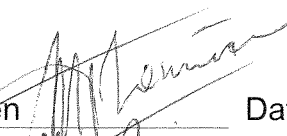
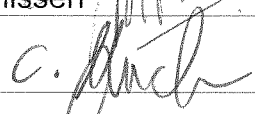

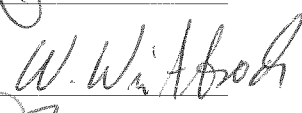
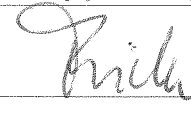


Title: Test Report: Herschel AFT – 4 (Post Vibration Test)

CI-No:

100 000

Prepared by:	M. Theunissen 	Date:	09-Jul-08
Checked by:	C. Much 		09/07/2008
Product Assurance:	R. Stritter 		09.07.08
Configuration Control:	W. Wietbrock 		23.07.08
Project Management:	W. Fricke 		25/07/2008

Distribution: See Distribution List (last page)

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Issue	Date	Sheet	Description of Change	Release
1	09-Jul-08	All	Formal Issue	

TABLE OF CONTENT

1	SCOPE	6
1.1	Objective	6
2	DOCUMENTS / DRAWINGS	7
2.1	Applicable Documents	7
2.2	Reference Documents	7
2.3	Acronyms & Abbreviations	7
3	TEST CHARACTERISTICS	8
3.1	Title	8
3.2	Unit tested	8
3.3	Description	8
3.4	Applied procedures	8
3.5	Requirements to be verified	8
3.6	Corresponding minutes of meetings	8
3.7	General test flow	8
4	TEST EXECUTION	10
4.1	Date and time	10
4.2	Tag / session reference	10
4.3	Personnel (Operator, Conductor and QA)	10
4.4	Detailed test timeline (CCS Time)	10
4.4.1	Start of test / end of test	10
4.4.2	Time of event as deviation	10
4.4.3	Time zone to be ignored in case of deviation	10
4.4.4	Time of SPR / NCR	11
4.4.5	Time of mile stone in test	11

4.5	Problems found during the test	16
4.5.1	Details of issues found, SPR list	16
4.5.2	Details of issues found, NCR list	16
4.5.3	List of SPRs and NCRs raised/reseen and what action was taken if any	16
4.5.4	Procedure changes	16
4.6	Deviations from test requirements (delta to TRR)	17
4.7	Test execution summary	17
4.8	Summary conclusion	17
4.8.1	Conclusions from 05.07.2008	17
4.9	Open issues	17
5	POST-TEST DATA RETRIEVAL	18
5.1	Cleanliness Report	18
5.2	Dump The CCS Data	18
5.2.1	Session Archive	18
5.2.2	SSMM Dump Data	18
5.2.3	TM Packet History	18
5.2.4	TM History	18
5.2.5	TC Packet History	19
5.3	Dump The TM/TC DFE Data	20
5.3.1	CLTU	20
5.3.2	TC Packets	20
5.3.3	TM Frames	20
5.3.4	TM Packets	20
5.4	Dump The 1553 DFE Data (Milbus)	20
5.5	Dump The Scoe Data	20
5.5.1	TT&C Scoe Data	20
5.5.2	Cryo Scoe Data	21
5.5.3	Acms Scoe Data	21
5.6	Replay of Data	21
5.6.1	Replay Archive	21
5.6.2	Replay TM History	21
5.6.3	Replay TM Packet History	21
6	ATTACHMENTS	22
6.1	Contamination Control Report	22

6.2	Pictures Taken On The Specimen In Test Configuration	22
6.3	Record (CD/DVD-ROM) of all acquired data during test	22
6.4	Test measurements devices calibration reports	22
6.5	Logbook Extracts	22
6.6	Copy Of Raised SPRs / NCRs	22
6.7	As-Run Procedure	22
6.8	TRR, PTS	23
6.9	Script File Configuration	23
6.10	Engineering (Pre-Evaluation)	23

1 Scope

This document reports on the S/C AFT-4 test performed on the FM S/C at ESTEC in accordance to [AD 1], section 5.8.3 and with the deviation identified in [AD-4].

1.1 Objective

The scope of the test was to perform a 'health-check' of the S/C subsystem at the end of the vibration tests performed on the two shakers for the 3 axes:

2 Documents / Drawings

2.1 Applicable Documents

AD-1	Herschel SFT & AFT SPECIFICATION	HP-2-ASP-SP-1411
AD-2	Herschel AFT Test Procedure, Issue 1	HP-2-ASED-TP-0224
AD-3	Herschel S/C IST Leading Procedure, Issue 1, Revision 2	HP-2-ASED-TP-0134
AD-4	S/C AFT-4 TRR Minutes of Meeting	H-P-TASF-MN-10
AD-5	Herschel Instrument Power ON-OFF Switching Procedure for Functional Testing	HP-2-ASED-TP-0206

2.2 Reference Documents

None

2.3 Acronyms & Abbreviations

See "as-run" procedure.

3 Test characteristics

3.1 Title

Herschel Abbreviated Functional Test Number 4: Post Vibration Test

3.2 Unit tested

- As defined in [AD-4]
- There was no change in the test object

3.3 Description

See § 1.1

3.4 Applied procedures

[AD-2], [AD-3], [AD-5]

3.5 Requirements to be verified

[AD-1]

- Section 3

3.6 Corresponding minutes of meetings

[AD-4]

3.7 General test flow

Performed on Night of 4th Jul and into PM of 5-Jul-08.

A Short Summary follows:

- S/c Switch on (Nominal CDMS and ACMS)
- Separation
- ACMS up to SCM
- SFT HIFI, SPIRE Nominal units OFF > Standby (PACS was **NOT TESTED**)
- SFT HIFI, SPIRE Redundant units OFF > Standby (PACS was **NOT TESTED**)
- CDMU Reconfig

- PCDU Reconfig
- TTC Reconfig
- ACMS Bus swap over
- ACMS Reconfig

4 Test execution

4.1 Date and time

See § 4.4

4.2 Tag / session reference

Tag Used: HP_2_ASED_TP_0224_ISS1_AFT4_BEGIN_001

Session Ref: 2008_07_04_21_40_hercdmu_hpws22_REALTIME

4.3 Personnel (Operator, Conductor and QA)

Operator: D. Liberatore / B. Chen / U. Klenke

QA: R. Goosens / B. Hogg / D. Lamonby

Test Conductor: M. Theunissen

Test Director: Y. Roche

4.4 Detailed test timeline (CCS Time)

Session of 04.07.08, AFT-4:

Note that prior to 00:45 there was a PACs NCR investigation being performed. Please ignore any SPRs NCRs etc raised before this time.

Power-On: 00:45

Power-Off: 16:45

4.4.1 Start of test / end of test

See test log book below and above

4.4.2 Time of event as deviation

See Log-Book

4.4.3 Time zone to be ignored in case of deviation

N/A

4.4.4 Time of SPR / NCR

See test log book below

4.4.5 Time of mile stone in test

See test log book below

Date	04/07/2008
Operator	D. Liberatore
QA	R. Goossens
EGSE	E. Hanka
Test Case	AFT4
OBSW	CDMS 3.4.0.9, ACMS 3.8
HPSDB	H-P-2-ASP-LI-1441 issue 14
HPCCS Release	HPCCS_2.0-1317
Test Environment / Version	HP_2_ASED_TP_0224_ISS1_AFT4_BEGIN_001
Session ID	2008_07_04_21_40_hercedmu_hpws22_REALTIME
Purpose of test	Debugging
	NCR investigation
	Calibration / Maintenance
	Unit integration testing
	FORMAL

X

Time UTC	Test Procedure / Step / Script / Command / Event / Anomaly	Remarks / Cause of anomaly / Corrective action	C/A type (T/P)	NCR ref. (P)
21:40	Start session for AFT4			
22:14	WMB04569 (SA_Pan1_Temp) shows a value of 400 degrees resulting into Out of Limit (High High) alarm, where range -60 till +150 degrees	Error observed also earlier today in previous session ; to be investigated if SA is disconnected or sensor is defect (then issue new NCR) See OOL printdump On further investigation shows all Solar Array thermistors showing high, this is due to the SA connectors being demated to allow the connection of the SAS Scoe. The one value showing an error is due to a slightly higher resistance than the other lines.		New NCR ?? NOT AN NCR
22:50	ERROR in ACMS_SCOE_CONFIG1.tcl	Error --> "Simulator schedule \$schedFileCheck file		Known SPR

Time UTC	Test Procedure / Step / Script / Command / Event / Anomaly	Remarks / Cause of anomaly / Corrective action	C/A type (T/P)	NCR ref. (P)
	This has happened before and is SPR 538	does not exist" terminate script and restart ...CONFIG1 script result: now ok.		538
22:54	IST_UPLOAD_EAT ERROR: TCSEND REJECTED (Cannot find command DC9A0185 in MIB) 1	Database error, unknown command (known SPR-573) --> found "locally modified" ; Patched online to latest version according SPR and restarted script then checked in		Known SPR-573
23:09	GET_EAT_REPORT reports 2 errors for PACS_BOLC_OFF	Script to be updated acc new SPR		New SPR-585
23:49	IST_UPLOAD_OBCP ERROR: TCSEND REJECTED	Same error as for EAT REPORT: script was only locally modified after script update by OMA; again, patched online and restarted;		Known SPR-574
00:02	From this time onward all further OBCPs are failing	Screendump made. To be investigated; related to new HPSDB ???		New NCR or SPR ??
00:11 & 00:1x (more than 1 occurrence)	TEST FAILED: TM check DE83E170 check timed out after 128 sec; found 4616 instead of xxxx (each time different)	To be investigated MTH: DE83E170 is the "OBCP load Identifier". This packet is in the EssLR packet (every 64 sec). Since the content of the OBCPs is changed with this database (issue 14) the OBCP CIDL should be checked if the OBCP load id are also changed. If changed raise an SPR.		New NCR ??
00:24:19	From this time on all OBCP's uploading ok again !!			
00:45	IST START finished; s/c powered on			
00:46	START with AFT4 according to TP-224			
00:51	PCDU_TRANSITION: TM check failed: YM508956 (BsbsCurrentIns) failed, expected between -5.4 and -5.8 value = 0.03 Considered no problem, continued	Also YM504956 (BsbsVoltageIns) reports failed MTH: An charge current is expected, however the BS is not being found charging. Check configuration file.		

Time UTC	Test Procedure / Step / Script / Command / Event / Anomaly	Remarks / Cause of anomaly / Corrective action	C/A type (T/P)	NCR ref. (P)
01:19	Problems encountered with switching TM to RF which doesn't seem to work. TM remains in Umbilical (steps 130 – 170)	TM still flowing down but via Umbilical ! Since we can't solve this (RF expert needed) we note this in the procedure and goto the next mode.		Investigate offline
01:40	Update of problem investigation: We had an idea to check the antenna cables for possible swap, found that these were connected ok but then found at the TTC SCOE FE that it was in LOCAL Mode and indicating a failure ! Operator decided to override and out TTC in Remote. Then went back to Checkout and checked test status, decided to restart the script from switching TM link to RF	Script seemed to run ok, commands executed, but then RF failed to lock [again] !!! CHECK WITH IAN WHY THE TTC SCOE WAS IN THIS STATE AND WHAT FAILED		
6:30	S/C in SCM mode			
7:15	Lost TM, when we tried to set TM to high rate in RF	Powered up SC using AFT configuration however TP-0221 called by ACS0377 to switch on PACS requests SC switch on INSTR configuration. This is probably not an NCR but just a conflict in configuration requirements trying to perform tests in parrallel.		NCR ??
8:05	Set back to Umbilical.			PVS#1
8:30	TM check errors in DP_SPS_LINK No Telemetry Packet received (Telemetry parameter isn't validated)	Reoccurrence of NCR Perform Operator Note35		NCR4181
	Switched On/OFF PACS wrt ACS0337			
10:23	PACS investigation ongoing, conclusion: PACS should be OFF until further notification.			
10:35	Set back to RF			
10:40	Switch ON/OFF HIFI Prime			
10:55	Switch ON SPIRE			
12:10	Some OOL Alarms, but few seconds later disappeared. Probably			

Time UTC	Test Procedure / Step / Script / Command / Event / Anomaly	Remarks / Cause of anomaly / Corrective action	C/A type (T/P)	NCR ref. (P)
	switch on effect.			
12:10	TC162289 is not acknowledged (in yellow) during switch on HIFI			
13:17	Some OOL alarms on SPIRE. Probably switch on effect.			
13:24	Some OOL alarms on SPIRE as expected during switch-off			
13:30	AFT Master script not in-line with the AFT procedure			SPR-586
14:01 to 14:09	Problems with DEL60170 (XpndRx2Use). Command DC37G170 was send manually to continue the test.	Ver_send seems to be altered. First TM is checked and then TC is sent by the procedure, whilst in the past first the TC was sent and then the TM was checked.		SPR-587
14:41	Script Y10289EVT005_TM_DFE_IN_FROM_TMC repeated manually because TM parameter RMB45442 (X2 RX Lock – RL) could not be validated by the system.			
14:49	Startracker 1 declared unhealthy at the point where the FDIR functionality was enabled.	TC's sent: ACYE8109 : ACZA3109 Startracker 1 now declared healthy.		TP-0224, PVS#4
15:42	TM parameter names changed in th HPSDB. Therefore script IST_END falls-over			SPR-588
16:02	IST_END Restarted			
16:45	S/C is OFF			

4.5 Problems found during the test

4.5.1 Details of issues found, SPR list

See also [OD 2] for detailed description

SPR No	Description
SPR586	AFT Master script not in line with AFT Procedure
SPR587	No TM received in ver_send procedure
SPR588	Different TM Parameter name in RM Log for CDMS

4.5.2 Details of issues found, NCR list

No NCRs were raised

NCR No	Description

4.5.3 List of SPRs and NCRs raised/reseen and what action was taken if any

SPR No	Action taken
586	Script to be updated
587	To be investigated
588	To be investigated

NCR No	Action taken

4.5.4 Procedure changes

See As-Run Procedure red-markings and Procedure Variation sheets

4.6 Deviations from test requirements (delta to TRR)

None

4.7 Test execution summary

The test ran as expected. PACS was not tested as it is still under an NCR (4272) investigation

4.8 Summary conclusion

4.8.1 Conclusions from 05.07.2008

The main objectives of the test have been met, as required in the TRR and w.r.t to the deviations identified. The results are considered acceptable from current/first analysis.

4.9 Open issues

None

5 Post-test Data Retrieval

Done. See CD in attachment

Post test data is stored in a common location on the Astrium-EADS FTP server at Friedrichshafen. The directory structure is common to all tests with only the top level directory name changing to reflect the test concerned. In this instance the top level directory is named:

2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.1 Cleanliness Report

See the corresponding subdirectory "Cleanliness_data" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.2 Dump The CCS Data

5.2.1 Session Archive

See the corresponding subdirectory "Session_Archive" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.2.2 SSMM Dump Data

See the corresponding subdirectory "SSMM_Dump_Data" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.2.3 TM Packet History

See the corresponding subdirectory "TM_Packet_History" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.2.4 TM History

See the corresponding subdirectory "TM_History" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

The following print specifications were used to extract TM parameters from the Replayed test session:

IST_ACMS_AAD

IST_ACMS_AAU
IST_ACMS_CRIS
IST_ACMS_GENERAL
IST_ACMS_GYRO
IST_ACMS_RCS
IST_ACMS_REACTION_WHEELS
IST_ACMS_SAS
IST_ASW
IST_BSW1
IST_BSW2
IST_CR101
IST_CR102
IST_I01 -- nb: zero one!
IST_INSTRUMENT_DATA -- For this test No Instruments On therefore Empty
IST_PCDU_PCS1
IST_PCDU_PCS2
IST_PCDU_PCS3
IST_PCDU_PCS4
IST_PCDU_PCS5
IST_PCDU_PCS6
IST_POWER
IST_RMB
IST_TTC
IST_TTC_DECOM
IST_TTC_TCS1
IST_TTC_TES2
IST_WM

5.2.5 TC Packet History

See the corresponding subdirectory "TC_History" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.3 Dump The TM/TC DFE Data

See the corresponding subdirectory "TM/TC_DFE_data" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.3.1 CLTU

See the corresponding subdirectory "CLTU" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.3.2 TC Packets

See the corresponding subdirectory "Tc_packets" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.3.3 TM Frames

See the corresponding subdirectory "Tm_frame" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.3.4 TM Packets

See the corresponding subdirectory "Tm_packets" on the CDs labelled:
2008_07_04_21_40_hercdmu_hpws22_REALTIME

5.4 Dump The 1553 DFE Data (Milbus)

Not Required

5.5 Dump The Scoe Data

5.5.1 TT&C Scoe Data

Not Required

5.5.2 Cryo Scoe Data

Not Required

5.5.3 Acms Scoe Data

Not Required

5.6 Replay of Data

Not Required

5.6.1 Replay Archive

Not Required

5.6.2 Replay TM History

Not Required

5.6.3 Replay TM Packet History

Not Required

6 Attachments

6.1 Contamination Control Report

See DVD containing test data

All environmental values were within specification. No NCRs raised.

