

Herschel/Planck

Herschel HP SDB

System data

Product Code: 460000

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DISTRIBUTION RECORD

DOCUMENT NUMBER : H-P-2-ASP-LI-1464		Issue : 03	
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EXTERNAL DISTRIBUTION		INTERNAL DISTRIBUTION	
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ISSUE	DATE	§ CHANGE RECORDS	AUTHOR
1.0	29/11/2007	First Issue	F. Chatte
2.0	11/12/2007	<ul style="list-style-type: none"> ValDatReq 127-H <ul style="list-style-type: none"> DBAMN-H-227 Change TC SubSchedule DBAMN-H-230 DBAMN-G-001 All TC are switch from "ground high priority" to "ground low priority" by default. ValDatReq 128-H <ul style="list-style-type: none"> DBMN-H-231 Modification of STR velocity commanding according to ESOC requirement. 	S Dos Santos
3.0	25/02/2008	<ul style="list-style-type: none"> H-P-200000-ASP-NC-2078 (Herschel Part): DBAMN-H-237 Change Hardlimit from [0.0..0.11] to [0.0..12] on Parameter WM307565 (SREM current) [RD4] . DBAMN-H-246 Change on OBCP new v 10.0 subschedule from 30 to 10 [RD7] DBAMN-H-250 SPIRE Launch Lock PCDU parameters acquisition [RD8] DBAMN-H-251 Decontamination setting calibration (NCR 3915 – Refer to François mail on 25/01/08) [RD10] DBAMN-H-252 Delete TM packet 939TMPKA003939 ("New Tm 251002939") not referenced by any Scos packet (due to H-P-462000-ASP-NC-3803) DBAMN-H-253 Change TC Subchedule by Subsystem [RD2] DBAMN-H-254 Add STR velocity [RD1] DBAMN-H-255- Set Event Packet =Alarm for TM packet (5,4) except for EGSE [RD3] DBAMN-H-256- Model Update for Cryo Data [RD6] DBAMN-H-259 – Raster Line Scan Calibration Curves (refer to mail from Aurelian on 16/05/07)[RD9] 	S Dos Santos



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1. INTRODUCTION

From: TAS-F

To: TAS-F

Object: System update of Herschel model

File Type: N/A

File: N/A

Date- 2008/02/25

Reason: System Updates after new Delivery of TAS-I (CIDL 13)

- H-P-200000-ASP-NC-2078 (Herschel Part): DBAMN-H-237 Change Hardlimit from [0.0..0.11] to [0.0..0.12] on Parameter WM307565 (SREM current) [RD4] .
- DBAMN-H-246 Change on OBCP new v 10.0 subschedule from 30 to 10.[RD7]
- DBAMN-H-250 Creation of diagnostic packet for SPIRE Launch Lock acquisition (workaround NCR 3661) [RD8]
- DBAMN-H-251 Decontamination setting calibration (NCR 3915 – Refer to François email on 25/01/08) [RD10]
- DBAMN-H-252 Delete TM packet TMPKA New Tm 251002939 not referenced by any Scos packet (due to H-P-462000-ASP-NC-3803)
- DBAMN-H-253 Change TC Subschedule by Subsystem [RD2]
- DBAMN-H-254 Add STR velocity [RD1]
- DBAMN-H-255- Set Event Packet = Alarm for TM packet (5,4) except EGSE [RD3]
- DBAMN-H-256- Model Update for Cryo Data [RD6]
- DBAMN-H-259 – Raster Line Scan Calibration Curves (refer to Aurelian mail on 16/05/07)[RD9]

2. CONFIGURATION ITEM

Number: 460000

Name: HPSDB – Data: Theoretical Model HERSCH_FM9

3. SUPPLIER NAME

Thales Alenia Space – France

4. APPROVED BY

Refer to cover page

5. INPUT

N/A

6. SYSTEM DATA UPDATES

6.1 Theoretical Part

6.1.1 TC ground priority

DBAMN-G001

For spacecraft TC's this change is done via generic data.

For EGSE TC's this change is included on TAS-I delivery (all references to TC header from GX000000 to GX004000).

Note: Warning High priority TC shall always refer to GX002000 TC header.

