obcp_120B_PAC_07	load(18,1)
CB08	Obcp_120B_PAC_08	load(18,1)
CB09	Obcp_120B_PAC_09	load(18,1)
CB0A	Obcp_120B_PAC_0A	load(18,1)
CB0B	Obcp_120B_PAC_0B	load(18,1)
<u>CB0C</u>	<u>Obcp_120B_PAC_0C</u>	<u>load(18,1)</u>
CBFF	Obcp_120B_PAC_FF	load(18,1)
CBST	Obcp_120B_PAC_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_050) : PACS_SUBS_ID_CMD (90 by default)

3.3.7 DB_OBCP_H_PACS_NORMAL_OFF

OBCP_ID : 0x120C

Version : 04

Source File	MD5 Checksum
DB_OBCP_H_PACS_NORMAL_OFF.ocl	<u>b341c201fb5d7ce23e9f09311a352134</u>

Delivered File	MD5 Checksum
OBCP_PAC_C.xml	<u>aca576bd4edd4fcdcaaffb8a8549099c</u>

Checksum of the OBCP flying code : 0x93C9

Update reason : Disable more EAT entries

List of the TCs to load this OBCP :

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
CC01	Obcp_120C_PAC_01	load(18,1)
CC02	Obcp_120C_PAC_02	load(18,1)
CC03	Obcp_120C_PAC_03	load(18,1)
CC04	Obcp_120C_PAC_04	load(18,1)
CC05	Obcp_120C_PAC_05	load(18,1)
<u>CC06</u>	<u>Obcp_120C_PAC_06</u>	<u>load(18,1)</u>
<u>CC07</u>	<u>Obcp_120C_PAC_07</u>	<u>load(18,1)</u>
CCFF	Obcp_120C_PAC_FF	load(18,1)
CCST	Obcp_120C_PAC_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_050) : PACS_SUBS_ID_CMD (90 by default)

Important : This OBCP needs that PACS_normal_off OBCP is loaded.

3.4 HIFI

3.4.1 DB_OBCP_H_HIFI_RESET

OBCP_ID : 0x130D

Version : 05

Source File	MD5 Checksum
DB_OBCP_H_HIFI_RESET.ocl	ed60f890f89595b7ec2d4b25f68fa947

Delivered File	MD5 Checksum
OBCP_HIF_D.xml	bdf59c2983bda51e12fd0b1a537872b8

Checksum of the OBCP flying code : 0xBBA0

Update reason : Removed Hard reset

List of the TCs to load this OBCP

DB_OBCP_H_HIFI_RESET		
TC_ID	Short_Description	TC
CD01	Obcp_130D_HIF_01	load(18,1)
CD02	Obcp_130D_HIF_02	load(18,1)
CD03	Obcp_130D_HIF_03	load(18,1)
CD04	Obcp_130D_HIF_04	load(18,1)

CD05	Obcp_130D_HIF_05	load(18,1)
CD06	Obcp_130D_HIF_06	load(18,1)
CD07	Obcp_130D_HIF_07	load(18,1)
CD08	Obcp_130D_HIF_08	load(18,1)
CD09	Obcp_130D_HIF_09	load(18,1)
CD0A	Obcp_130D_HIF_0A	load(18,1)
CD0B	Obcp_130D_HIF_0B	load(18,1)
CD0C	Obcp_130D_HIF_0C	load(18,1)
CD0D	Obcp_130D_HIF_0D	load(18,1)
CD0E	Obcp_130D_HIF_0E	load(18,1)
CD0F	Obcp_130D_HIF_0F	load(18,1)
CD10	Obcp_130D_HIF_10	load(18,1)
CDFF	Obcp_130D_HIF_FF	load(18,1)
CDST	Obcp_130D_HIF_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_100) : HIFI_SUBS_ID_CMD (70 by default)
- Parameter 2 (DID_OBCP_32_OFFSET_101) : HIFI_PL_SIDE (NOMINAL by default)

3.4.2 DB_OBCP_H_HIFI_STANDBY

OBCP_ID : 0x130E

Version : 03

Source File	MD5 Checksum
DB_OBCP_H_HIFI_STANDBY.ocl	61d890d5a12e8a38c8e66b664c0e12fc