6.2 Pictures Taken On The Specimen In Test Configuration

Not applicable

6.3 Record (CD/DVD-ROM) of all acquired data during test

See DVD containing the test data.

6.4 Test measurements devices calibration reports

Not applicable

6.5 Logbook Extracts

See section 4.4.5

Note the logbook extracts are for information only and do not necessarily represent a complete and accurate sequence of events. All essential information is provided in the signed off "as-run" procedures appended to this report

6.6 Copy Of Raised SPRs / NCRs

For NCRs, reference should be made to PRISMA for an accurate and detailed status of each. See sections 4.5.1 & 4.5.2 for a summary of the NCRs & SPRs related to this test.

A copy of the SPRs raised during the test are attached

6.7 As-Run Procedure

A copy of the "as-run" procedure follow.

6.8 TRR, PTS

A copy of the "MOM" follow.

6.9 Script File Configuration

TBC

6.10 Engineering (Pre-Evaluation)

N/A

END OF DOCUMENT

Attachment 1 to Section 6.6:
SPRs Raised During The Test

SPR Formsheet

Nr.: 586	Date: 5/7/2008	Author: M. Theunissen	Classification: minor
Test: AFT 4	Session ID: 2008-07-04-21-40-hercdmu- hpws22-REALTIME	Subsystem:	
Title: AFT Master script not in line with the AFT procedure			
Type: (Script/Picture /Test structure):	Name: 2010999 MCVT205_AFT_MASTER	Version: 1.6	
Problem description (to be filled by Test conductor (TC) / Test operator (TO)): Time (UTC): 13:30 Step no: 770			
The test procedure is: HP-2-ASED-TP-0224, issue 1.1 Herschel SAT AFT, 26.06.2008			
Proposed solution (to be filled by TC / TO): Move instrument steps (B-side) before CDMU 3B re-configuration			
Review board decision (to be filled by TC, TO, QA plus Engineering / experts if required):			
Implement as proposed:	<input checked="" type="checkbox"/>	Reject:	<input type="checkbox"/>
Other:			
Proposed rerun (Date / Test case):			
Date: 05.07.2008	Participants: MTH		
Implemented:	<input checked="" type="checkbox"/>	Code inspected:	<input type="checkbox"/>
Confirmed by Test Conductor(s) / Experts to check-in:			<input type="checkbox"/>
Date:	Name:		
Close out (Functional team member & QA):			
Verified during test case / ID: Same session			
Date: 05.07.2008	Version: 1.7	Func. Team Name: MTH	
Date:	QA:		

SPR Formsheet

Nr.: 587	Date: 05.07.2008	Author: M.THEUNISSEN	Classification:
Test: AFT4	Session ID:	Subsystem:	
Title: no TM received in ver-send procedure			
Type: (Script/Picture /Test structure):	Name: ver-send proc	Version:	
Problem description (to be filled by Test conductor (TC) / Test operator (TO)): Time (UTC): 14:01 Step no: 910 of AFT (TP 224) vss 1.1 ver-send that contains a TC and TM, with parameter in LR (64 sec) packet pops up an error message " No TM received "			
Proposed solution (to be filled by TC / TO):			
Review board decision (to be filled by TC, TO, QA plus Engineering / experts if required): Implement as proposed: <input type="checkbox"/> Reject: <input type="checkbox"/> Other: _____ Proposed rerun (Date / Test case): _____			
Date:	Participants:		
Implemented: <input type="checkbox"/>	Code inspected: <input type="checkbox"/>		
Confirmed by Test Conductor(s) / Experts to check-in: <input type="checkbox"/>			
Date:	Name:		
Close out (Functional team member & QA): Verified during test case / ID: _____			
Date:	Version:	Func. Team Name:	
Date:	QA:		

SPR Formsheet

Nr.: 588

Date: 5-7-2008

Author: D. LAMONBY

Classification:

Test: 1ST-END

Session ID: 2008-07-04_21-40_hercdmu_hpivs22_REALTIME

Subsystem:

Title: DIFFERENT TM PARAMETER NAME IN RM LOG FOR CDM.

Type: (Script/Picture /Test structure):

Name: GEN-COMMON-PROC-LIB

Version: 1.31

Problem description (to be filled by Test conductor (TC) / Test operator (TO)):

Time (UTC): 15155 Step no: BETWEEN STEP 3(END) AND STEP 5 (BEGINNING)

In new HPS DB first parameter AEV0A070 is renamed to AEV0070, etc

Proposed solution (to be filled by TC / TO):

Although it is strange that we verify ACMS parameters here (we dump CDMs RM log), it's clear that this problem is introduced with new HPS DB (issue 14). Check new names with current and old database differences and correct parameter names. Change AEV... → DEV... & AEW → DEW...

Review board decision (to be filled by TC, TO, QA plus Engineering / experts if required):

Implement as proposed:

Reject:

Other:

Proposed rerun (Date / Test case): 07.07.2008 (SVT debug)

Date: 05.07.2008

Participants: MTH

Implemented:

Code inspected:

Confirmed by Test Conductor(s) / Experts to check-in:

1.32

Date: 05.07.2008

Name: MTH

Close out (Functional team member & QA):

Verified during test case / ID:

Date:

Version:

Func. Team Name:

Date:

QA:

Attachment 1 to Section 6.7:
As Run Procedure HP-2-ASED-TP-0134

Title: **Leading Procedure for Herschel Integrated Satellite Test**

AS RUN FOR AFT 4

SESSION ID: 2008_07_04_21_40_hercedmu-hpws22-REALTIME_

CI-No:

START 04-07-08 23:40

Prepared by:	Functional Team	Date:
Checked by:	C. Much <i>[Signature]</i>	25/4/2008
Product Assurance:	J. Hall <i>[Signature]</i>	25/4/2008
Configuration Control:	W. Wietbrock	
TASF Engineering	G. Beaufile <i>[Signature]</i>	25 APR 08
TASF Test Director	S. Mooney <i>[Signature]</i>	25/4/2008
Project Management:	Dr. W. Fricke <i>[Signature]</i> APPROVED HIS POSITION + SIGNATURE FOR START OF TEST + [Signature]	
Project Management	Denis Montet <i>[Signature]</i>	28/4/08

[Handwritten signature]
29/04/08

Distribution: See Distribution List (last page)

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7.2.2 IST Configuration Table

The Herschel Satellite configuration for each IST test case is listed in the table below.

SASLPS SCOE	Bat. SCOE	Crome PAP/CCS	Sep. Strap SM	TTR SM	TM OBT	TC Dec.	PM SW	SSMM	Bus SM	PCDU SM	HPS	TxChain SM	RFDN SM	CCU ON Mode		ACMS Config. File				
5.8.2 NOMINAL LAUNCH																				
SAS	Sim. Charged + Launch	PM A Nominal	Not Separated	B	A	A	A1	A 0-1-2 B 0-1-2	A	B	A	B	A	A	B	1&3	ABBB	A&B	2	IST_FN
5.8.3a ACMS Commissioning																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	B	A1	A 0-1-2 B 0-1-2	A	B	A	B	A	A	B	1&3	ABBB	A&B	1	IST_SCA1
5.8.3b S/C Commissioning																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	A	A1	A 0-1-2 B 0-1-2	A	B	A	B	A	A	B	1&3	ABBB	A&B	1	IST_MOD
5.8.4.5.1 SPIRE Commissioning																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	A	A1	A 1 B 1	B	A	A	B	A	A	B	1&3	ABBB	A&B	1	
5.8.4.5.2 SPIRE Spectrometer Complementary Test																				
SAS	Sim. Charged	PM B Nominal	Separated	A	B	B	B1	A 3 B 3	B	A	B	A	B	B	A	2&4	AABB	A&B	1	

SASLPS	Bat.	Crome	Sep. Strap	TTR	TM	TC	PM	SSMM	Bus	PCDU	HPS	TxChain	RFDN	CCU	ACMS					
SCOE	SCOE	PAP/CCS	SM	SM	OBT	Dec.	SW		SM	SM		SM	SM	ON	Mode	Config. File				
5.8.4.6 PACS Commissioning																				
SAS	Sim. Charged	PM A Nominal	Separated	A	A	B	A1	A 2 B 2	B	A	B	A	B	B	A	2&4	AABB	A&B	1	
5.8.4.7 HIFI Commissioning																				
SAS	Sim. Charged	PM B Nominal	Separated	B	A	A	B1	A 3 B 3	A	B	A	B	A	A	B	1&3	ABBB	A&B	1	
5.8.4.8 Parallel Mode Commissioning																				
SAS	Sim. Charged	PM B Nominal	Separated	A	B	B	B1	A 0 B 0	A	B	B	A	B	B	A	2&4	AABB	A&B	1	
5.8.5 Mode Transition																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	A	A1	A 1 B 1	A	B	A	B	A	A	B	1&3	ABBB	A&B	2	IST_MOD
5.8.6 SC Reconfiguration																				
SAS	Sim. Charged	PM A Nominal	Separated	A	B	B	A1	A 2 B 2	B	A	B	A	B	B	A	2&4	AABB	A&B	1	IST_FD_B
5.8.7 CDMS Management																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	A	A2	A 1 B 1	A	B	A	B	A	A	B	1&3	ABBB	A&B	2	IST_CDMS
5.8.8 DTCP Worst Case Scenario																				
SAS	Sim. Charged	PM B Nominal	Separated	A	B	B	B2	A 2 B 2	B	A	B	A	B	B	A	2&4	AABB	A&B	2	IST_WCS

SASL PS	Bat. SCOE	Crome PAPI/CCS	Sep. SM	Strap SM	TTR	TM	TC	PM	SSMM	Bus	PCDU	HPS	TxChain	RFDN	CCU	ACMS				
					OBT	Dec.	SW			SM	SM		SM	SM	ON	Mode	Config. File			
5.8.9 RMS Reference Mission Scenario																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	A	A1	A 0-1-2 B 0	A	B	A	B	A	A	B	1&3	ABBB	A&B	1	IST_RMS
5.8.9 Launch Clean Run																				
LPS	REAL	PM A Nominal	Not Separated	B	A	A	A1	A 0-1-2 B 0-1-2	A	B	A	B	A	A	B	1&3	ABBB	A&B	2	IST_CLN
5.8.11 Launch Mode Robustness																				
SAS	Sim. Charged +Launch	PM A Nominal	Not Separated	B	A	A	A1	A 0 B 0	A	B	A	B	A	A	B	1&3	ABBB	A&B	2	IST_LSR
5.8.12 NOM Mode Robustness																				
SAS	Sim. Charged	PM A Nominal	Separated	A	B	B	A1	A 3 B 3	B	A	B	A	B	B	A	2&4	AABB	A&B	1	IST_NMR
5.8.13 Instrument FDIR																				
SAS	Sim. Charged	PM A Nominal	Separated	B	A	A	A2	A 1 B 1	A	B	A	B	A	A	B	1&3	ABBB	A&B	1	IST_CDMS

7.2.3 Initialisation

Step-No.	Initialisation-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
<u>TT&C SCOE initialisation</u>							
1	Verify that TT&C SCOE application SW is running Otherwise go on TTC SCOE or access remotely (command "startCMD ttcvnc" on shell window") and click "TTC SCOE Herschel" icon on TT&C SCOE desktop controller and wait for self test completion.						JK
2	On TT&C SCOE application, in window ":: CONF namespace" (that can be open by menu "windows/SCOE config"), select menu "Config/Load", load the file "Herschel.conf" then click "open" button.						not needed
<u>SPACECRAFT SKIN CONNECTORS CONFIGURATION</u>							
3	Verify that all the SCOE skin connectors cables are installed <ul style="list-style-type: none"> Goto chapter 4.3 Choose according to the IST Test case the related skin configuration table Check the list and sign off (together with PA and Floor Manager). 						JK

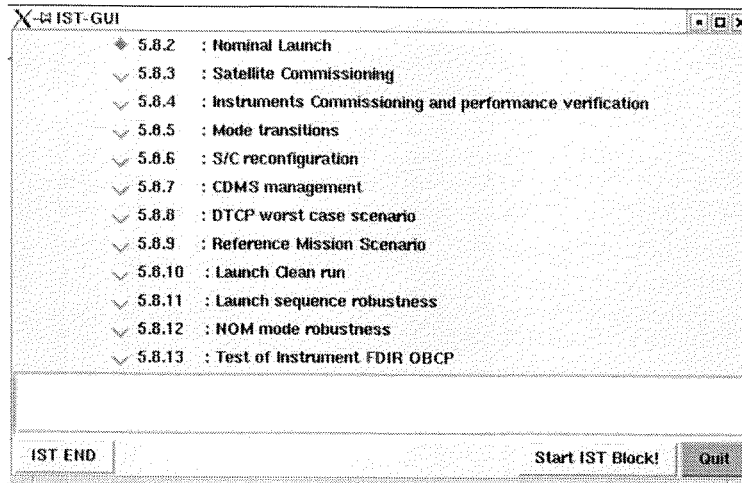
Test location: <i>ester</i>	Operator: <i>id.</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>09/02/08</i>	Time: <i>11:58</i>
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Step-No.	Initialisation-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
ACMS SCOE CHECK							
4 N/A for "Launch Clean Run"	Verify that the ACMS SCOE is ON and operational					PL	
5 N/A for "Launch Clean Run"	In the Clean Room, check on the ACMS SCOE that STR UCE Electrical Stimuli program on PC2 and PC3 are enabled (i.e. double click on "scroll lock" and check "01-02 & 01-03" that mouse pointer can be moved). Otherwise execute Annex D Operator Note 3					PL	

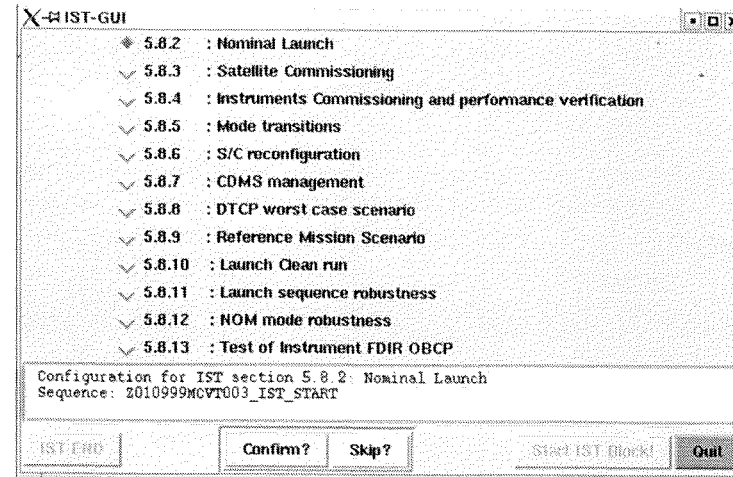
Test location: OTEC	Operator DL	Product-Assurance: R. Goussens	Date: 21/03/08	Time 00:00
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7.2.4 IST Start Step by Step Procedure

At the CCS test sequence console call the sequence "Z010999MCVT201_IST_GUI " to start an IST test. When the Graphical User Interface (see Picture 1) occurs, select the appropriate test case (and note it down in this Test Procedure) followed by a click on the "Start IST Block".