6.1.2 Sub schedule

XML Loading [RD2]

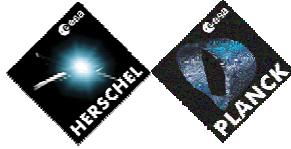
The default sub schedule values are set according to ESOC requirements:

- "10" for CDMS and model telecommands except SREM
- "20" for ACMS telecommands
- "50" for SREM telecommands (1)
- "70" for HFI telecommands
- "90" for LFI telecommands
- "370" for SCE telecommands

- (1) Only ASW TC commands are modified (low level TC's to SREM are considered as CDMS or model commands) and as such have a sub schedule "10")

ASW SREM TC ID	Short Description	Long Description
DC811160	StartCycSREMAcq	Start Cyclic SREM Acquisition
DC812160	StopCycSREMAcq	Stop Cyclic SREM Acquisition
DC813160	DumpSREMMem	Dump SREM Memory
DC814160	LoadSREMPatch	Load SREM Patch
DC815160	SetSREMReg	Set SREM Register
DC816160	GetSREMReg	Get SREM Register

- (2) Generic and EGSE TC's sub_schedule is 30



6.1.3 TM (5,4) Event Packet set to Alarm

XML Loading [RD3]

ACMS Subsystem:

2 packets inside COM_BSW_ACC

9 packets inside Subsystem A105

CDMS Subsystem:

2 packets inside COM_B_C_9

60 Packets on CDMU_A_C_9

24 Packets on CDMU_B_C_9

SPIRE Subsystem

Done by SPIRE Team V 2.2H1

HIFI subsystem

Done by HIFI Team HFI v 11.6

Note Please:

PACS Subsystem already done

EGSE is not modified

6.1.4 Theoretical element ACC_A_C_4:

XML Loading [RD1]

STR velocity modification

- Curve 001400 is created (to de-calibrate STR velocity)
- Creation of command parameters:
 - o HFXC (for X axis velocity)
 - o HFXE (for Y axis velocity)
 - o HFXF (for Z axis velocity)
 - o HFXX (for X axis velocity DB loading)
 - o HFXY (for Y axis velocity DB loading)
 - o HFXZ (for Z axis velocity DB loading)
- Creation of Telecommand CDL2 (instance of CDL1 to load DB with default STR velocity)

6.1.5 Theoretical element ACC_A_H_4:

XML Loading [RD9]

<!-- Version 01 - DBAMN-H-197 - 19/02/08 (refer mail from A. Tomescu on 16/05/07) -->

<!-- F. Chatte -->

<!-- In the theoretical element ACC_A_H_4 (ACC ASW Herschel specific)-->

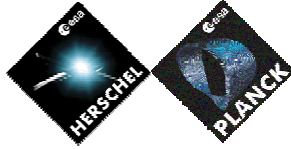
<!-- 1 - Creation of 5 curves-->

<!-- 1-1 - 002990 - To calibrate tilt angle-->

<!-- 1-2 - 002991 - To calibrate d1 steps-->

<!-- 1-3 - 002992 - To calibrate d2 lines-->

<!-- 1-4 - 002993 - To calibrate D1 line-->



<!-- 1-5 - 002994 - To calibrate scan rate-->
<!-- 2 - Update of 5 software command parametersto refer to curve-->
<!-- 2-1 - HHDA - AcmsH tlit angle-->
<!-- 2-2 - HHDB - AcmsH d1 steps-->
<!-- 2-3 - HHDC - AcmsH d2 lines-->
<!-- 2-4 - HHDL - AcmsH D1 line-->
<!-- 2-5 - HHDS - AcmsH scan rate-->

6.1.6 Theoretical Element PCDU_COM

XML Loading [RD4]:

H-P-200000-ASP-NC-2078 (Herschel Part): DBAMN-H-237 Change Hardlimit from [0,0.11] to [0,0.12] on Parameter WM307565 (SREM current) .