Delivered File	MD5 Checksum
OBCP_HIF_E.xml	d80ce6268cc7e64e34d986228d657bd1

Checksum of the OBCP flying code : 0xD9E6

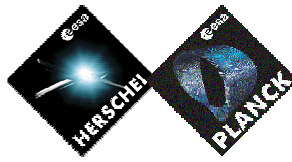
Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_HIFI_STANDBY		
TC_ID	Short_Description	TC
CE01	Obcp_130E_HIF_01	load(18,1)
CE02	Obcp_130E_HIF_02	load(18,1)
CE03	Obcp_130E_HIF_03	load(18,1)
CEFF	Obcp_130E_HIF_FF	load(18,1)
CEST	Obcp_130E_HIF_ST	start(18,3)

Parameters needed for the Start_TC :

- Parameter 1 (DID_OBCP_32_OFFSET_100) : HIFI_SUBS_ID_CMD (70 by default)



3.5 DUMMY

3.5.1 DB_OBCP_H_DUMMY

OBCP_ID : 0x9999

Version : 02

Source File	MD5 Checksum
DB_OBCP_H_DUMMY.ocl	d3d43fdf7a9db57faa3e0ba1f44ab5e8

Delivered File	MD5 Checksum
OBCP_COM_M.xml	af1314f1377e395a150301f644e8c3d1

Checksum of the OBCP flying code : 0x7FBC

Update reason : update according to OCL interpreter version 5.x

List of the TCs to load this OBCP

DB_OBCP_H_SPIRE_STANDBY		
TC_ID	Short_Description	TC
CM01	Obcp_9999_COM_01	load(18,1)
CM02	Obcp_9999_COM_02	load(18,1)
CM03	Obcp_9999_COM_03	load(18,1)
CM04	Obcp_9999_COM_04	load(18,1)
CMFF	Obcp_9999_COM_FF	load(18,1)
CMST	Obcp_9999_COM_ST	start(18,3)

Parameters needed for the Start_TC :

- None

4. EAT

Version : 06

Update reason : Update according to new HPSDB rules

Delivered File	MD5 Checksum
EAT_TC.xml	<u>8aab565f4f4514482df99766a99f8cb0</u>

For debugging, the "Pckt_Length" field in TC(19,1) is updatable.

4.1 DB_OBCP_H_MODE_PL_SC

This OBCP is called during mode transition. This call is hard-coded on the OBSW, therefore there is no need to fill the EAT for this OBCP.

4.2 DB_OBCP_H_SPIRE_DRCU_OFF

This OBCP is triggered by :

- DRCU Power anomaly or Temperature anomaly (5,2,0xC000) from SPIRE NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_DRCU_OFF		
TC_ID	Short_Description	TC
C2A0	EAT_SPIRE_DRCU_N	Add Event (19,1)
C2A1	EAT_SPIRE_DRCU_Enable	Enable Action (19,4)
C2A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C2A3	EAT_AHI	Configure FDIR (8,4,108,3)

- DRCU Power anomaly or Temperature anomaly (5,2,0xC000) from SPIRE REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_DRCU_OFF		
TC_ID	Short_Description	TC
C2A4	EAT_SPIRE_DRCU_R	Add Event (19,1)
C2A5	EAT_SPIRE_DRCU_Enable	Enable Action (19,4)
C2A6	EAT_PPS	Disable Param Passing (8,4,108,2)
C2A7	EAT_AHI	Configure FDIR (8,4,108,3)

4.3 DB_OBCP_H_SPIRE_OFF

This OBCP is triggered by :

- DPU Power anomaly (5,2,0xC010) from SPIRE NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OFF		
TC_ID	Short_Description	TC
C3A0	EAT_SPIRE_OFF_N	Add Event (19,1)
C3A1	EAT_SPIRE_Enable	Enable Action (19,4)
C3A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C3A3	EAT_AHI	Configure FDIR (8,4,108,3)

- DPU Power anomaly (5,2,0xC010) from SPIRE REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OFF		
TC_ID	Short_Description	TC