Picture 1



Picture 2

Then configuring the spacecraft for the selected IST Test is proposed to be run or skipped (see Picture 2). If the button "Confirm" has been clicked, continue with step 1 of the following IST START step description. Otherwise pressing the button "Skip" will lead to chapter 7.2

*skipped
(NOT on
IST list)*

Test location: <i>ETEC</i>	Operator <i>M.</i>	Product-Assurance: <i>K. Grossens</i>	Date: <i>01/07/08</i>	Time <i>17:00</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
1	<p>Z010999MCVT003_IST_START</p> <p>At the bottom of the window, the IST_START configuration panel displays all parameters applied during the IST_START. ⇒ Click the button "Continue" to proceed</p>	To Check in Config. Table (Page 73)			NOT available be AFT!	✓	

Configuration of "IST_START"

Power SAS/LPS SCOE: SAS Bat. SCOE: Simulated PCDU: A HPS: A	CDMS TM OBT: A Bus: A PM: A1 PapCcs: PMAnominal Survival Register Bus: B Launch Straps: Not Separated PCDU: B TTR: B Tx Chain: B RFDN Switches Position: ABBB	Rx and Tx Chain Tx Chain (Xpnd. Tx, EPC, TWT): A TC decoder: A TM Rate: Medium (150Kbps) RFDN Switches in use: 1&3 SSMM Mass Memory: A0 and B0
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Continue? **Abort TS?**

IST_START Configuration Panel

Test location: <i>PTCC</i>	Operator: <i>DL</i>	Product-Assurance: <i>R. Gossens</i>	Date: <i>21/07/06</i>	Time: <i>12:21</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
2	<p>Z010999MCVT003_IST_START</p> <p>Note the execution diagram, resuming each configuration steps and check all parameters are set as previously (particularly if any modification has been done on configuration panel)</p> <p>"START Satellite HERSCHEL "IST_START"</p> <p>⇒ Choose "Yes" or "No"</p>	YES				✓	
3	<p>Z010999MCVT097_ASDGEN_CRIT_PARS_CHECK</p> <p>This script will run during the whole session to monitor critical parameters.</p> <p>As soon as wrong value will be detected. A popup window will occur alerting the operator about incorrect TM checks</p> <p>⇒ Minimise this window by clicking the corresponding button (on corner top right, first button from left)</p>					✓	

Test location: <i>OTC</i>	Operator <i>DI.</i>	Product-Assurance: <i>R. Gossens</i>	Date: <i>24/07/08</i>	Time <i>22:07</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
4	<p>Z010999MCVT003_IST_START</p> <p>Reply to the prompt: "SPACECRAFT POWER_ON"</p> <p>⇒ Click the button "Confirm" to proceed</p>					✓	
5	<p>Z010999MCVT001_POWER_ON_HER_IST</p> <p>Set Battery ????????????</p> <p>Set TCDecoder to ?</p> <p>Set PM_SW ??</p> <p>Do you want to continue with the upper configuration:</p> <p>If these parameter values are in accordance with the IST Configuration Table (Page 73),</p> <p>⇒ click the button "OK" to proceed</p>	<p>To Check in Config. Table (Page 73)</p> <p>Bat.SCOE</p> <p>TCDec.</p> <p>PM/SW</p>		<p>SAS</p> <p>A</p> <p>99</p> <p>Smaller + Crk</p> <p>A</p> <p>A1</p>		✓	

Test location: ETEC	Operator DL	Product-Assurance: R. Coosemans	Date: 09/02/08	Time ?? 03
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
6	<p>Z010999MCVT001_POWER_ON_HER_IST A Popup window occurs asking to verify data reception on TM/TC Data Front End workstation: In window "System Status", check following panels</p> <ul style="list-style-type: none"> → TM chain / TM Acquisition synchronised and locked Status expected → View / TM Transfer Frame Monitor TM frame data should be received before few minutes <p>⇒ click the button "OK" to proceed</p>					✓	
7	<p>Z010999MCVT001_POWER_ON_HER_IST A Popup Window occurs asking to start a new acquisition in Bus Monitor with name IST on the CDMU SCOE: - start a new acquisition by clicking "Menu Mode/Start new Acquisition" If an acquisition is already started, please stop and restart</p> <p>⇒ click the button "OK" to proceed</p> <p>After few minutes Data transfer should be visible on the Bus Monitor.</p>				N/A for "Launch Clean Run" as the cables for CDMU BUS monitor are disconnected	✓	

Test location: <i>ESTEC</i>	Operator: <i>DL</i>	Product-Assurance: <i>R. Gussens</i>	Date: <i>01/07/08</i>	Time: <i>17:00</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
8	<p>D102159SCVT001_GET_ALARM_STATUS Check that both DOD ext1 and ext2 are "Not Asserted". Otherwise execute Annex D – Operator Note 8</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	
9	<p>D102159SCVT001_GET_ALARM_STATUS Check that both DOD ext1 and ext2 are "Not Asserted". Otherwise execute Annex D – Operator Note 8</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	
9b when BCR OCP are detected ACTIVE	<p>Z010999MCVT001_POWER_ON_HER_IST</p> <p>Temporary workaround until SPR-107 / NCR-3312 are solved</p> <p>⇒ click the button "YES" to proceed the workaround</p> <p>See SPR 107 / NCR 3312</p>	YES			<p>NCR 3492: TTRMMemCorEr_A 1 := 0 SPR 244: OutOfLimit for SA_Pan?_Temp_N/R (WMB0?569) SPR 284: WARNING about missing TC SPR 285: many TCs not acknowledged For launch clean run with real Battery fully charged, parameters BCR1, BCR2 are expected active.</p>	✓	

Test location: <i>HTP</i>	Operator <i>DL</i>	Product-Assurance: <i>R. Bussens</i>	Date: <i>01/27/08</i>	Time :
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
10	D102159SCVT032TIMESYNCRO Wait until the synchronization between CDMS On-board Time and CCS is finished ⇨ Click the button "End TS!" to proceed				TM parameter ZE00999 out of limits and back in limits again at synchronisation to be expected.	✓	
11	Z010999MCVT001_POWER_ON_HER_IST ⇨ Click the button "End TS!" to proceed					✓	
12	D102159SCVT001_GET_ALARM_STATUS Check that both DOD ext1 and ext2 are "Not Asserted". Otherwise execute Annex D – Operator Note 8 ⇨ Click the button "End TS!" to proceed					✓	
13	Z010999MCVT003_IST_START Reply to the prompt: <p style="text-align: center;">"CDMS Configuration:" "CROME settings PM?????"</p> If the CROME settings is in accordance with the CROME PAP/CCS of IST Configuration Table (Page73), ⇨ Click the button "Confirm" to proceed	To Check in Config. Table (Page 73) CROME PAP/CCS				✓	

Test location: <i>EXT 2</i>	Operator <i>DL</i>	Product-Assurance: <i>R. Gibson</i>	Date: <i>02/02/08</i>	Time <i>77:16</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
14	D102159SCVT176_WRITE_CROME ⇒ Click the button "End TS!" to proceed					✓	
15	Z010999MCVT003_IST_START Reply to the prompt: "CDMS Configuration:" "Set configuration" "Bus ? PCDU ? HPS ? TxChain ? RFDN ???" "TM-OBT ? TMrate Medium (150Kbps)" If all these parameter value are in accordance with the IST Configuration Table (Page 73), ⇒ Click the button "Confirm" to proceed	To Check in Config. Table (Page 73) BUS PCDU HPS TxCh. RFDN TM-Obt		A A A A 183 10 kbs	Please note that the TMrate Medium (150 Kbps) is not specified in IST Config. Table on page 73.	✓	
16 Only if Encoder B is req.	D102159SCVT104_ENCODER_SELECT ⇒ Click the button "End TS!" to proceed				SPR 286: TM check needs repeat		N/A

Test location: <i>EITEC</i>	Operator: <i>DL</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>09/07/08</i>	Time: <i>22:22</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
17	⇒ Click the button "End TS!" to proceed					✓	
18	<p>Z010999MCVT003_IST_START</p> <p>Reply to the prompt: "SSMM Configuration" ????????"</p> <p>⇒ Click the button "Confirm" to proceed</p>	To Check in Config. Table (Page 73) SSMM		A-0-1-2 B0-1-2		✓	
19	<p>Z010999MCVT005_IST_START_SSMM</p> <p>Start initialising with Steps 1-2 of IST_START SSMM Procedure (see Page 96). Then continue with the next test step of IST_START.</p> <p>NOTE: After completion of Mass Memory initialisation (roughly 12 minutes per bank), i.e. when ALL affected mass memory banks are ON, continue with step 3 of IST_START SSMM Procedure (see Page 96).</p>				In Launch cases, IST_START_SSMM shall be completely performed before next step	✓	

Test location: <i>ESTCC</i>	Operator: <i>DL</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>01/02/06</i>	Time: <i>12:25</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
20	<p>Z010999MCVT003_IST_START</p> <p>Reply to the prompt: “SWITCH ON CCU ??? and” “START MONITORING in MODE ?”</p> <p>⇒ Click the button “Confirm” to proceed</p> <p>In case that TM checks for CCU valves are failed, see Annex D Operator note 11 and perform actions if required.</p>	To Check in Config. Table (Page 73) CCU On Mode		<p><i>A-773</i></p> <p><i>Mode 1</i></p>	<p>NCR-3119: Alarms for TMs</p> <ul style="list-style-type: none"> o KM130300 o KM120300 o KM110300 <p>fails status consistency check during CCU A on</p> <p>And for TMs</p> <ul style="list-style-type: none"> o KM130301 o KM120301 o KM110301 <p>fails status consistency check</p> <p>The following is expected until TC DCT53170 is sent:</p> <ul style="list-style-type: none"> o Events 28417 CCU A monitoring discarded o Events 28418 CCU B monitoring discarded 		

Test location: <i>ENTC</i>	Operator <i>DW</i>	Product-Assurance: <i>R. Goossens J.</i>	Date: <i>09/08/08</i>	Time <i>17 : 72</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
21	<p>Z010999MCVT003_IST_START</p> <p>Reply to the prompt: "Record CCU Temp In Background"</p> <p>⇒ Click the button "Confirm" to proceed</p>				Minimise Log file after starting	✓	
22 applicable only in launch (IST spec. 5.8.2 5.8.10 5.8.11)	<p>Z010999MCVT003_IST_START</p> <p>Reply to the prompt : "STATUS SPACECRAFT and EGSE (Power ON)"</p> <p>⇒ Click the button "Confirm" to proceed</p> <p>Reply to the next prompt: "Do you want to stop and notice each failure?"</p> <p>⇒ Choose "YES" to proceed</p>						N/A

Test location: <i>ETEL</i>	Operator <i>DL.</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>01/02/08</i>	Time <i>22:31</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
23 applicable only in launch (IST spec. 5.8.2 5.8.10 5.8.11)	Z010999MCVT1533_IST_STATUS Check the Satellite status displayed and ⇒ Click the button "OK" to proceed						
24	Z010999MCVT003_IST_START Reply to the prompt: ACMS SCOE Configuration – ACMS Power ON ⇒ Click the button "Confirm" to proceed Execute ACMS CONFIG procedure (Page 100) in parallel to the IST_START master					✓	

W/A

Test location: <i>ESTR</i>	Operator <i>DL</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>09/07/08</i>	Time <i>22 : 37</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
25	Z010999MCVT003_IST_START Reply to the prompt: "SET TCT Table for Ambient Temperature" ⇨ Click the button "Confirm" to proceed					✓	
26	D102159SCVT032EnNomTCSLoops ⇨ Click the button "End TS!" to proceed					✓	
27	D102159SCVT115_CHECK_HCS_OFF ⇨ Click the button "End TS!" to proceed					✓	
28	Z010999MCVT003_IST_START Reply to the prompt: "EAT UPLOADING" ⇨ Click the button "Confirm" to proceed"					✓	

Test location: <i>ESTER</i>	Operator <i>AL</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>04/02/08</i>	Time <i>22 : 03</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
29	<p>D102159SCVT192_GET_EAT_REPORT</p> <p>Check that every initial entries of the Event Action Table are successfully checked</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	
30	<p>D102159SCVT192_GET_EAT_REPORT</p> <p>Check that every initial entries of the Event Action Table are correctly set</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	
31	<p>D102159SCVT192_IST_UPLOAD_EAT</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	
32	<p>Z010999MCVT003_IST_START</p> <p>Ckeck that ACC is running on TM Packet history with filter on APID 512 (set on Step 1 of ACMS Configuration Procedure 7.2.4.2 Page 100) and checking packets reception.</p>					✓	

Test location: ETEL	Operator: DW	Product-Assurance: R. Goossens	Date: 01/02/08	Time: 77:56
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N	
33	<p>Z010999MCVT003_IST_START</p> <p>Do not perform before the completion of the procedures: - IST START SSMM and - ACMS Configuration Cannot be run in parallel with other "active" sequences or TCs send in parallel Reply to the prompt: "CDMS CONFIGURATION:" "SURVIVAL REGISTER SETTING" "(Bus ?, PCDU ?, RFDN ?????, TxChain ?, TTR ?, Sep Strap ?????)"</p> <p>⇒ Click the button "Confirm" to proceed</p>	<p>To Check in Config. Table (Page 73)</p> <p>Bus PCDU RFDN TxCh. TTR Sep Strap</p>	<p>B B X010 B B Sep</p>				✓	
34	<p>D102159SCVT175_SET_SURV_REG</p> <p>⇒ Click the button "End TS!" to proceed</p>				SPR 289 No TM return for TM check	✓		
35 (only in launch test cases)	<p>Z010999MCVT003_IST_START</p> <p>Prompt: "Check CDMS Tables"</p> <p>⇒ Click the button "Confirm" to proceed</p>						W/A	

Test location: <i>EITER</i>	Operator <i>DL</i>	Product-Assurance: <i>R. Grossens</i>	Date: <i>22/02/08</i>	Time <i>00:26</i>
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
36 (only in launch test cases)	D102159SCVT219_GET_BSW_HEALTH_UIU ⇒ Click the button "End TS!" to proceed						N/A
37 (only in launch test cases)	D102159SCVT204_GET_MOT ⇒ Click the button "End TS!" to proceed						N/A
38 (only in launch test cases)	D102159SCVT192_GET_EAT_REPORT Check that every uploaded entries of the Event Action Table are correctly set ⇒ Click the button "End TS!" to proceed						N/A
39 (only in launch test cases)	D102159SCVT205_SAT_COM_TCT ⇒ Click the button "End TS!" to proceed				Expected that checks will fail as the uploaded TCT is for ambient but the checks are performed against the		N/A

Test location: ENTEL	Operator: DL	Product-Assurance: R. Goossens	Date: 05/02/06	Time: 00 : 36
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
40 (only in launch test cases)	D102159SCVT207_SAT_COM_FCCT ⇒ Click the button "End TS!" to proceed						
41	Z010999MCVT003_IST_START Reply to the prompt: "DOWNLINK SSMM PACKET STORE and CEL A&B" ⇒ Click the button "Confirm" to proceed					✓	
42	D102159SCVT188_IST_DUMP_PKT_STORE ⇒ Click the button " End TS!" to proceed				With parameters: 0 80 1 81 2 82 3 83	✓	
43	D102159SCVT188_IST_DUMP_PKT_STORE ⇒ Click the button " End TS!" to proceed				With parameters: CEL_A CEL_B All events, warnings and alarms recorded before the dump, are re-occurring during this step	✓	

N/A

Test location: ATEC	Operator: M.	Product Assurance: R. Groosens	Date: 05/07/08	Time: 00 :
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Step-No.	IST_START-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
44	Z010999MCVT003_IST_START ⇒ Click the button "End TS!" to proceed					✓	

Test location: <i>BTEC</i>	Operator: <i>DL</i>	Product Assurance: <i>R. Goossens</i>	Date: <i>05/02/08</i>	Time: <i>00 46</i>
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7.2.4.1 IST_START_SSMM Procedure

Step-No.	IST_START_SSMM-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
1	<p>Z010999MCVT005_IST_START_SSMM</p> <p>Reply to the prompt: "SSMM CONFIGURATION ??????"</p> <p>⇒ Click the button "Confirm" to proceed</p>	<p>To Check in Config. Table (Page 73)</p> <p>SSMM</p>		<p>A-0-1-2</p> <p>B-0-1-2</p>		✓	
2	<p>D102159SCVT186_IST_SSMM_ON</p> <p>Reply to the prompt "Do you want to continue" "with such configuration?"</p> <p>Check the SSMM configuration and then ⇒ Click the button "Continue" to proceed</p>				<p>Mass Memory config. takes about 12 minutes per bank. Therefore, the next step in IST_START procedure can be executed.</p>	✓	
3	<p>D102159SCVT186_IST_SSMM_ON</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	

Test location: <i>ETEC</i>	Operator <i>DL</i>	Product-Assurance: <i>R. Gossens</i>	Date: <i>01/07/08</i>	Time <i>17:26</i>
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Step-No.	IST_START_SSMM-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
4	<p>Z010999MCVT005_IST_START_SSMM</p> <p>Reply to the prompt: "OBCP UPLOADING"</p> <p>⇒ Click the button "Confirm" to proceed</p> <p>Let run in parallel the sequence D102159SCVT193_IST_UPLOAD_OBCP and continue with next step "Packet Store Definition"</p>				occurrence of 2 BSW problems EvtID 30738	✓	
5	<p>Z010999MCVT005_IST_START_SSMM</p> <p>Reply to the prompt: "Definition of the Packet Store"</p> <p>⇒ Click the button "Confirm" to proceed</p>					✓	
6	<p>If only 1 Bank (bank 0, 1, 2 or 3) is initialised on each SSMM D102159SCVT185_IST_PACKET_STORE_DEF</p> <p>If 3 banks (banks 0, 1 and 2) are initialised on each SSMM D102159SCVT189_IST_PACKET_STORE_DEF2</p> <p>If SSMM A banks 0, 1 and 2 and only SSMM B bank 0 are initialised D102159SCVT178_RMS_PKT_STORE_DEF</p> <p>When the requested SSMM bank are initialised ⇒ Click the button "Yes" to proceed</p>					✓	