6.1.7 Theoretical Subsystem A209-ACMS

XML Loading [RD1]

In the theoretical subsystem A209

- Modification Telecommand ACYJU109 (from variable to fix TC)
- Modification Telecommand ACYJR109 (from variable to fix TC)
- Modification Telecommand ACZR4109 (from variable to fix TC)
- Modification Telecommand ACZR5109 (from variable to fix TC)

6.1.8 Theoretical Model HERSCH_FM9

6.1.8.1 CRYO data update

XML Loading [RD6]

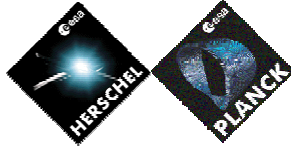
The following updates are done:

a) Alphanumeric display

- No change between TAS-F and TAS-I definition:
ZAK02999
ZAK04999
ZAK05999
ZAK06999
ZAK07999
- Overwrite
ZAK03999

TAS-I

<ALPHA_D_STR Pos="45" ModeFlag="N" Commutation="1" ParRef="KM272300" Format="N"/>



<ALPHA_D_STR Pos="46" ModeFlag="N" Commutation="1" ParRef="KM273300" Format="N"/>
by TAS-F

<ALPHA_D_STR Pos="45" ModeFlag="N" Commutation="1" ParRef="KD272300" Format="N"/>
<ALPHA_D_STR Pos="46" ModeFlag="N" Commutation="1" ParRef="KD273300" Format="N"/>

- New (Total 4)

ZAK08999 KD_H_CCU_A_Mon12_HK_ParRep 1of2
ZAK09999 KD_H_CCU_A_Mon12_HK_ParRep 2of2
ZAK10999 KD_H_CCU_B_Mon12_HK_ParRep 1of2
ZAK11999 KD_H_CCU_B_Mon12_HK_ParRep 2of2

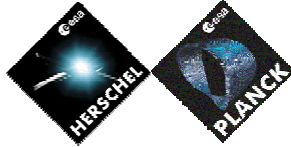
b) TC label overwrite to reflect the engineering label of the addressed equipment:

ZC0Z1999	Change TC description	CCUA_Arm_V1	by	CCUA_Arm_V103
ZC0Z2999	Change TC description	CCUA_Open_V1	by	CCUA_Open_V103
ZC0Z3999	Change TC description	CCUA_Close_V1	by	CCUA_Close_V103
ZC0Z4999	Change TC description	CCUA_Arm_V2	by	CCUA_Arm_V501
ZC0Z5999	Change TC description	CCUA_Open_V2	by	CCUA_Open_V501
ZC0Z6999	Change TC description	CCUA_Close_V2	by	CCUA_Close_V501
ZC0Z7999	Change TC description	CCUA_Arm_V3	by	CCUA_Arm_V504
ZC0Z8999	Change TC description	CCUA_Open_V3	by	CCUA_Open_V504
ZC0Z9999	Change TC description	CCUA_Close_V3	by	CCUA_Close_V504
ZC0ZA999	Change TC description	CCUB_Arm_V1	by	CCUB_Arm_V106
ZC0ZB999	Change TC description	CCUB_Open_V1	by	CCUB_Open_V106
ZC0ZC999	Change TC description	CCUB_Close_V1	by	CCUB_Close_V106
ZC0ZD999	Change TC description	CCUB_Arm_V2	by	CCUB_Arm_V503
ZC0ZE999	Change TC description	CCUB_Open_V2	by	CCUB_Open_V503
ZC0ZF999	Change TC description	CCUB_Close_V2	by	CCUB_Close_V503
ZC0ZG999	Change TC description	CCUB_Arm_V3	by	CCUB_Arm_V505
ZC0ZH999	Change TC description	CCUB_Open_V3	by	CCUB_Open_V505
ZC0ZJ999	Change TC description	CCUB_Close_V3	by	CCUB_Close_V505

(Note no Description change on the TC's ZC0ZR999, ZC0ZS999, ZC0ZT999, ZC0ZU999)

c) TC CVS completion overwrite to check final status of valves and arming reset:

ZC0Z1999	Replace CVS Order=2	070002000	by	110011300
ZC0Z2999	Replace CVS Order=2	070002000	by	110012319
ZC0Z3999	Replace CVS Order=2	070002000	by	110013319
ZC0Z4999	Replace CVS Order=2	070002000	by	110021300
ZC0Z5999	Replace CVS Order=2	070002000	by	110022319
ZC0Z6999	Replace CVS Order=2	070002000	by	110023319
ZC0Z7999	Replace CVS Order=2	070002000	by	110031300
ZC0Z8999	Replace CVS Order=2	070002000	by	110032319
ZC0Z9999	Replace CVS Order=2	070002000	by	110033319
ZC0ZA999	Replace CVS Order=2	070002000	by	110011301
ZC0ZB999	Replace CVS Order=2	070002000	by	110112319
ZC0ZC999	Replace CVS Order=2	070002000	by	110113319
ZC0ZD999	Replace CVS Order=2	070002000	by	110021301