C3A4	EAT_SPIRE_OFF_R	Add Event (19,1)
C3A5	EAT_SPIRE_Enable	Enable Action (19,4)
C3A6	EAT_PPS	Disable Param Passing (8,4,108,2)
C3A7	EAT_AHI	Configure FDIR (8,4,108,3)

- DLL FDIR (5,x,152)

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OFF		
TC_ID	Short_Description	TC
C3A8	EAT_SPIRE_OFF_DLL	Add Event (19,1)
C3A9	EAT_SPIRE_Enable	Enable Action (19,4)
C3AA	EAT_PPS	Disable Param Passing (8,4,108,2)
C3AB	EAT_AHI	Configure FDIR (8,4,108,3)

- TFL TC FDIR (5,x,171)

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OFF		
TC_ID	Short_Description	TC
C3AC	EAT_SPIRE_OFF_TFL	Add Event (19,1)
C3AD	EAT_SPIRE_Enable	Enable Action (19,4)
C3AE	EAT_PPS	Disable Param Passing (8,4,108,2)
C3AF	EAT_AHI	Configure FDIR (8,4,108,3)

4.4 DB_OBCP_H_SPIRE_OFF_CTRL

This OBCP is triggered by TFL TM FDIR (5,x,185)

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OFF_CTRL		
TC_ID	Short_Description	TC
C4A0	EAT_SPIRE_OFF_CTRL	Add Event (19,1)
C4A1	EAT_SPIRE_Enable	Enable Action (19,4)
C4A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C4A3	EAT_AHI	Configure FDIR (8,4,108,3)

4.5 DB_OBCP_H_SPIRE_STANDBY

This OBCP is only called by DB_OBCP_H_MODE_PL_SC.

4.6 DB_OBCP_H_SPIRE_OPE_STOP

This OBCP is triggered by :

- Operation anomaly (5,2,0xC100) from SPIRE NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OPE_STOP		
TC_ID	Short_Description	TC
C6A0	EAT_SPIRE_OP_STOP_N	Add Event (19,1)
C6A1	EAT_SPIRE_OP_STOP_En	Enable Action (19,4)
C6A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C6A3	EAT_AHI	Configure FDIR (8,4,108,3)

- Operation anomaly (5,2,0xC100) from SPIRE REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OPE_STOP		
TC_ID	Short_Description	TC
C6A4	EAT_SPIRE_OP_STOP_R	Add Event (19,1)
C6A5	EAT_SPIRE_OP_STOP_En	Enable Action (19,4)
C6A6	EAT_PPS	Disable Param Passing (8,4,108,2)
C6A7	EAT_AHI	Configure FDIR (8,4,108,3)

4.7 DB_OBCP_H_SPIRE_OPE_RESUME

This OBCP is triggered by :

- Operation resume (5,2,0xC110) from SPIRE NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OPE_RESUME		
TC_ID	Short_Description	TC
C7A0	EAT_SPIRE_OP_RES_N	Add Event (19,1)
C7A1	EAT_SPIRE_OP_RES_En	Enable Action (19,4)
C7A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C7A3	EAT_AHI	Configure FDIR (8,4,108,3)

- Operation resume (5,2,0xC110) from SPIRE REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_SPIRE_OPE_RESUME		
TC_ID	Short_Description	TC
C7A4	EAT_SPIRE_OP_RES_R	Add Event (19,1)
C7A5	EAT_SPIRE_OP_RES_En	Enable Action (19,4)
C7A6	EAT_PPS	Disable Param Passing (8,4,108,2)
C7A7	EAT_AHI	Configure FDIR (8,4,108,3)

4.8 DB_OBCP_H_PACS_SAFE

This OBCP is triggered by :

- GO Safe (5,2,4) from PACS NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
C8A0	EAT_PACS_SAFE_N	Add Event (19,1)
C8A1	EAT_PACS_SAFE_EN	Enable Action (19,4)
C8A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C8A3	EAT_AHI	Configure FDIR (8,4,108,3)