Test location: <i>01722</i>	Operator: <i>OL</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>02/02/08</i>	Time: <i>27:50</i>
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Step-No.	IST_START_SSMM-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
7	<p>If only 1 Bank is initialised on SSMM A & B D102159SCVT185_IST_PACKET_STORE_DEF</p> <p>If 3 banks are initialised on SSMM A & B D102159SCVT189_IST_PACKET_STORE_DEF2</p> <p>If 3 banks on SSMM A and only 1 on SSMM B are initialised D102159SCVT178_RMS_PKT_STORE_DEF</p> <p>⇒ Click the button "End TS!" to proceed</p>				NCR-3492 occurs: (TTRRMMemCorEr_A 2 := 1)!	✓	
8	<p>Z010999MCVT005_IST_START_SSMM Reply to the prompt: "Initialise MTL Service Buffers"</p> <p>⇒ Click the button "Confirm" to proceed</p>				TM(5,4) alarms expected: o Evt_MTLBufADel (ID:26914) o Evt_MTLBufBDel (ID 26915)	✓	
9	<p>D102159SCVT209_START_ON_BOARD_SCHEDULE</p> <p>⇒ Click the button "End TS!" to proceed</p>				SPR 282 TM failure: too quick check	✓	
10	<p>D102159SCVT193_IST_UPLOAD_OBCP</p> <p>⇒ Click the button "End TS!" to proceed</p>					✓	

Test location: <i>01702</i>	Operator: <i>DL.</i>	Product-Assurance: <i>R. Gossens</i>	Date: <i>04/07/08</i>	Time: <i>23:59</i>
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Step-No.	IST_START_SSMM-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
11	Z010999MCVT005_IST_START_SSMM ⇒ Click the button "End TS!" to proceed					✓	

Test location: <i>ETEC</i>	Operator: <i>Dh</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>05/07/08</i>	Time: <i>00:09</i>
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7.2.4.2 ACMS Configuration Procedure

Step-No.	ACMS_CONFIG-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
1	Open the ACMS_H_BLOC MIM Display to verify the telemetry status updating. Configure a "Telemetry Packet History" window set with filter APID = 512					✓	
2	A102109SPVT003_ACMS_CONFIG25 At the prompt "Enter your choice", insert "1" to select "Select/Load ACMS_CONFIG Input File" ⇒ Click the button "OK" to proceed	1		AFT		✓	
3	A102109SPVT003_ACMS_CONFIG25 ⇒ Click the button "Continue" to proceed					✓	
4	A102109SPVT004_ACMS_LOADCONFIG1 At the prompt, "Enter your choice:" ⇒ Click the button "OK" to proceed	To Check in Config. Table (Page 73) ACMS Config. File				✓	

Test location: <i>ETEC</i>	Operator: <i>M</i>	Product-Assurance: <i>R. Gossens</i>	Date: <i>01/07/08</i>	Time: <i>17:39</i>
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Step-No.	ACMS_CONFIG-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
5 N/A for "Launch Clean Run"	A102109SPVT003_ACMS_CONFIG25 At the prompt "Enter your choice", insert "6" ⇒ Click the button "OK" to proceed	6				✓	
6 N/A for "Launch Clean Run"	A102109SPVT003_ACMS_CONFIG25 ⇒ Click the button "Continue" to proceed					✓	
7 N/A for "Launch Clean Run"	A102109SPVT003_ACMS_CONFIG25 Verify on AND YA001939 AMCS SCOE - AS_PSEUDO 1 of 1 the parameters YMACT939 (ACMS SCOE state) YMASE939 (Simulator stata) YMAMS939 (MILFE state) YMAUS939 (UIFE state)	executing executing executing executing			Alarms are expected for TM with APID 2018 and EVID 4 when the parameters on the left have not reached the executing stage yet.	✓	

Test location: <i>ETEC</i>	Operator <i>A.</i>	Product-Assurance: <i>R. Grossens</i>	Date: <i>01/02/06</i>	Time <i>12:42</i>
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Step-No.	ACMS_CONFIG-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
8	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt "Enter your choice", insert "4" to select "ACMS Power ON (in Pre-Sep configuration)"</p> <p>⇒ click the button "OK" to proceed</p>	4				✓	
9	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>⇒ Click the button "CONTINUE" to proceed</p>					✓	
10	<p>A102109SPVT011_ACMS_ON</p> <p>During this sequence, following events are expected:</p> <ul style="list-style-type: none"> - TM(5,4) Event Report and Reconfiguration Log - TM(5,2) APID:2018 (ACMS_SCOE) indicates ACMS "TestDataWord" needs to be switched ON. A few seconds later when the corresponding TC is sent, this TM(5,2) must disappear. - Multiple other events TM(5,1), such as "Fdir Task Overrun" or "Fdir Rm Parity Error" 				<p>Expected Out of Limit of AEYYY109 (synchronisation) ACC may become INVALID for a short time</p> <p>SPR 245 NCR 2862: Out of Limit of HKA_ANTH?_Data</p> <p>SPR 334 OutOfLimit of Gyro Calib Curve in LCR</p>	✓	

Test location: <i>ATEC</i>	Operator: <i>dh.</i>	Product-Assurance: <i>R. Goossens</i>	Date: <i>22/07/08</i>	Time: <i>23:15</i>
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Step- No.	ACMS_CONFIG-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
11	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt "Enter your choice", Insert "5" to select "Modify ACC SGM/RM content"</p> <p>⇒ Click the button "OK" to proceed</p>	5				✓	
12	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>⇒ Click the button "Continue" to proceed</p>					✓	
13	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt "Enter your choice", Insert "20" for "Default configuration for separation"</p> <p>⇒ Click the button "OK" to proceed</p>	20			<p>Expected Out of Limit of AEYYY109 (synchronisation) ACC may become INVALID for a short time</p> <p>TC PM_Reset (ACY42109) not acknowledge expected</p>	✓	
14	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>⇒ Click the button "Continue" to proceed</p>					✓	

Test location: <i>BITEC</i>	Operator: <i>DL</i>	Product-Assurance: <i>R. Grossens</i>	Date: <i>04/03/08</i>	Time: <i>73 : 16</i>
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Step- No.	ACMS_CONFIG-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
15	A102109SPVT003_ACMS_CONFIG25 After about 10 min verify that ACMS Sequences are correctly terminated and ACMS CONFIG MAIN MENU 1.0 is available.					✓	
16	A102109SPVT003_ACMS_CONFIG25 At the prompt "Enter your choice", Insert "99" to select "Return to Main Menu 1.0" ⇒ Click the button "OK" to proceed	99				✓	
17	A102109SPVT003_ACMS_CONFIG25 ⇒ Click the button "Continue" to proceed					✓	

Test location: <i>ETEC</i>	Operator <i>Di.</i>	Product-Assurance: <i>R. Grossens</i>	Date: <i>21/02/08</i>	Time :
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7.3 IST Test Case

According to the actual IST Test Case, IST_GUI will prompt with following window(see Figure 1) to execute the relevant test sequence / procedure as listed below.

Click the button "Confirm" to call the appropriate sequence displayed in the message box.

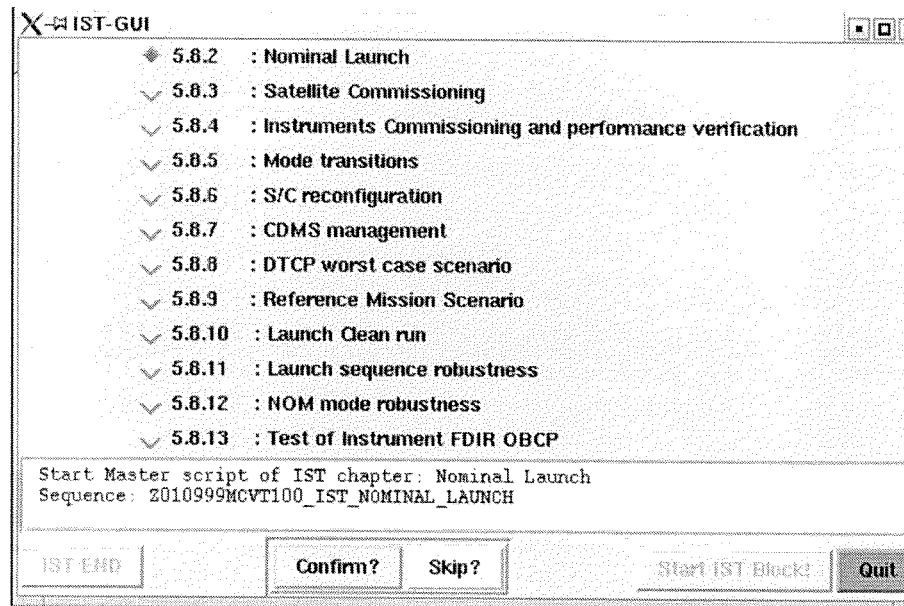


Figure 1: IST_GUI calling Master sequence, for instance "Nominal Launch"

Test location:	Operator	Product-Assurance:	Date:	Time
				:

Important Note: After execution of the IST Test Case, S/C has to be switched off with the "IST END" procedure as described in chapter 7.4.

Herschel IST Test Case 'Launch Phase, Separation and Post Separation':	HP-2-ASED-TP-0185
Herschel IST Test Case 'Satellite Commissioning':	HP-2-ASED-TP-0186
Herschel IST Test Case 'ACMS Commissioning':	HP-2-ASED-TP-0187
Herschel IST Test Case 'Instruments Commissioning and Performance Verification':	HP-2-ASED-TP-0188
Herschel IST Test Case 'Mode Transitions':	HP-2-ASED-TP-0189
Herschel IST Test Case 'S/C Reconfiguration':	HP-2-ASED-TP-0190
Herschel IST Test Case 'CDMS Management': ..	HP-2-ASED-TP-0191
Herschel IST Test Case 'DTCP Worst Case Scenario': ..	HP-2-ASED-TP-0192
Herschel IST Test Case 'REFERENCE Mission Scenario':	HP-2-ASED-TP-0193
Herschel IST Test Case 'Launch Clean Run':	HP-2-ASED-TP-0194
Herschel IST Test Case 'Launch Sequence Robustness':	HP-2-ASED-TP-0195
Herschel IST Test Case 'NOM Mode Robustness':	HP-2-ASED-TP-0196
Herschel IST Test Case 'Test of Instrument FDIR OBCP'	HP-2-ASED-TP-0197

Highlight the TEST Case to be performed in the above

Test location:	Operator	Product-Assurance:	Date:	Time
				:

7.4 IST END Procedure *15:25*

Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
1.	IST_GUI ⇨ Click the button "OK" and then ⇨ Click the button "IST_END" to proceed			<i>N/A</i>			
2.	D102159SCVT188_IST_DUMP_PKT_STORE ⇨ Click the button "Confirm" to proceed				<i>15:25</i>	✓	
3.	D102159SCVT188_IST_DUMP_PKT_STORE ⇨ Click the button " End TS!" to proceed				<i>15:42</i>	✓	

Test location: <i>ESTEC</i>	Operator <i>U. Klenke</i>	Product-Assurance: <i>D. Lamerby</i>	Date: <i>5/7/2008</i>	Time <i>15:43</i>
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
4. Only if PACS, SPIRE or HIFI is still ON	<p>Z010999MCVT004_IST_END</p> <p>If one of the instruments is detected "ON" reply to the prompt:</p> <p style="text-align: center;">"Should the sequence"</p> <p style="text-align: center;">Z102999SCVT011_ASDGEN_PACSPWROFF_P Z102999SCVT005_ASDGEN_SPIREPWROFF_P Z102999SCVT015_ASDGEN_HIFIPWROFF_P</p> <p style="text-align: center;">"be called?"</p> <p>⇒ Click the button "YES" to proceed</p>			N/A			
5. Only if CCU A is ON	<p>Z010999MCVT004_IST_END</p> <p>If CCU is detected "ON" reply to the prompt:</p> <p>Should the sequence "K102999ECVT001_ASDGENCCU_ABPWROFF be called"</p> <p>⇒ Click the button "YES" to proceed</p>				16:02	✓	

Test location: ESTEC	Operator Uwe Kleenke	Product-Assurance: D. Lamontagne	Date: 5/7/2008	Time: 16:07
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
6. Only if RWL ON and ACMS is still in SCM	Z010999MCVT004_IST_END "Please ensure that ACMS is set in OCM mode, otherwise select the correct menu in the ACMS_CONFIG25" Perform chapter 7.4.1 then click OK			N/A			
7. Only if RWL are still spinning	Z010999MCVT004_IST_END Start the sequence A102109SPVT061_RWL_SPINDOWN? ⇒ Click the button "YES" to proceed			N/A	Out of Limits concerning RWL speed are expected during RWL spin down		
8. Only if ACMS is still ON	Z010999MCVT004_IST_END Start the sequence A102109SPVT012_ACMS_OFF ? ⇒ Click the button "YES" to proceed				16:08	✓	

Test location: ESTEC	Operator U. Klenke	Product-Assurance: D. Lamberly	Date: 5/7/2008	Time 16:08
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
9. Only if ACMS is still ON	<p>A102109SPVT012_ACMS_OFF</p> <p>During this sequence, following event are expected to occur:</p> <ul style="list-style-type: none"> • TM(5,2) EvtID: 33 Event Report - ACB Rx Failed • TM(5,2) EvtID: 33 Event Report - ACB Rx Failed • TM(5,4) EvtId:16426 Mode SBSM Entry • Event Report - Boot Report and Reconfiguration Log • Event Report - SDB Unhealthy • Multiple "New Tm 251004939" • Multiple "New Tm 251001939" • Multiple "New Tm 251002939" <p>This sequence needs time to be completely run, so let run in parallel with the following steps.</p>					✓	
10. Only if SREM is still ON	<p>Z102999SCVT002_SREM_OFF</p> <p>⇒ Click the button "End TS!" to proceed</p>				SPR 35-290 NCR 3986 Wrong TM set in HPSDB		
11.	<p>D102159SCVT174_IST_REDUNDANT_CONF</p> <p>⇒ Click the button "Ens TS" to proceed</p>					✓	

Test location: ESTEC	Operator: U. Klenke	Product-Assurance: Dilemonby.	Date: 5/7/2008	Time: 16:11
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
12. Only if Survival Register set with separated flag	Z010999MCVT004_IST_END At the prompt "The survival register is set with the launch flag "separated". It must be set to "not separated" to avoid any reconfiguration during power off" ⇨ Click the button "Yes" to proceed			N/A			
13. Only if Survival Register set with separated flag	D102159SCVT175_SET_SURV_REG ⇨ Click the button "End TSI!" to proceed				16:20	✓	

Test location: ESTER	Operator U. Klenke	Product-Assurance: D. Lamonty	Date: 5/7/2008	Time 16:20
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
14. Only if CROME wrongly set	Z010999MCVT004_IST_END Reply to the prompt "The CROME registers are not configured " "in PMA or PMB nominal " "Such configuration will block TM during Power OFF" ⇨ Click the button "YES" to proceed			N/A			
15. Only if CROME wrongly set	D102159SCVT176_WRITE_CROME ⇨ Click the button "End TS!" to proceed			N/A			
16. Only if SSMM is ON	D102159SCVT188_IST_DUMP_PKT_STORE ⇨ Click the button "End TS!" to proceed			EndTs		✓	
17. Only if SSMM is ON	D102159SCVT181_Disable_PKT_STORE ⇨ Click the button "End TS!" to proceed			EndTs		✓	

Test location: ESTEC	Operator U. Klenke	Product-Assurance: D. Lamonty	Date: 5/7/2008	Time 16:33
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
18. Only if SSMM is ON	D102159SCVT187_IST_SSMM_OFF During this sequence, the following events are expected: <ul style="list-style-type: none"> • TM(5,2) EvtId: 84 PM COCOS SPW C Reconnection • TM(5,4) EvtId: 88 MM A COCOS RT Failure • TM(5,4) EvtId: 148 MM SPW C address transfer error • TM(5,2) EvtId: 85 PM COCOS SPW C Reconnection • TM(5,4) EvtId: 89 MM A COCOS RT Failure • TM(5,4) EvtId: 149 MM SPW C address transfer error ⇒ Click the button "End TS!" to proceed			EndTs	16:35	✓	
19. Not for Launch Cases	D102159SCVT001PM_SELECT ⇒ Click the button "End TS!" to proceed			EndTs	16:42	✓	
20.	Z010999MCVT002_POWER_OFF_HER_IST ⇒ Click the button "End TS!" to proceed			EndTs	16:49	✓	

Test location: ESTEC	Operator U. Klenke	Product-Assurance: D. Lamonty	Date: 5/7/2008	Time 16:49
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Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
21 Only if TTC-SCOE is still ON	Y102989ETVT020_TTC_SCOE_OFF ⇒ Click the button "End TS!" to proceed			N/A			
21.	Z010999MCVT004_IST_END ⇒ Click the button "End TS!" to proceed			EndTs	16:50	✓	
22.	IST_GUI ⇒ Click the button "Quit" to terminate the test sequence			N/A			
23.	Update CVS Tag 1. Open a shell (xterm) 2. Execute the command update_tag Insert the name of TAG → IST_x_PART_x_TP_xxxx_x_x_END_xxx					✓	

Test location: ESTEC	Operator Uwe Klenke	Product-Assurance: D. Lamoury	Date: 5/7/2008	Time :
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7.4.1 ACMS SCM to OCM transition for power off

Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
24.	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt "Enter your choice", insert "2" to select "Transition SCM to OCM"</p> <p>⇒ Click the button "OK" to proceed, then "Continue"</p>	2					
25.	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt Menu 7 "Enter your choice", insert "5" to select "Reaction wheels spin down"</p> <p>Click the button "OK" to proceed, then "Continue"</p>	5					
26.	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt Menu 9 "Enter your choice", insert "1" to select "Switch off ACMS"</p> <p>Click the button "OK" to proceed, then "Continue"</p>	1					

MIA

Test location:	Operator	Product-Assurance:	Date:	Time
		<i>D. Lanerby</i>	<i>5-7-08</i>	:

Step-No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value		P	N
27.	<p>A102109SPVT012_ACMS_OFF</p> <p>During this sequence, following event are expected to occur:</p> <ul style="list-style-type: none"> • TM(5,4) EvtId:16426 Mode SBSM Entry • Event Report - Boot Report and Reconfiguration Log • Event Report - SDB Unhealthy • TM(5,2) EvtID: 33 Event Report - ACB Rx Failed • TM(5,2) EvtID: 33 Event Report - ACB Rx Failed • Multiple "New Tm 251004939" • Multiple "New Tm 251001939" • Multiple "New Tm 251002939" • Multiple TM(5,1) such as "FDir Task Overrun", etc... 						
28.	<p>A102109SPVT003_ACMS_CONFIG25</p> <p>At the prompt "Enter your choice", insert "99" to select "Terminate ACMS_CONFIG25"</p> <p>Click the button "OK" to proceed, then "Confirm" and continue in parallel with the next step.</p>	99					

NIA

Test location:	Operator	Product-Assurance: <i>D. Lamorby</i>	Date: <i>5-7-08</i>	Time :
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Step- No.	IST_END-Step-Description	Nominal Value	Tolerance	Actual Value	P	N
29.	A102109SPVT017_ACMS_CRS_BACKGROUND ⇨ Terminate the sequence.					N/A

Test location:	Operator	Product-Assurance: <i>D. Lamonty</i>	Date: 5-7-08	Time :
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8.1 Procedure Variation Summary

	Test Change	Curr. No.:	
		Date	
		Page	of
Test designation	Test Procedure	Issue	Rev.
Test step changed	Reason for Change		
Prepared by:	Resp. Test Leader	Project Engineer	
PA/QA	Prime	Customer	

Table 8.1-1: Procedure Variation Sheet

8.3 Sign-off Sheet

To finalise the test campaign, all responsible personnel shall sign off the filled-in procedure in the following table:

	Date	Signature
Test Director		
Test Conductor	5-7-08	M. THEUNISSEN
PA Responsible	5-7-08	D. Lamorby

Annex B: Script Hierarchy

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===== IST START =====

>Z010999MCVT001_POWER_ON_HER_IST $PM $tcDec $batScoe
|----> Y102989EPVT007_IST_PWR_SCOE_ON $configBS
|----|----> Z010999MMXX002UNITS_CHECK
|----> async referby timeSynchronisation D102159SCVT032TIMESYNCRO
|----> D102159SCVT210_GET_ALARM_STATUS
|----> D102159SCVT210_GET_ALARM_STATUS
|----> W102584EPVT007_IST_CHECK_PCDU
|----> Z010999MMXX002UNITS_CHECK
|----> R102479ECVT009_UNITS_SELECTION
> Z010999MCVT001_POWER_ON_HER_IST $PM $tcDec $batScoe
|----> Y102989EPVT007_IST_PWR_SCOE_ON $configBS
|----|----> Z010999MMXX002UNITS_CHECK
|----> async referby timeSynchronisation D102159SCVT032TIMESYNCRO
|----> D102159SCVT210_GET_ALARM_STATUS
|----> D102159SCVT210_GET_ALARM_STATUS
|----> W102584EPVT007_IST_CHECK_PCDU
|----> Z010999MMXX002UNITS_CHECK
|----> R102479ECVT009_UNITS_SELECTION
> D102159SCVT210_GET_ALARM_STATUS
> D102159SCVT176_WRITE_CROME $papCcs 1
> D102159SCVT174_IST_REDUNDANT_CONF $bus $pcduTmTc $hps $txChain $rfdn $tmObt
$tmRate
|----> D102159SCVT104_ENCODER_SELECT $tmObt $tm_Enc_Config
> async referby istStartSSMM Z010999MCVT005_IST_START_SSMM $ssmm]
> K102999ECVT001_ASDGENCCU_ABPWRON
|----> K102999ECVT001_ASDGENCCU_MnDisDLC
|----> K102999ECVT001_ASDGENCCUA_POWERON
|----|----> Z010999MMXX002UNITS_CHECK
|----> K102999ECVT001_ASDGENCCUA_ChkEssTM
|----> K102999ECVT001_ASDGENCCUB_POWERON
|----|----> Z010999MMXX002UNITS_CHECK
|----> K102999ECVT001_ASDGENCCUB_ChkEssTM
> K102999ECVT001_ASDGENCCU_MnEBOTH2
> K102999ECVT001_ASDGENCCU_MnEBOTH1
> K102999ECVT001_ASDGENCCUA_POWERON
|----> Z010999MMXX002UNITS_CHECK
> K102999ECVT001_ASDGENCCUA_MnEnaMd2
> K102999ECVT001_ASDGENCCUA_MnEnaMd1
> K102999ECVT001_ASDGENCCUB_POWERON
|----> Z010999MMXX002UNITS_CHECK
> K102999ECVT001_ASDGENCCUB_MnEnaMd2
> K102999ECVT001_ASDGENCCUB_MnEnaMd1
> Z010999MCVT153_IST_STATUS 5.8.2.4.2
|----> ACMS_get_RM_status RMA
|----> ACMS_get_RM_status RMB
> async A102109SPVT003_ACMS_CONFIG25
|----> A102109SPVT004_ACMS_LOADCONFIG1
|----> A102109SPVT010_ACMS_SCOE_CONFIG1
|----|----> async A102109SPVT017_ACMS_CRS_BACKGROUND
|----> A102109SPVT011_ACMS_ON
|----|----> Z010999MMXX002UNITS_CHECK
|----|----> ACMS_get_RM_status RMA

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|----|----> ACMS_get_RM_status RMB
|----> A102109SPVT021_ACMS_ACC_SEPARA
> D102159SCVT032EnNomTCSLoops ist_herschel_tcs_config
> D102159SCVT115_CHECK_HCS_OFF
> D102159SCVT192_IST_UPLOAD_EAT
|----> D102159SCVT192_GET_EAT_REPORT
|----> D102159SCVT192_GET_EAT_REPORT 1
> D102159SCVT175_SET_SURV_REG $busSM $pcduSM $rfdnSM $txChainSM $trSM $sepStsSM
> D102159SCVT219_GET_BSW_HEALTH_UIU 1
> D102159SCVT204_GET_MOT 1
> D102159SCVT192_GET_EAT_REPORT 1
> D102159SCVT205_SAT_COM_TCT 1
> D102159SCVT207_SAT_COM_FCCT 1
> D102159SCVT188_IST_DUMP_PKT_STORE 0 80 1 81 2 82 3 83
> async referby celDownlink D102159SCVT188_IST_DUMP_PKT_STORE CEL_A CEL_B

```

===== IST END =====