ZCOZE999 Replace CVS Order=2 070002000 by 110122319
 ZCOZF999 Replace CVS Order=2 070002000 by 110123319
 ZCOZG999 Replace CVS Order=2 070002000 by 110031301
 ZCOZH999 Replace CVS Order=2 070002000 by 110132319
 ZCOZJ999 Replace CVS Order=2 070002000 by 110133319

- d) TM packets overwrite in order that low and high speed CCUA monitoring packet address the same structure (SPID): 999TMPKA142999 links to SPID 260142999 change to SPID 260141999 (SPID 260142999 is useless)
- e) TM packets overwrite in order that low and high speed CCUB monitoring packets address the same structure (SPID): 999TMPKA145999 links to SPID 260145999 change to SPID 260144999 (SPID 260145999 is useless)
- f) SPID 260130999 - Essential HK - CCU data replaced by 1553 structures inherited from CRYO subsystem
- g) SPID 260140999, 260141999, 260143999 and 260144999 CCU data replaced by structures (CCU monitoring and DLCM) inherited from CRYO subsystem

The following SPID's: 260142999 and 260145999 have been deleted manually in HPSTDB (they are no more referenced).

6.1.8.2 SPIRE Launch Lock acquisition

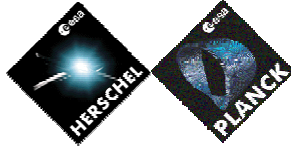
XML input [RD8]

```
<!-- Issue 01 - DBAMN-H-250 -->
<!-- F. Chatte-->
<!-- 1 - Creation of system diagnostic TM packets for SPIRE Launch Lock parameters acquisition
as workaround to NCR 3661 (this diagnostic packets and all associated items shall be removed
once NCR 3661 is fixed):-->
<!-- . WM107565 (PID=565)-->
<!-- . WMA07565 (PID=826)-->
<!-- 1-1 - New TC(3,2) ZCB00999 (HK PK ID=120, SID=25000, Interval=4 (4*1s))-->
<!-- 1-2 - New TM packet (3,26) 999TMPKA000999-->
<!-- 1-3 - New SCOOS PID 264000999 -->
<!-- 1-1-4 - New AND ZAW00999-->
```