- GO Safe (5,2,4) from PACS REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_SAFE		
TC_ID	Short_Description	TC
C8A4	EAT_PACS_SAFE_R	Add Event (19,1)
C8A5	EAT_PACS_SAFE_EN	Enable Action (19,4)
C8A6	EAT_PPS	Disable Param Passing (8,4,108,2)
C8A7	EAT_AHI	Configure FDIR (8,4,108,3)

4.9 DB_OBCP_H_PACS_BOLC_OFF

This OBCP is triggered by :

- BOLC OFF (5,2,5) from PACS NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_BOLC_OFF		
TC_ID	Short_Description	TC
C9A0	EAT_PACS_BOLC_N	Add Event (19,1)
C9A1	EAT_PACS_BLC_ENABLE	Enable Action (19,4)
C9A2	EAT_PPS	Disable Param Passing (8,4,108,2)
C9A3	EAT_AHI	Configure FDIR (8,4,108,3)

- BOLC OFF (5,2,5) from PACS REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_BOLC_OFF		
TC_ID	Short_Description	TC
C9A4	EAT_PACS_BOLC_R	Add Event (19,1)
C9A5	EAT_PACS_BLC_ENABLE	Enable Action (19,4)
C9A6	EAT_PPS	Disable Param Passing (8,4,108,2)
C9A7	EAT_AHI	Configure FDIR (8,4,108,3)

4.10 DB_OBCP_H_PACS_POWER_CYCLE

This OBCP is triggered by :

- Power Cycle (5,2,6) from PACS NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_POWER_CYCLE		
TC_ID	Short_Description	TC
CAA0	EAT_PACS_PWR_N	Add Event (19,1)
CAA1	EAT_PACS_PWR_En	Enable Action (19,4)
CAA2	EAT_PPS	Disable Param Passing (8,4,108,2)
CAA3	EAT_AHI	Configure FDIR (8,4,108,3)

- Power Cycle (5,2,6) from PACS REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_POWER_CYCLE		
TC_ID	Short_Description	TC
CAA4	EAT_PACS_PWR_R	Add Event (19,1)
CAA5	EAT_PACS_PWR_En	Enable Action (19,4)
CAA6	EAT_PPS	Disable Param Passing (8,4,108,2)
CAA7	EAT_AHI	Configure FDIR (8,4,108,3)

4.11 DB_OBCP_H_PACS_IMMEDIATE_OFF

This OBCP is triggered by :

- Immediate OFF (5,2,13) from PACS NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_IMMEDIATE_OFF		
TC_ID	Short_Description	TC
CBA0	EAT_PACS_IMM_OFF_N	Add Event (19,1)
CBA1	EAT_PACS_IMM_En	Enable Action (19,4)
CBA2	EAT_PPS	Disable Param Passing (8,4,108,2)
CBA3	EAT_AHI	Configure FDIR (8,4,108,3)

- Immediate OFF (5,2,13) from PACS REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_IMMEDIATE_OFF		
TC_ID	Short_Description	TC
CBA4	EAT_PACS_IMM_OFF_R	Add Event (19,1)
CBA5	EAT_PACS_IMM_En	Enable Action (19,4)
CBA6	EAT_PPS	Disable Param Passing (8,4,108,2)
CBA7	EAT_AHI	Configure FDIR (8,4,108,3)

- DLL FDIR (5,x,153)

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_IMMEDIATE_OFF		
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TC_ID	Short_Description	TC
CBA8	EAT_PACS_IMM_DLL	Add Event (19,1)
CBA9	EAT_PACS_IMM_En	Enable Action (19,4)
CBAA	EAT_PPS	Disable Param Passing (8,4,108,2)
CBAB	EAT_AHI	Configure FDIR (8,4,108,3)

- TFL TC FDIR (5,x,172)

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_IMMEDIATE_OFF		
TC_ID	Short_Description	TC
CBAC	EAT_PACS_IMM_TC	Add Event (19,1)
CBAD	EAT_PACS_IMM_En	Enable Action (19,4)
CBAE	EAT_PPS	Disable Param Passing (8,4,108,2)
CBAF	EAT_AHI	Configure FDIR (8,4,108,3)

- TFL TM FDIR (5,x,186)