```

> $swOFFsequence
> A102109SPVT061_RWL_SPINDOWN
> async referby acmsOff A102109SPVT012_ACMS_OFF
> Z102999SCVT002_SREM_OFF
> D102159SCVT174_IST_REDUNDANT_CONF A A 0 0 0 0 0
|----> D102159SCVT104_ENCODER_SELECT $tmObt $tm_Enc_Config
> D102159SCVT175_SET_SURV_REG B B AB B B not
> D102159SCVT176_WRITE_CROME AB 1
> D102159SCVT181_DISABLE_PKT_STORE
> D102159SCVT187_IST_SSMM_OFF
> Y102989ETVT020_TTC_SCOE_OFF
|----> Y102989ECVT018_TTC_TC_OP_METHOD OFFLINE
|----|----> Y102989ETVT017_TTC_CHECK_ROUTINE
|----|----> Y102989ETVT019_TTC_SCOE_ACTIVITY
|----> W102584SPVT101_PCDU_TRANSITION_FDIR 5
> Z010999MCVT002_POWER_OFF
|----> D102159SCVT028SSMM_OFF
|----> D102159SCVT001PM_SELECT B
|----|----> D102159SCVT003DISTHERMALCONTROL
|----|----> Z010999MMXX002UNITS_CHECK
|----> D102159SCVT001PM_SELECT A
|----|----> D102159SCVT003DISTHERMALCONTROL
|----|----> Z010999MMXX002UNITS_CHECK
|----> R102479SMXX001_XPND_HUM_TXT
|----> Y102989EPVT002_PWR_SCOE_OFF
|----|----> Z010999MMXX003UNITS_CHECK_PWR_OFF
|----|----> Z010999MMXX003UNITS_CHECK_PWR_OFF
|----|----> Z010999MMXX003UNITS_CHECK_PWR_OFF
|----> Z010999MMXX003UNITS_CHECK_PWR_OFF

```


Annex C: Session Record

Test Description	AFT4
Session ID	2008_07_04_21_40_hercedmu_hpws22_REALTIME
Start Time:	21:40
End Time	16:50
CVS Tag for Test	HP-2-ASED-TP-0224_iss1_1-AFT4-BEGIN_001
Applicable IST Specification	H-P-2-ASP-SP-0939
Test conductor	Y. ROCHE
QA Approval	D. Lamonby.

Test Description	
Session ID	
Start Time:	
End Time	
CVS Tag for Test	
Applicable IST Specification	
Test conductor	
QA Approval	

Test Description	
Session ID	
Start Time:	
End Time	
CVS Tag for Test	
Applicable IST Specification	
Test conductor	
QA Approval	

Annex D: Operation Notes

Operation Note 3

Title: ACMS SCOE does not boot	Date: 06/02/08
Observation:	
<p>The ACMS SCOE does not boot.</p> <p>Reason: One of the STR UCE (Unit Checkout Equipment) electrical stimuli programs hangs.</p>	
Operator Action:	
<p>Until NCR / SPR is solved the following workaround is proposed (by Martijn):</p> <p>During powering the Power SCOE in the cleanroom:</p> <ol style="list-style-type: none"> 1) Go to the STR UCE (in cleanroom) and select electrical stimuli PC on the KVM switch, press 2 time 'scroll lock' and select PC#2. 2) Kill the running application, by pressing the cross in the upper right corner. 3) Start the UCE application by double clicking the icon 'SMI', an application 'Star Mapper Analogue Chain Simulation' should start up. 4) Press 2 time 'scroll lock' and select PC#3 and repeat step 3. 	

Operation Note 8

Title:	DOD Alarm	Date: 14/02/08
Observation:		
<p>During each Power on within the "IST_START" there is a check of the DOD flag. Directly after the "D102159SVT32TIMESYNCRO" the dump of the RM LOG and the DOD Flag check is performed by the "D102159SCVT210_Get_ALARM_STATUS".</p> <p>If the DOD alarm is present it has to be reset , otherwise the S/C will enter Save Mode directly after separation.</p>		
Operator Action:		
<p>For resetting the DOD alarm decrease the Vbat under the DoD threshold and then increasing the Vbat upper the DoD threshold therefore perform the following steps:</p> <p>Open a shell window -> startCMD bsvnc On the window "H-P BS SCOE" switch to local On the window "BS SCOE Config" change the Battery Voltage from 25,4 to 19 The push the button save&update On the window "BS SCOE Config" change the Battery Voltage from 19 to 25,4 The push the button save&update On the window "H-P BS SCOE" switch to remote</p> <p>Execute the script: D102159SCVT210_Get_ALARM_STATUS to dump the RM Log to check DOD Flag Check if DOD alarm is still present</p>		

Operation Note 11

Title: Failure in TM Check of CCU Valves	Date: 14/02/08
<p>Observation:</p> <p style="text-align: center;">If CCU Valves sensing lines are connected to CRYO SCOE instead of CCU the valves status check fails at CCU Power ON</p>	
<p>Operator Action:</p> <ol style="list-style-type: none"> 1) On Test conductor Console, perform “connect PFM_CRYO” 2) Thanks Telemetry Query Display (TQD) check following TMs <ul style="list-style-type: none"> - YM648958 (VLV_STATUS_V103) instead of KM269302 = “CLOSED” - YM649958 (VLV_STATUS_V106) instead of KM269303 = “CLOSED” - YM640958 (VLV_STATUS_V501) instead of KM270302 = “CLOSED” - YM641958 (VLV_STATUS_V503) instead of KM270303 = “CLOSED” - YM643 958 (VLV_STATUS_V505) instead of KM271303 = “OPEN” 3) On Test conductor Console, perform “disconnect PFM_CRYO” 	

END OF DOCUMENT

Insert actual distribution list

Attachment 2 to Section 6.7:
As Run Procedure HP-2-ASED-TP-0224


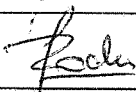
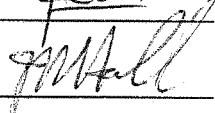

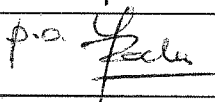
AS RUN FOR AFT4

2008-07-04-21-40-herscdmu.hpws22-REALTIME

Title: Herschel SAT AFT

START: 040708 23:40

CI-No: 100 000

Prepared by:	A. Di Capua		Date:	03-07-08
Checked by:	Y. Roche			03 JUL 08
Product Assurance:	J. Hall			3/7/2008.
Configuration Control:	W. Wietbrock			
Project Management:	Dr. W. Fricke			3.7.08
TAS-F Approval:	D. Montet			03 JUL 08
Distribution:	See Distribution List (last page)			

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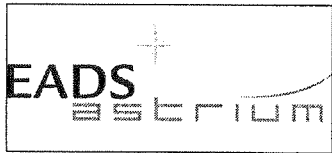
**Herschel Abbreviated Functional Test
Procedure**

Herschel

Issue	Date	Sheet	Description of Change	Release
1	20.04.08		Initial Version	
1.1	26.06.08		Instrument SFT chain-B moved after SFT of chain-A CDMU Bus swap added for each instrument power-on and before starting S/C switch-off (to test ACC-PMB and XPND-2 bus interfaces)	

Table of Content

1. SCOPE	4
1.1. OBJECTIVE.....	4
1.2. FLOW.....	4
2. DOCUMENTS/DRAWINGS	8
2.1. APPLICABLE DOCUMENTS.....	8
2.2. REFERENCE DOCUMENTS.....	8
3. REQUIREMENTS TO BE VERIFIED	9
4. CONFIGURATION	9
4.1. HARDWARE CONFIGURATION.....	9
4.2. SOFTWARE CONFIGURATION	9
4.3. TEST CONFIGURATION	9
4.4. EGSE CONFIGURATION	10
4.5. SPECIFIC HARDWARE / TEST EQUIPMENT REQUIRED	11
5. CONDITIONS	12
5.1. ENVIRONMENTAL CONDITION	12
5.2. PERSONNEL.....	12
6. GENERAL PRECAUTIONS AND SAFETY	14
7. VERIFICATION REQUIREMENTS AND TEST CRITERIA	15
7.1. PASS/FAIL CRITERIA.....	15
8. STEP-BY-STEP PROCEDURE	16
9. SUMMARY SHEETS	29
9.1. PROCEDURE VARIATION SUMMARY	30
9.2. NON CONFORMANCE REPORT (NCR) SUMMARY.....	32

	Herschel Abbreviated Functional Test Procedure	Herschel
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1. Scope

1.1. Objective

This Test Procedure represents the final step in the test process definition originated by the AIV Plan. It is aimed to specify the step-by-step flow down of the AFT activity to be performed at S/C level including the definition of the relevant supporting infrastructure.

This Test Procedure is in line with the relevant activity sheets of the Satellite AIT Plan [AD 3] and associated requirements. It has been issued following the tests' definition reported in the Test Specification [AD 1]. A detailed description is provided in § 1.2

The identification of hazardous conditions associated with the test article and the operations, which might damage equipment, cause injury or invalidate test data, will be herein provided. Precautions to be observed, with correlation to the specific areas of applicability, they will be provided as well in the descriptions of the test set-up to be adopted.

1.2. Flow

As per [AD 1], the entire AFT is meant as an overall check-up of the satellite functions to be run before or after several S/C life phases (EMC, TVTB, mechanical test, etc). The AFT overall sequence is identical for all the above phases, however the Helium state can vary. A flow chart, derived from [AD 1], section 8, is depicted in Fig. 1.2.2

The starting point is reached by IST-START procedure, [AD 4], bringing the S/C in Launch-Mode, with CDMU PM-A as nominal, ACC PM-A as nominal, OBCP loaded, EAT activated, CCU ON. Nominal mode is then reached for both CDMU and ACC and several actions are performed to test the healthiness of redundant PM for on-board computers, BUS A and B. Instruments are checked with relevant SFTs during Nominal Mode. See Fig. 1.2.1 for details.

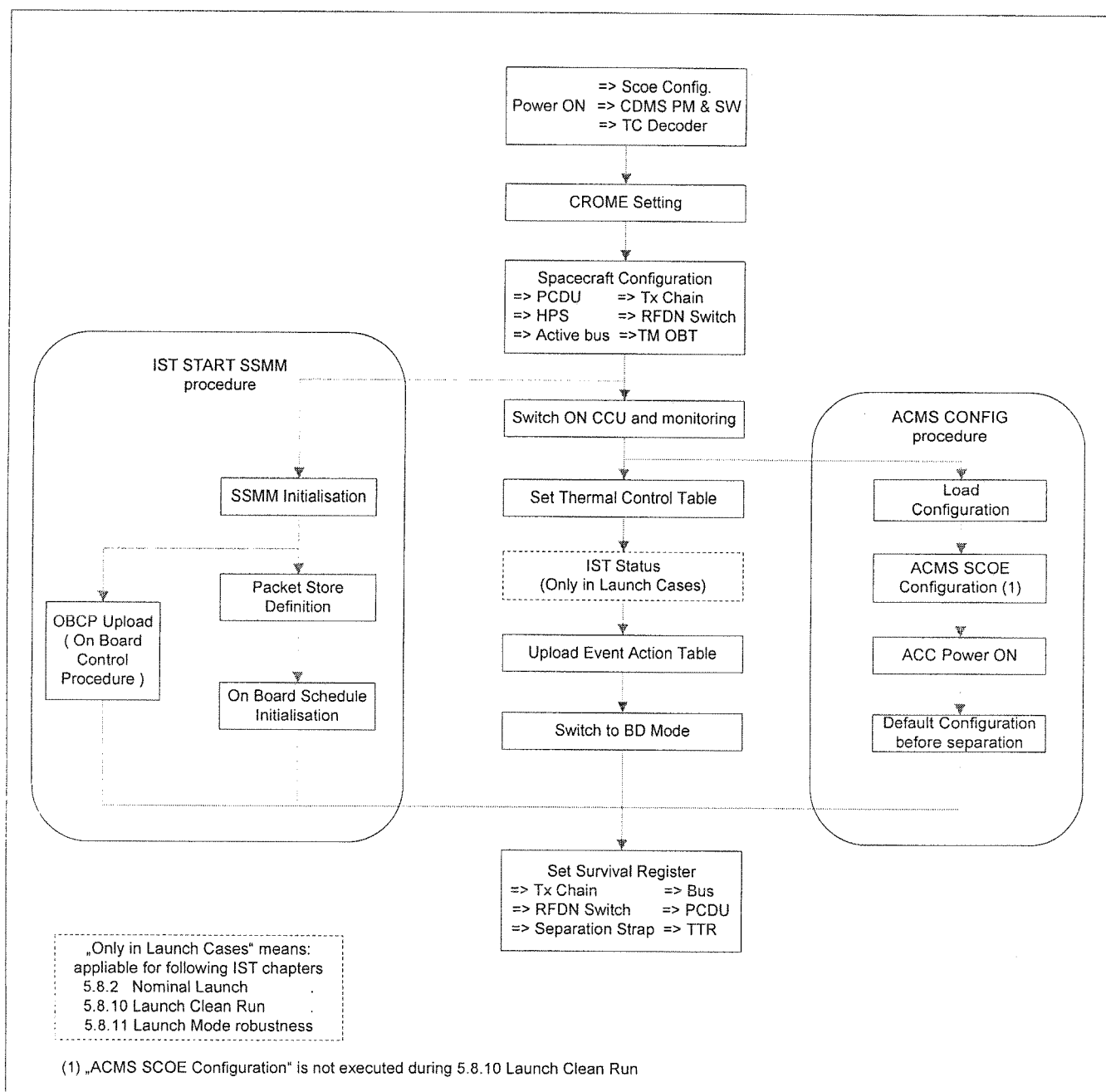


Fig. 1.2.1 as per [AD 4], flow chart to reach Launch-Mode Configuration

Once starting configuration is reached, the following actions are performed:

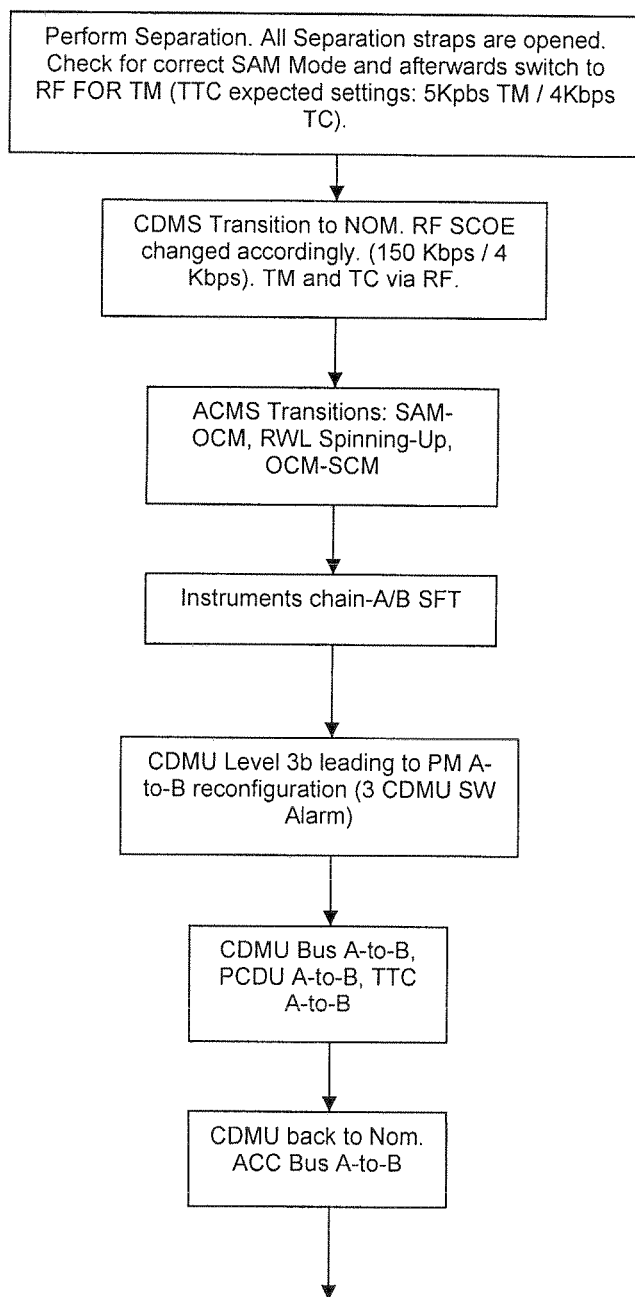


Fig. 1.2.1.2-part 1: AFT flow chart

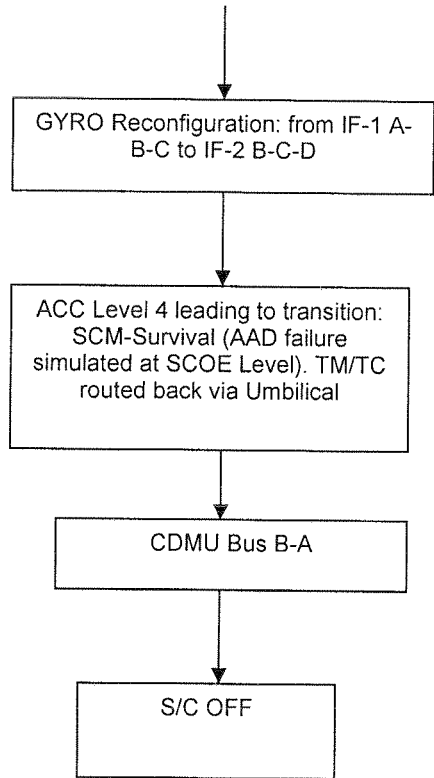


Fig. 1.2.1.2-part 2: AFT flow chart

2. Documents/Drawings

This document incorporates, by dated or undated references, provisions from other publications. These normative references are cited at appropriate places in the text and publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these apply to this document only when incorporated into it by amendment or revision. For undated references, the latest edition of the publication referred to apply.

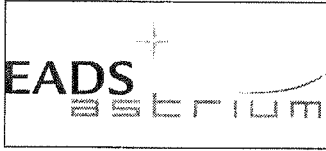
2.1. Applicable Documents

AD 1	Herschel SFT and AFT Specification	H-P-2-ASP-SP-1411
AD 2	Herschel IST Procedure, Volume 1	HP-2-ASED-PR-0104
AD 3	Satellite AIT Plan	HP-2-ASED-PL-0026
AD 4	Herschel IST Leading procedure	HP-2-ASED-TP-0134
AD 5	Herschel PA Plan	ASED-PL-0007, Issue 2.1
AD 6	Instrument Power On/Off	HP-2-ASED-TP-0206

2.2. Reference Documents

This section contains a list of documents filled with statements necessary to organize and to detail the operative execution of the test activities.

RD-1	Herschel SVM User Manual	H-P-MA-AI-0001
RD-2	H/P ACMS S/S AVM SIT Specification	H-P-SP-AI-0059

	Herschel Abbreviated Functional Test Procedure	Herschel
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3. Requirements to be verified

See AD-1 § 9.2.

4. Configuration

The activities described in this test procedure require the complete Satellite configuration.

4.1. Hardware Configuration

The configuration for each unit (simulated, real) relevant to S/C skin configuration is in accordance to Annex 1. For the Hardware Matrix see TAS-I TCDL and ASED ISL indicated in the Satellite AFT TRR MoM.

4.2. Software Configuration

The activities will be performed using the On Board Software Version(s), HPSDB and SCOE ASW indicated in the Satellite AFT TRR MoM.

4.3. Test Configuration

The activities described in this test procedure need the complete configuration of the HERSCHEL S/C. In particular the following items are mandatory: Harness, PCDU and CDMU.

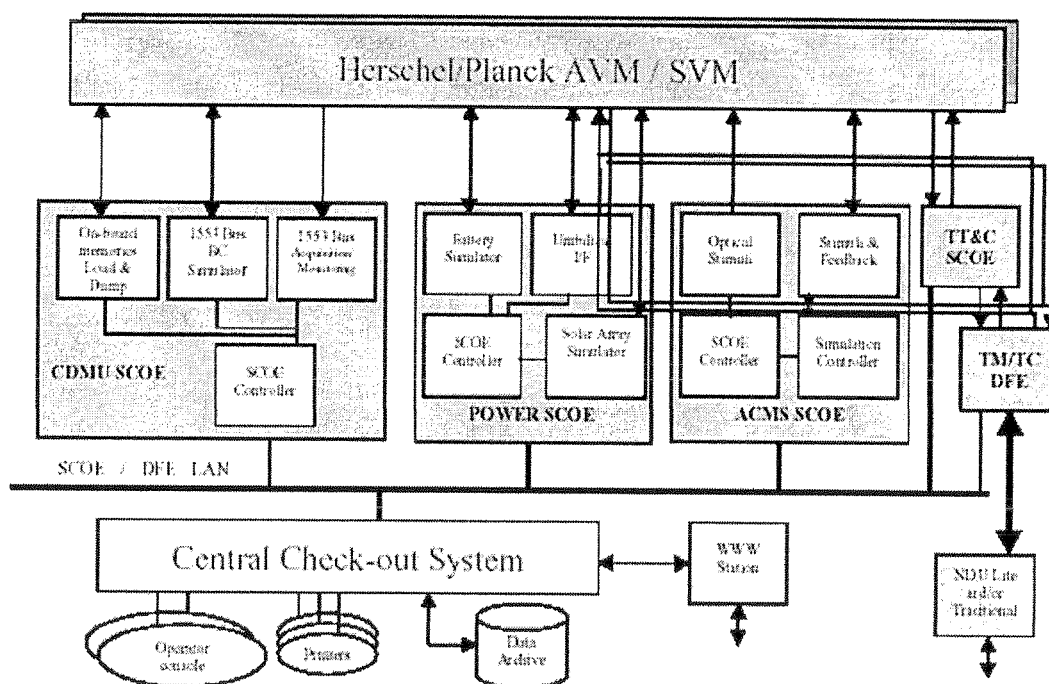
The activities to be performed before starting the execution of this procedure are:

- EGSE Commissioning

- HERSCHEL SVM incoming inspection
- CDMS I&T and UFT
- PCS I&T and UFT
- ACMS I&T and UFT
- CCU I&T and UFT
- Instrument(s) I&T and UFT


4.4. EGSE Configuration

The EGSE configuration, when completed, is shown in figure below:



The Herschel EGSE will be built with the following equipment:

- Central Check Out System (CCS)

	Herschel Abbreviated Functional Test Procedure	Herschel
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- The Power Control Subsystem SCOE (Power SCOE)
- The Telemetry, Tracking and Command SCOE (TT&C SCOE)
- The Telemetry and Telecommand Data Front End Equipment (TM/TC DFE)
- The Attitude and Control Measurement Subsystem SCOE (ACMS SCOE)
- The Central Data Management Unit SCOE (CDMU SCOE)
- NDIU will be configured to put ESOC in listening mode if necessary

All the above items are interconnected through an Ethernet Local Area Network (LAN) used to exchange both data and command & control information.

4.5. Specific Hardware / Test Equipment required

Before starting all Antenna Caps shall be connected.

5. Conditions


5.1. ENVIRONMENTAL CONDITION

During all the phases of the AFT, HERSCHEL S/C shall be maintained in a controlled environment in order to prevent degradation or contamination of the satellite equipment and surface, which could result in operational failures. ESTEC plant clean room will be used. Ambient conditions shall comply with following features for cleanliness requirement.

Environmental	Nominal	Actual	P	N
Clean Room Class	100 000	} as checked daily by ETS	✓	
Temperature	22 °C ±3 °C		✓	
Rel. Humidity	50 % +/- 10%		✓	
Delta Pressure	above 0.6 mm		✓	

5.2. Personnel

Responsibility	Name / Organization
Test Manager DIRECTOR	Y. Roche
Test Engineer CONDUCTORS	Adi Capua / M. Theunissen
EGSE Operator	per shift
Support Engineer	TASF
PA Responsible	per shift
Customer Representative	always a surprise..... 😊

	Herschel Abbreviated Functional Test Procedure	Herschel
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The team is made-up of: AIT Functional Team and an EGSE Team led by the AIT Manager, a PA Team led by a PA Manager and by an AIT Mechanical Team.

AIT Functional Team is in charge of:

- Preparation of Electrical and Functional Integration and Test Procedures
- Preparation and utilisation of electrical integration and test tools (H/W & S/W)
- Execution of Electrical Integration and Test activities
- Chairing of Electrical/Functional Test Readiness Review (TRR) and Post Test Review (PTR)
- Management and Monitor Electrical Integration and Test execution and participation to Non-conformance Review Board (NRB)

EGSE Team is in charge of :

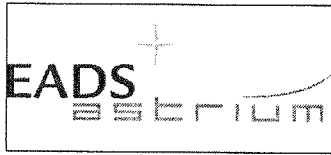
- Preparation of EGSE system and component (SCOEs FE and Check-Out Systems)
- Preparation of EGSE Commissioning and Test Procedures
- Setup, configuration, administration and maintenance of EGSE
- Support to test preparation, execution and data analysis.
- AIT Satellite DataBase setup, administration and maintenance

AIT Mechanical Team is in charge of:

- Preparation of Mechanical Integration and Test Procedures
- Preparation and utilisation of Mechanical test tools
- Execution of Mechanical Integration and Test activities
- Chairing of Mechanical/Thermal Test Readiness Review (TRR) and Post Test Review (PTR)

PA Team in charge of:

- Chair TRR and PTR
- Participation and QA monitoring of Integration and Test execution and attendance to Daily Meetings


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- Chairing of NRB
- Execution of QA Inspection and preparation of relevant reports
- Certification of H/W, S/W and documentation
- Non Conformance's Report (NCR) management and co-ordination
- Review and approval of Integration/Test Procedures (including Procedures Variation Sheets (PVS) if any)

6. General Precautions and Safety

The following Operational restrictions shall be carefully taken into account:

- Before any test article modification the relevant power sources shall be switched OFF
- Protective caps shall be installed on each harness or unit connector when these are not linked to their equipment