6.1.8.3 Decontamination setting calibration

XML input [RD10]

```
<!-- Version 01 - DBAMN-H-251 - 19/02/08 - NCR 3915 (refer mail from F. Sauvage on
25/01/08) -->
<!-- F. Chatte -->
```



```
<!-- In the theoretical model HERSCH_FM9 -->
<!-- 1 - Creation of 5 curves-->
<!-- 1-1 - Z999200999 - Textual curve to convert parameter identifier (engineering) in PID
(RAW) for allowed parameters on M1-->
<!-- 1-2 - Z999201999 - Textual curve to convert parameter identifier (engineering) in PID
(RAW) for allowed parameters on M2-->
<!-- 1-3 - Z999202999 - Discrete curve to convert temperature °C (engineering) to resistance
(raw) for M1 temperature thresholds-->
<!-- 1-4 - Z999203999 - Discrete curve to convert temperature °C (engineering) to resistance
(raw) for M2 temperature thresholds-->
<!-- 1-5 - Z999204999 - Discrete curve to convert temperature °C (engineering) to resistance
(raw) for continuity check threshold-->
<!-- 2 - Creation of 20 software command parameters-->
<!-- 2-1 - ZHB00999 - M1 thermistor 1 identifier (Parameter 1 for TC ZCB01999)-->
<!-- 2-2 - ZHB01999 - M1 thermistor 2 identifier (Parameter 2 for TC ZCB01999)-->
<!-- 2-3 - ZHB02999 - M1 thermistor 3 identifier (Parameter 3 for TC ZCB01999)-->
<!-- 2-4 - ZHB03999 - M2 thermistor 1 identifier (Parameter 1 for TC ZCB02999)-->
<!-- 2-5 - ZHB04999 - M2 thermistor 2 identifier (Parameter 2 for TC ZCB02999)-->
<!-- 2-6 - ZHB05999 - M2 thermistor 3 identifier (Parameter 3 for TC ZCB02999)-->
<!-- 2-7 - ZHB06999 - M1 threshold Tmin (Parameter 1 for TC ZCB0499)-->
<!-- 2-8 - ZHB07999 - M1 threshold Tmax (Parameter 2 for TC ZCB0499)-->
<!-- 2-9 - ZHB08999 - M2 threshold Tmin (Parameter 3 for TC ZCB0499)-->
<!-- 2-10 - ZHB09999 - M2 threshold Tmax (Parameter 4 for TC ZCB0499)-->
<!-- 2-11 - ZHB10999 - Continuity check threshold (Parameter 5 for TC ZCB0499)-->
<!-- 2-12 - ZHB11999 - M1 heater 1 mask (Parameter 7 for TC ZCB0399)-->
<!-- 2-13 - ZHB12999 - M1 heater 2 mask (Parameter 6 for TC ZCB0399)-->
<!-- 2-14 - ZHB13999 - M1 heater 3 mask (Parameter 5 for TC ZCB0399)-->
<!-- 2-15 - ZHB14999 - M1 heater 4 mask (Parameter 4 for TC ZCB0399)-->
<!-- 2-16 - ZHB15999 - M1 heater 5 mask (Parameter 3 for TC ZCB0399)-->
<!-- 2-17 - ZHB16999 - M1 heater 6 mask (Parameter 2 for TC ZCB0399)-->
<!-- 2-18 - ZHB17999 - M1 heater 7 mask (Parameter 1 for TC ZCB0399)-->
<!-- 2-19 - ZHB21999 - M2 heater 1 mask (Parameter 9 for TC ZCB0399)-->
<!-- 2-20 - ZHB22999 - M2 heater 2 mask (Parameter 8 for TC ZCB0399)-->
<!-- 3 - Creation of 4 TC's (8,4,113,1) -->
<!-- 3-1 - ZCB01999 - To configure thermistor in use for M1 decontamination - default value set
-->
<!-- 3-2 - ZCB02999 - To configure thermistor in use for M2 decontamination - default value set
-->
<!-- 3-3 - ZCB03999 - To configure the heater mask - default value set-->
<!-- 3-4 - ZCB04999 - To configure the thresholds - default value set-->
```

6.2 Output-File

None

6.3 Output-File compliance

N/A

6.4 Output File Type

N/A

6.5 Version/Release Number

H-P-3-ASP-LI-1464 v 3

6.6 Generation Date

2008/02/25

6.7 Checksum Type

N/A

6.8 Checksum Value

N/A

6.9 Delivered Files

This delivery (one unique zip file: H-P-2-ASP-LI-1464_issue03.zip) contains 10 files:

1. A pdf document: this release note H-P-2-ASP-LI-1464_issue02.pdf
2. [RD1]
3. [RD2]
4. [RD3]
5. [RD4]
6. [RD6]
7. [RD7]
8. [RD8]
9. [RD9]
- 10.[RD10]

7. APPLICABILITY

HERSCH_FM9



8. APPLICABLE AND REFERENCE DOCUMENTS

8.1 Applicable documents

AD	Title	Reference	Issue /version
[AD1]	CCS - external ICD	H-P-4-TE-ID-8020	01/08
[AD2]	Naming Convention	H-P-ASPI-SP-0141	02/02

8.2 Reference documents

RD	Title	Reference	Issue /version
[RD1]	HPSDB HPSDB_STR_Velocity_v_1_1.zip	N/A	01/01
[RD2]	HPSDB_Subschedule_v_1_1.zip	N/A	01/01
[RD3]	HPSDB_Event_Packet_v_1_0.zip	N/A	01/00
[RD4]	HPSDB_PCDU_COM_Change_HardLimit_SREM_Current_v_1_0.zip	N/A	01/00
[RD5]	N/A		
[RD6]	HPSDB_Model_HERSCH_FM9_Cryo_Data_Update_v_1_1.zip	N/A	01/01
[RD7]	HPSDB_v_1_1_OBCPv_10	N/A	01/01
[RD8]	HPSDB_DBAMN-H-250 Z999_DTM_def_20080215_FC_issue_01.zip	N/A	01/00
[RD9]	ACMS Calibration.zip	N/A	01/00
[RD10]	Decontamination setting with calibration.zip	N/A	01/00

9. KNOWN PROBLEMS OR MISSING DATA

None

10. DELIVERY

Part of HERSCH_FM9 model delivery.

END OF DOCUMENT