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_IMMEDIATE_OFF		
TC_ID	Short_Description	TC
CBB0	EAT_PACS_IMM_TM	Add Event (19,1)
CBB1	EAT_PACS_IMM_En	Enable Action (19,4)
CBB2	EAT_PPS	Disable Param Passing (8,4,108,2)
CBB3	EAT_AHI	Configure FDIR (8,4,108,3)

4.12 DB_OBCP_H_PACS_NORMAL_OFF

This OBCP is triggered by :

- Normal OFF (5,2,25) from PACS NOMINAL

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_NORMAL_OFF		
TC_ID	Short_Description	TC
CCA0	EAT_PACS_NORM_OFF_N	Add Event (19,1)
CCA1	EAT_PACS_IMM_En	Enable Action (19,4)
CCA2	EAT_PPS	Disable Param Passing (8,4,108,2)
CCA3	EAT_AHI	Configure FDIR (8,4,108,3)

- Normal OFF (5,2,25) from PACS REDUNDANT

List of the TCs to fill the EAT table

DB_OBCP_H_PACS_NORMAL_OFF		
TC_ID	Short_Description	TC
CCA4	EAT_PACS_NORM_OFF_R	Add Event (19,1)
CCA5	EAT_PACS_NORM_En	Enable Action (19,4)

CCA6	EAT_PPS	Disable Param Passing (8,4,108,2)
CCA7	EAT_AHI	Configure FDIR (8,4,108,3)

4.13 DB_OBCP_H_HIFI_RESET

This OBCP is triggered by :

- DLL FDIR (5,x,151)

List of the TCs to fill the EAT table

DB_OBCP_H_HIFI_RESET		
TC_ID	Short_Description	TC
CDA0	EAT_HIFI_RESET_DLL	Add Event (19,1)
CDA1	EAT_HIFI_RESET_En	Enable Action (19,4)
CDA2	EAT_PPS	Disable Param Passing (8,4,108,2)
CDA3	EAT_AHI	Configure FDIR (8,4,108,3)

- TFL TC FDIR (5,x,170)

List of the TCs to fill the EAT table

DB_OBCP_H_HIFI_RESET		
TC_ID	Short_Description	TC
CDA4	EAT_HIFI_RESET_TC	Add Event (19,1)
CDA5	EAT_HIFI_RESET_En	Enable Action (19,4)
CDA6	EAT_PPS	Disable Param Passing (8,4,108,2)
CDA7	EAT_AHI	Configure FDIR (8,4,108,3)

- TFL TM FDIR (5,x,184)

List of the TCs to fill the EAT table

DB_OBCP_H_HIFI_RESET		
TC_ID	Short_Description	TC
CDA8	EAT_HIFI_RESET_TM	Add Event (19,1)
CDA9	EAT_HIFI_RESET_En	Enable Action (19,4)
CDAA	EAT_PPS	Disable Param Passing (8,4,108,2)
CDAB	EAT_AHI	Configure FDIR (8,4,108,3)

4.14 DB_OBCP_H_HIFI_STANDBY

This OBCP is only called by DB_OBCP_H_MODE_PL_SC.

5. TOOLS

5.1 LOAD_OBCP

Version : 10

Update reason of the load_obcp.c source file : Corrected parameter "N" used in Load_OBCP TC and add generation of files with TERMA interface.

Source File	Comments	MD5 Checksum
load_obcp.c	C source file of the "load_obcp" tool	3eebbd8cc48366f2bf7b9e12841c2143
Makefile	Compiling file	2af688b3f5b158f41aae6ea359cdeade

This tool is using a token file "img_xxx.tok" to generate 5 output files :

- IMG version : version of the OBCP
- SVF file : sild procedure to load the OBCP.
- SVF file for TERMA : sild procedure using TERMA's interface.
- XML file : load TCs and start TC for HPSDB in XML format according to [AD2].
- TXT file : list of the TCs in XML file.

6. INCLUDED FILES

6.1 XML Files

Source File	Comments	MD5 Checksum
obcp.xml	Contains the XML format of the TCs used by OBCPs	1a8f478d999dd5afb5d24d8c367d0d8f
TM_5_4.xml	Contains the XML format of the TMs used by OBCPs	C34a09ea0fcf389afd433e643156d218

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