- All the test data shall be recorded
- Before starting the test sequence, care must be taken in verifying that all hardware links are correctly connected.
- To avoid possible damages, no signal shall be applied in no powered units, except where otherwise specified
- During testing the step by step procedure shall be followed. Changes will be possible and will be managed by a Procedure Variation Sheet approved by the AIT and PA.
- In case of any failure, the activities shall be stopped until troubleshooting plan is generated and approved.
- In case of non-conformance, the procedure addressed in [AD 5] shall be applied.
- The time of usage (ON/OFF cycles and ON duration) of each limited life equipment (FPGAs, battery, TWTA, writing in CDMU and ACC EEPROM) shall be noted and recorded.
- No stimulus has to be applied to any CRS switched-OFF
- The EPC cannot be switched-ON for more than 5 minutes without any TWT turned-ON.
- Care must be exercised when working around the S/C; in particular, if real IMU(s) or CRS rate sensors are involved, which may register any mechanical vibration affecting the responses of the ACC and/or invalidating the overall test results.

	<p style="text-align: center;">Herschel Abbreviated Functional Test Procedure</p>	<p style="text-align: center;">Herschel</p>
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- Before switching-ON the TWT assembly the antenna paths shall be properly terminated or linked to TTC SCOE via TTC SCOE cables.
- None of the test steps is hazardous.

7. Verification Requirements and Test Criteria

7.1. PASS/FAIL CRITERIA

At each test stage completion, the test success is determined comparing the results obtained against the expected values.

If the compliance between obtained and expected values has been met, and authorization to proceed with the next stage of the test is given, then the actual test stage must be considered satisfactory completed.

The success of the overall testing activities is determined from the satisfactory completion of all test stages.

Successful criteria to be satisfied in each test stage shall be:

- Test conditions according to specification requirement;
- Complete verification of the requirement aspects according to the test specifications
- Fulfillment of test results with respect to required data
- Verification that all the TM parameters used to monitor the SAT do not exceed the limit thresholds loaded in the HPSDB (OOL display);
- Verification that the received event reports are only those ones expected to fulfill the pass test criteria.

8 Step-by-Step Procedure

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
S/C Switching-On in Launch-Mode							
10.	Check that Skin Configuration is in accordance with the one depicted in Annex 1	OK					
20.	Setup EGSE and Switch-On SpaceCraft as per [AD 4] (from Test Conductor Console, call script: → type 'call async': Z010999MCVT003_IST_START AFT)	OK					
30.	From Real-Time console, open TM Packet History, filtering with APID 16 and APID 512 and check that CDMS and ACC Housekeeping is correctly flowing down	OK			do it later...		
Starting AFT Main Script							
40.	From Test Conductor Console, run the Satellite Commissioning Master Sequence: 'Z010999MCVT205_AFT_MASTER'	OK					
50.	At prompt: "START HERSCHEL AFT" click the button YES.	YES					
60.	At prompt: "TRANSITION TO SAS 1700W - BS = 24V" click the button YES. <i>confirm</i>	YES			SAS is set with all sections enabled and active		

Test Location <i>SITEC</i>	Customer	PA Assurance: Operator: <i>Dl.</i>	Date: <i>01/27/08 09:46</i>
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Doc. No:	HP-2-ASED-TP-0224	Page:	16
Issue:	1.1	off	36

Step- No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
70.	At prompt: "CDMS SETTING FOR SEPARATION" click the button CONFIRM	CONFIRM				✓	
80.	Sequence D102159SCVT138_IST_LAUNCH_SUNACQ shall pop-up. At the message: 'Wait for separation straps to be opened' GoTo ACMS MASTER (ACMS_CONFIG25) sequence and move to Menu 3 (if not already there) with <u>option 88</u> . Click OK and then Continue	OK				✓	
90.	From ACMS_CONFIG25, Menu 3, select <u>option 2</u> : 'Open Separation Straps' then Click button OK and then Continue	OK			Selecting this option Separation Strap are opened	✓	
100.	Sequence A102109SPVT034_ACMS_SAM_MON shall pop-up following the opening of separation straps, at prompt: 'Do you want to continue to monitor Sam Sun Pointing mode ?' Enter your choice: no Then click OK	no			ACMS SAM Point Coarse is reached	✓	
110.	Wait for 'A102109SPVT034_ACMS_SAM_MON' to be completed. Menu 4.0 shall appear	OK				✓	
120.	Check for sequence D102159SCVT138_IST_LAUNCH_SUNACQ completion without any NO-GO. Press 'End Ts!'	OK				✓	

Test Location <i>PTFC</i>	Customer	PA Assurance: Operator: <i>DL</i>	Date: <i>08/07/06 01:00</i>
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Doc. No:	HP-2-ASED-TP-0224	Page:	17
Issue:	1.1	off	36

Step- No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
130.	Back to 'AFT Master Sequence', at prompt: 'SWITCH TM LINK TO RF' click button Confirm	Confirm			Only TM is routed via RF. TC are still in Umbilical	X	✓
140.	TTC SCOE and TMTC DFE are set to link TM through TTC.	Confirm				✓	
150.	On AND YAHK1946 check that EiuTmInConfig is linked to TTC SCOE	OK				✓	
160.	From TM Packet History check that TM is correctly flowing down	OK				✓	
170.	Back to 'AFT Master Sequence', at prompt: 'TRANSITION TO NOMINAL' click button Confirm	Confirm				✓	
180.	VMC is switched off. Check that parameter: WM82B565 (LCL-20) turns to OFF	OK				✓	
190.	Sequence 'D102159SCVT137_IST_SUNACQ_NOM' shall pop-up. Check that no NO-GO are present and click 'End Ts!'	OK			CDMS moves from SAM to NOM mode (for this transition TM is routed back via umbilical)	✓	
200.	Check that parameter DEL34170 (CDMS Mode) has turned to: Nominal	OK				✓	
210.	Back to 'AFT Master Sequence', at prompt: 'SWITCHING TO RF' click button Confirm	Confirm				✓	

Test Location ENTSC	Customer	PA Assurance: Operator: PL 	Date: 05/02/08
------------------------	----------	---	-------------------

Step- No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
220.	TC and TM are routed via TTC. Check on AND YAHK1946 that parameter EiuTcOutConfig and EiuTMInconfig show: TTC SCOE.	OK			TC and TM are routed via RF. XPND is being locked with an Uplink signal of about -100 dBm (Nominal level as per Link Budget)	✓	
230.	When above script is completed check (from TTC Synoptic) that XPND is Locked and Squelch is On, RNG ON, Coherent Mode ON. MGA is selected.				A 'connection test' TC can be sent to ensure the healthiness of RF TC link.	✓	
240.	From ACMS_CONFIG25 Master Sequence, Menu 4.0, select <u>option 6</u> 'Transition to OCM' Click OK and then Continue	Continue			ACMS moves from SAM to OCM (OCM is reached in step 270)	✓	
250.	Sequence 'A102109SPVT036_ACMS_STR_ON' shall pop-up. At prompt: 'Do You want to change current Str in Use' check if STR already selected is the correct one and answer 'no'	no			STR-1 is switched ON and put in ATFAD mode	✓	
260.	At prompt: Do you want STR-2 in STD-BY mode? Type 'Y'	Y			STR-2 is switched-on as well	✓	
270.	From ACMS synoptic check that ACC Mode is turned to: 'OCM pnt fine'	OK				✓	
280.	From ACMS_CONFIG25 Master Sequence, Menu 7.0, select <u>option 3</u> 'Transition to SCM' Click OK and then Continue	Continue			ACMS moves from SAM to OCM (SCM is reached in step 310)	✓	

Test Location <i>ETOR</i>	Customer	PA Assurance: Operator: <i>M</i> 	Date: <i>05/07/08</i> <i>5:59</i>
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Doc. No:	HP-2-ASED-TP-0224	Page:	19
Issue:	1.1	off	36

Step- No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
290.	Script A102109SPVT038_RWL_ON pops-up. At prompt 'Do you want to change the actual onboard wheels selected in the nominal configuration?' Type 'no' and then OK	no				✓	
300.	At prompt 'Do you want to change the actual Angular momentum ?' Type 'no' and then OK	no				✓	
310.	Script shall prompt with message: 'RWL target not reached' after about 10 minutes. Press Resume and then 'End Ts!'	Resume			This is due to NCR-2130	✓	
320.	Script 'TRANSITION TO SCM' shall pop-up. At script completion, check on SAT synoptic that ACC is in SCM mode				ACC in SCM	✓	
330.	Back to 'AFT Master Sequence', at prompt: 'START HIFI SFT ON CHAIN-A' click button Confirm	Confirm			HIFI CHAIN-A SFT	✓	
340.	Follow relevant step as per [AD 6]	OK					
350.	When Instrument is ON check that relevant TM is correctly received.	OK			→ ch 7.3.1 cooling on → ch 7.3.2	✓	
360.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusB.hpws21 And check on SAT synoptic that active bus is B	OK				✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamonty</i> Operator: <i>B. Chen</i>	Date: 7/4/08 11:42
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Doc. No:	HP-2-ASED-TP-0224	Page:	20
Issue:	1.1	off	36

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
370.	Check that Instrument TM is correctly received for 1 min	OK				✓	
380.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusA.hpws21 And check on SAT synoptic that active bus is A	OK				✓	
390.	Switch-off Instrument as per [AD 6]	OK			ch. 7.3.3. 'APT206		
400.	Back to 'AFT Master Sequence', at prompt: 'START PACS SFT ON CHAIN-A' click button Confirm	Confirm			PACS CHAIN-A SFT		
410.	Follow relevant step as per [AD 6]	OK					
420.	When Instrument is ON check that relevant TM is correctly received.	OK					
430.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusB.hpws21 And check on SAT synoptic that active bus is B	OK			SKIP		
440.	Check that Instrument TM is correctly received for 1 min	OK					
450.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusA.hpws21 And check on SAT synoptic that active bus is A	OK					
460.	Switch-off Instrument as per [AD 6]	OK					
470.	Back to 'AFT Master Sequence', at prompt: 'START SPIRE SFT ON CHAIN-A' click button Confirm	Confirm			SPIRE CHAIN-A SFT	✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamonty</i> Operator: <i>P. che</i>	Date: 5/7/2008 11:50
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Doc. No:	HP-2-ASED-TP-0224	Page:	21
Issue:	1.1	off	36

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
480.	Follow relevant step as per [AD 6]	OK			7.2.2 PT 206	✓	
490.	When Instrument is ON check that relevant TM is correctly received.	OK				✓	
500.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusB.hpws21 And check on SAT synoptic that active bus is B	OK				✓	
510.	Check that Instrument TM is correctly received for 1 min	OK				✓	
520.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusA.hpws21 And check on SAT synoptic that active bus is A	OK				✓	
530.	Check that script is completed without any 'NO-GO'	OK				✓	
540.	Switch-off Instrument as per [AD 6]	OK			7.2.3 PT206	✓	
550.	Back to 'AFT Master Sequence', at prompt: 'START HIFI SFT ON CHAIN-B' click button Confirm	Confirm				✓	
560.	Follow relevant step as per [AD 6]	OK			7.3.4	✓	
570.	When Instrument is ON check that relevant TM is correctly received.	OK				✓	
580.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusB.hpws21 And check on SAT synoptic that active bus is B	OK				✓	
590.	Check that Instrument TM is correctly received for 1 min	OK				✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamoury</i> Operator: <i>B. che</i>	Date: 5/7/2008 13:07
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Doc. No:	HP-2-ASED-TP-0224	Page:	22
Issue:	1.1	off	36



Herschel Abbreviated Functional Test Procedure

Herschel

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
600.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusA.hpws21 And check on SAT synoptic that active bus is A	OK				✓	
610.	Switch-off Instrument as per [AD 6]	OK			7.3.5 TP206	✓	
620.	Back to 'AFT Master Sequence', at prompt: 'START PACS SFT ON CHAIN-B' click button Confirm	Confirm					
630.	Follow relevant step as per [AD 6]	OK			Skip PACS		
640.	When Instrument is ON check that relevant TM is correctly received.	OK					
650.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusB.hpws21 And check on SAT synoptic that active bus is B	OK					
660.	Check that Instrument TM is correctly received for 1 min	OK					
670.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusA.hpws21 And check on SAT synoptic that active bus is A	OK					
680.	Switch-off Instrument as per [AD 6]	OK					
690.	Back to 'AFT Master Sequence', at prompt: 'START SPIRE SFT ON CHAIN-B' click button Confirm	Confirm				✓	
700.	Follow relevant step as per [AD 6]	OK			section 7.2.4 TP206	✓	

Test Location ESTEC	Customer	PA Assurance: D. Lamonty Operator: B. che / U. Klauke	Date: 5/7/08 13:16
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Doc. No:	HP-2-ASED-TP-0224	Page:	23
Issue:	1.1	off	36

13:20

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
710.	When Instrument is ON check that relevant TM is correctly received.	OK				✓	
720.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusB.hpws21 And check on SAT synoptic that active bus is B	OK			13:20	✓	
730.	Check that Instrument TM is correctly received for 1 min	OK			13:22	✓	
740.	Change CDMU bus by Manual CMD stack: (From Menu -> Load Stack) SetBusA.hpws21 And check on SAT synoptic that active bus is A	OK			13:22	✓	
750.	Check that script is completed without any 'NO-GO'	OK				✓	
760.	Switch-off Instrument as per [AD 6]	OK			section 7.2.5 of TP206	✓	
770.	Back to 'AFT Master Sequence', at prompt: 'CDMU 3b RECONFIGURATION' click button Confirm	Confirm			13:44 SPR-586	✓	
780.	Script performs three CDMS SW Alarm(s) in order to reach EARTH mode and swap from PM-A to PM-B Check that script is completed without any NO_GO	OK			Following transitions are performed: Nom-to-EAM EAM-to-EAM PM-A to PM-B	✓	
790.	From SAT synoptic checks that ACC is in 'SCM Point CIR'	OK				✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamanby</i> Operator: <i>Uwe Kleber</i>	Date: 5/7/2008 13:49
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Doc. No:	HP-2-ASED-TP-0224	Page:	24
Issue:	1.1	off	36

13:50

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
800.	From SAT synoptic checks that CDMU is in 'EARTH' and active PM is PM-B	OK				✓	
810.	From Packet History checks that TM (with APID 512 and APID 16) is correctly flowing down	OK				✓	
820.	Back to 'AFT Master Sequence', at prompt: 'CDMU BUS SWAP' click button Confirm	Confirm			13:51:45	✓	
830.	Click 'End Ts!'	OK				✓	
840.	From SAT synoptic checks that CDMU active bus is BUS-B	OK			13:52	✓	
850.	From Packet History checks that TM (with APID 512 and APID 16) is correctly flowing down	OK				✓	
860.	Back to 'AFT Master Sequence', at prompt: 'PCDU SWAP' click button Confirm	Confirm			13:53 During PCDU-SWAP some (5,4) are received. This is nominal since the TCS is enabled	✓	
870.	Click 'End Ts!'	OK			13:56	✓	
880.	From SAT synoptic checks that PCDU active interface is B	OK				✓	
890.	From Packet History checks that TM (with APID 512 and APID 16) is correctly flowing down	OK				✓	
900.	Back to 'AFT Master Sequence', at prompt: 'TTC SWAP' click button Confirm	Confirm			13:57	✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamonty</i> Operator: <i>U. Kunkke</i>	Date: 5/7/2008
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Doc. No:	HP-2-ASED-TP-0224	Page:	25
Issue:	1.1	off	36



Herschel Abbreviated Functional Test Procedure

Herschel

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
910.	TM/TC are temporary routed via UMBILICAL to allow TTC SWAP	OK			SPR-587	✓	
920.	TWTA-1 and XPND-1 are switched-off. TWTA-2 and XPND-2 are switched-on	OK				✓	
930.	Check on SAT Synoptic (after 3 minutes for TWT warm-up) that above configuration for TTC is correctly reached	OK			14:17	✓	
940.	Back to 'AFT Master Sequence', at prompt: 'BACK TO RF VIA CHAIN-2 / LGA-1' click button Confirm	Confirm			14:18	✓	
950.	After completion of ancillary sequences, check on AND YAHK1946 that parameters TcOutput and TmInput shows TTC-SCOE	OK			TM and TC routed back via RF	✓	
960.	From TTC Synoptic, Check that XPND-2 is in: Medium Rate, RNG ON, COHE, ON	OK			A 'connection test' TC can be sent to ensure the healthiness of RF TC link. 14:45	✓	
970.	Back to 'AFT Master Sequence', at prompt: 'ACC BUS TRANSITION A-to-B' click button Confirm	Confirm			14:46	✓	
980.	GYRO and STR bus is changed from A-to-B. Check on SAT synoptic the correct BUS swap.	OK				✓	
990.	Check on SAT synoptic that GYRO active interface is IF-2. Gyro active sensors are: B-C-D Check that Gyro Interfaces and sensors are HEALTHY (green coloured).	OK			Gyro configuration is changed from: IF-1 and A-B-C sensors to IF-2 and B-C-D sensors	✓	

Test Location ESTEC	Customer	PA Assurance: D. Lamontagne Operator: U. Klenke	Date: 5/7/2008 15:08
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Doc. No:	HP-2-ASED-TP-0224	Page:	26
Issue:	1.1	off	36

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
1000.	From On-Board Event History, check that no 'unexpected' (5,x) have been received	OK				✓	
1010.	Back to 'AFT Master Sequence', at prompt: 'TM AND TC ROUTED VIA UMBILICAL' click button Confirm	OK			15:10 TM and TC are routed back via Umbilical in order to ensure a complete	✓	
1020.	Back to 'AFT Master Sequence', at prompt: 'ACC FDIR Level 4' click button Confirm	Confirm			15:11 By ACMS SCOE, AAD stimuli is set to 0 thus leading to SCM-SM transition (and PM A-to-B swap). Note: in OnBoardEvent Display, some (5,x) are expected due to Survival Transition.	✓	
1030.	From SAT Synoptic, check that ACC PM selected is PM-B. ACC is in SM Mode.	OK				✓	
1040.	From Packet History checks that TM (with APID 512 and APID 16) is correctly flowing down	OK			15:15	✓	
1050.	From Manual CMD Stack (Menu->Load Stack) change CDMU bus from B-to-A executing CMD: SetBusA.hpws21	OK				✓	
1060.	Check that TM (512) is correctly received for 1 min	OK				✓	
1070.	Master Script is over. To switch-off S/C, perform, from Test Conductor Console, script: 'IST_END'. Please refer to [AD 4]	OK			TM and TC are routed via Umbilical. SSMM is downloaded as well.	✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamont</i> Operator: <i>U. Klenke</i>	Date: 5/7/2008 15:23
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Doc. No:	HP-2-ASED-TP-0224	Page:	27
Issue:	1.1	off	36



Herschel Abbreviated Functional Test Procedure

Herschel

Step-No.	Integration-Step-Description	Nominal Value	Tolerance	Actual Value	Remarks	P	N
1080.	Check that at sequence completion no NO-GO are present	OK				✓	

Test Location ESTEC	Customer	PA Assurance: <i>D. Lamont</i> Operator: <i>U. Kenke</i>	Date: 5/7/2008
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Doc. No:	HP-2-ASED-TP-0224	Page:	28
Issue:	1.1	off	36

9. Summary Sheets

Doc.	HP-2-ASED-TP-0224		Page:	29
Issue:	1.1		of	36
Date:	26.06.08	File: HP-2-ASED-TP-0224.doc		

9.1. Procedure Variation Summary

	Test Change 0	Curr. No.: Date: /2008 Page 1 of 1	
Test designation	Test Procedure	Issue 1	Rev. NA
Test step changed: 340-420, 650-730	Reason for Change:		
Prepared by: A. Di Capua	Resp. Test Leader A. Di Capua	Project Engineer	
PA/QA	Prime	Customer	

Table 9.1-1: Procedure Variation Sheet

Doc.	HP-2-ASED-TP-0224		Page:	30
Issue:	1.1		of	36
Date:	26.06.08	File: HP-2-ASED-TP-0224.doc		

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Doc.	HP-2-ASED-TP-0224		Page:	31
Issue:	1.1		of	36
Date:	26.06.08	File: HP-2-ASED-TP-0224.doc		

9.2. Non Conformance Report (NCR) Summary

NCR - No.	NCR - Title	Date	Open Closed	PA sig.

Table 9.2-1: Non-Conformance Record Sheet

Insert actual distribution list

Doc.	HP-2-ASED-TP-0224		Page:	33
Issue:	1.1		of	36
Date:	26.06.08	File: HP-2-ASED-TP-0224.doc		

Annex 1

SCOE CABLES CONNECTION to HERSCHEL S/C						
SKIN-01	PWR Panel (PCDU)					
	Connector/Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector	
	BS Nom Power	SK01BJ09	PCDU	BS SCOE Cable Plugged ✓		
	BS Red Power	SK01BJ10	PCDU	BS SCOE Cable Plugged ✓		
	BDR1 AIT	SK01BJ11	PCDU	LPS SCOE Cable Plugged ✓		
	BDR2 AIT	SK01BJ12	PCDU	LPS SCOE Cable Plugged ✓		
	SA Nom Power	SK01AJ01	PCDU	POWER SCOE Cable Plugged ✓		
	SA Nom Power	SK01AJ02	PCDU	POWER SCOE Cable Plugged ✓		
	SA Nom Power	SK01AJ03	PCDU	POWER SCOE Cable Plugged ✓		
			Battery	EMC Cover ✓		
	SA Red Power	SK01AJ05	PCDU	POWER SCOE Cable Plugged ✓		
	SA Red Power	SK01AJ06	PCDU	POWER SCOE Cable Plugged ✓		
	SA Red Power	SK01AJ07	PCDU	POWER SCOE Cable Plugged ✓		
SKIN-02	PWR Panel (ACC, CDMU, RCS, 1553 & Thruster)					
	Connector/Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector	
	SKIN-02	DMS 1553 Bus_A	J01	CDMU	Bus Monitor Cable Plugged ✓	
	SKIN-02	DMS 1553 Bus_B	J02	CDMU	Bus Monitor Cable Plugged ✓	
	SKIN-02	ACMS 1553 Bus_A	J03	ACC	ACMS SCOE Cable Plugged ✓	
	SKIN-02	ACMS 1553 Bus_B	J04	ACC	ACMS SCOE Cable Plugged ✓	
	SKIN-02	LV1/FCV 20N CMD S/A M	J05	ACC/RCS	ACMS SCOE Cable Plugged ✓	
	SKIN-02	LV2/FCV 20N CMD S/A R	J06	ACC/RCS	ACMS SCOE Cable Plugged ✓	
	SKIN-02	RCS Press/Tank Temp/PT Pwr	J07	ACC/PT&TH	ACMS SCOE Cable Plugged ✓	
	SKIN-02	Thruster Temp M/LV1 Sts	J08	ACC/RCS	ACMS SCOE Cable Plugged ✓	
	SKIN-02	CDMU and ACC EEPROM reprogramming input	J09	ACC/CDMU		Flight Plug SK02P09 Plugged ← deviation'


deviation': ACC QSL cables still connected from s/w upload. o.k. for test AFTH.
J. 040708 21:50

SKIN-02	CDMU and ACC EEPROM reprogramming input	J10	ACC/CDMU		Flight Plug SK02P10 Plugged	<i>devator!</i>
SKIN-02	Thruster Temp R/LV2 Sts	J11	ACC/RCS	ACMS SCOE Cable Plugged ✓		
SKIN-02	Thruster C/B Heaters M	J12	ACC/CBH	ACMS SCOE Cable Plugged ✓		
SKIN-02	Thruster C/B Heaters R	J13	ACC/CBH	ACMS SCOE Cable Plugged ✓		
SKIN-02	Str1/2 On/Off Cmd M/Str1 Sts	J14	ACC/STR-1		ACMS Flight Plug SK02P14 Plugged ✓	
SKIN-02	Str1/2 On/Off Cmd R/Str2 Sts	J15	ACC/STR-2		ACMS Flight Plug SK02P15 Plugged ✓	
SKIN-02	Gyro A On/Off Cmd	J16	ACC/GYRO-E1		ACMS Flight Plug SK02P16 Plugged ✓	
SKIN-02	Gyro B On/Off Cmd	J17	ACC/GYRO-E2		ACMS Flight Plug SK02P17 Plugged ✓	
SKIN-03	TTC Panel					
	Connector Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector	
SKIN-03	Test point TC + protection jumper EPC1	SK03J01	XPND1/EPC1		Plastic cap ✓	
SKIN-03	Test point TC + protection jumper EPC2	SK03J02	XPND2/EPC2		Plastic cap ✓	
	RF LINK					
	Connector Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector	
	RF link for antenna LGA1	N/A	LGA1	RF SCOE LGA1 Plugged	LGA1 Anechoic TEST - Cap ✓	
	RF link for antenna LGA2	N/A	LGA2	RF SCOE LGA2 Plugged	LGA2 Anechoic TEST - Cap ✓	
	RF link for antenna MGA	N/A	MGA	RF SCOE MGA Plugged	MGA Anechoic Cap TEST - CAP ✓	
SKIN-04	ACMS Panel (RWE)					
	Connector Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector	
SKIN-04	RWL1 Sgn	J01	ACC/RWL-1		ACMS Flight Plug SK04P01 Plugged ✓	
SKIN-04	RWL2 Sgn	J02	ACC/RWL-2		ACMS Flight Plug SK04P02 Plugged ✓	
SKIN-04	RWL3 Sgn	J03	ACC/RWL-3		ACMS Flight Plug SK04P03 Plugged ✓	
SKIN-04	RWL4 Sgn	J04	ACC/RWL-4		ACMS Flight Plug SK04P04 Plugged ✓	
SKIN-05	GYR/QRS Panel					
	Connector Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector	
SKIN-05	CRS1 AOCS Sgn	J01	CRS-1/ACC		ACMS Flight Plug ✓	
SKIN-05	CRS2 AOCS Sgn	J02	CRS-2/ACC		ACMS Flight Plug ✓	
SKIN-05	GYRO RS422 / Test	J03	GYRO	ACMS SCOE Cable Plugged ✓		
SKIN-05	CRS 1/2 Stimuli	J04	CRS-1,2	ACMS SCOE Cable Plugged ✓		

Verified by R. Coossens
040708 G. 21:50

SKIN-05	AAD Sgn M	J05	AAD/ACC	ACMS SCOE Cable Plugged ✓	
SKIN-05	SAS1/2 Sgn M	J06	SAS/ACC	ACMS SCOE Cable Plugged ✓	
SKIN-05	SAS1/2 Sgn R	J07	SAS/ACC	ACMS SCOE Cable Plugged ✓	
SKIN-05	AAD Sgn R	J08	AAD/ACC	ACMS SCOE Cable Plugged ✓	
SKIN-06	STR Panel				
	Connector Function	Skin Connector	S/C unit	SCOE CABLE	Flight Connector
SKIN-06	STR1 Stimuli	J01	STR1	ACMS SCOE Cable Plugged ✓	
SKIN-06	STR2 Stimuli	J02	STR2	ACMS SCOE Cable Plugged ✓	
	UMBILICAL				
	Connector Function	Connector	S/C unit	SCOE CABLE	
	Power/Data	HUJ01	SYSTEM	SCOE's cable Plugged ✓	
	Power/Data	HUJ02	SYSTEM	SCOE's cable Plugged ✓	

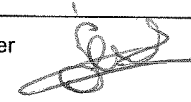
*Verified by R. Boossens
040700 J . 21:50*

	TRR Minutes Applicable H-P-TASF-MN-	REF.: H-P-TASF-AS-RUN-LOG	
		HERSCHEL	
		DATE : 04/07/08	PAGE : of
AS-RUN DOCUMENTS RAISED		PLACE :	

TEST NAME: AFT / PAC's INVESTIGATION	TEST CONDUCTOR: M. THUNISSEN	
ACTIVITY CONTROL SHEET No's: PAC's INVEST ACS 0377		
LEADING PROCEDURE (Title) HERSCHEL SAT AFT	Doc No HP-2-ASE7-TP-0224	Issue 1.1
FUNCTIONAL PROCEDURE (Title) SC SWITCH ON/OFF	Doc No HP-2-ASE7-TP-0134	Issue 4
Session ID/s 2008_07_04_21_40_herschelmu_hpws22-REALTIME		
START TAG: HP-2-ASE7-TP-0224-ISS1-AFT4-BEGIN-001 END		

PVS #	Raised against	Description (brief summary of reason document is raised)
1	TP-0224	AFTER STEP 320 PERFORM PACS INVEST ACS 0377
1	TP-0134	TO PERFORM GYRO CAL DURING 7.2.4.2
1	TP-0221	SWITCH TLM FROM RF BACK TO UNBILICAL
2	TP-0221	TYPO IN PROCEDURE TO CHECK TLM.
2	TP-0224	RESTORE RF LINK FOR TLM AFTER PACS INVEST.
3	TP-0224	No PACS test allowed → NCR 4272
1	TP-0206	I EGSF action required
4	TP-0224	RESTORE STARTRACKER1 TO 'HEALTHY' STATE
SPR #	Raised against	Description (same as SPR title)
588	TP0134(ISTEND)	Different TM parameter name in RM Log for CDMS
NCR #	Raised against	Description (same as NCR title)


Procedure Variation Summary

	Test Change	Curr. No.: 1	Date 5/7/08
		Page 1	of 1
Test designation HiFi during AFT	Test Procedure TP-0200	Issue 1	Rev. 2
Test step changed Chpt 7.3.4 Step 1	Reason for Change IEASE action required		
<p>before step 1, HiFi needed to change the IEASE configuration (PRIME → MEDICAMENT).</p> <p>After that "connect HHIFIEASE" was executed.</p>			
Prepared by: S. Ilan	Resp. Test Leader S. Ilan 	Project Engineer	
PA/QA D. Lomsky	Prime	Customer	

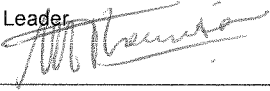
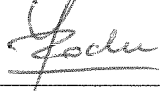


Procedure Variation Summary

	Test Change	Curr. No.: 3	
		Date 5/7/08	
		Page	of
Test designation AFT	Test Procedure TP-0224	Issue 1	Rev. 1
Test step changed 400 → 460 & 620 → 680	Reason for Change No PACS test Allowed → NCR 4272		
<p>Due to PACS NCR investigation (SD-0377), no PACS switch-on allowed.</p>			
Prepared by: S. Ilsen	Resp. Test Leader S. Ilsen	Project Engineer	
PA/QA D. Lamaby	Prime	Customer	

Procedure Variation Summary

	Test Change	Curr. No.: 2	Date 4-07-08
		Page 1 of 1	
Test designation AFT #4	Test Procedure TP-0224	Issue	Rev.
Test step changed 330	Reason for Change Restored RF after PACS debug (ACS 377)		
<p>before 330 the RF should be restored :</p> <ul style="list-style-type: none"> * set to MBR (DC22 F170) ✓ 10:31 * re acquire RF link with TTC SCOE scripts callsync Y102989 ECVT003-TC-DFE-OUT-2-TTC {4000} ✓ 10:41 callsync Y102989 ECVT005-TM-DFE-IN-FROM-TTC {MGA} {MBR} ✓ 10:44 			
Prepared by: M. THEUNISSEN	Resp. Test Leader M. THEUNISSEN	Project Engineer	
PA/QA 	Prime	Customer	

1.1. Procedure Variation Sheet

	Test Change PACS Investigation	Curr. No.: 1 Date: 03-07-08 Page 1 of 1	
Test designation AFT	Test Procedure TP-0224	Issue 1	Rev. 1
Test step changed Step added after step 320	Reason for Change PACS Investigation		
<p>a) Perform steps described in ACS-0377</p> <p>b) Come back to Master AFT procedure (step 330)</p>			
Prepared by: ADC	Resp. Test Leader 	Project Engineer 	
PA/QA  3. HALL (CPA) 4/7/08	Prime 	Customer	

		Test Change		Curr. No.: 2 <i>2/07/08</i>	
		Gyro Calibration		Date: 03-07-08 <i>4/7/08</i>	
				Page 1 of 1	
Test designation		Test Procedure		Issue	
AFT		TP-0134		4	
Test step changed		Reason for Change			
Section 7.2.4.2 (ACC-ON)		GYRO Calibration			
<p>In case GYRO Calibration is still to be performed. During section 7.2.4.2 (ACC-ON) of IST Leading Procedure, nominally perform steps 1-4 then</p> <ul style="list-style-type: none"> - Skip steps 5-7 - Perform step 8-10 (ACC-ON) - When ACC is ON. Wait ½ h for GYRO Warm-Up. - Collect Gyro parameter values: AEGRA002, AEGRB002, AEGRC002, AEGRD002 for 15 minutes - Perform an average of above parameters and put them in AFT.txt input file - Re-Perform step 2-4 of main procedure (re-load input file) - Perform steps 5-7 of main procedure (switch-on ACMS SCOE) - Continue with step 11 					
Prepared by:		Resp. Test Leader		Project Engineer	
ADC		<i>[Signature]</i>		<i>[Signature]</i>	
PA/QA		Prime		Customer	
<i>[Signature]</i> (PA) J. HALL 4/7/08		<i>[Signature]</i>			

9.1. Procedure Variation Summary

	Test Change 0	Curr. No.: # 4 Date: ^{5/7} /2008 Page 1 of 1
Test designation SAT AFT (AFT 4)	Test Procedure TP-0224	Issue 1.1
		Rev. NA
Test step changed: 340-420, 650-730 990	Reason for Change: Restore Startracker 1 to 'healthy' state	
<p>Send TC's</p> <ul style="list-style-type: none"> - ACYE8109 - ACZA3109 		
<p>(Saturday 5 July UTC 14:49 Startracker 1 declared unhealthy Martijn said an NCR must be raised to report this.)</p>		
Prepared by: for M. THEUNISSEN A. Di Capua	Resp. Test Leader for A. Di Capua M. THEUNISSEN	Project Engineer
PA/QA D. Lamonty	Prime	Customer

Table 9.1-1: Procedure Variation Sheet

Doc.	HP-2-ASED-TP-0224		Page:	30
Issue:	1.1		of	36
Date:	26.06.08	File: HP-2-ASED-TP-0224.doc		

Davis, William Spencer (external)

From: Oort, Marc
Sent: 07 July 2008 13:22
To: Theunissen, Martijn
Cc: Alessio Di Capua; yvan.roche@thalesalieniaspace.com; Much, Christoph; johnjennyhall@hotmail.com; nicjknight@aol.com; Hohn, Ruediger
Subject: RE: GYR STR cross check, again

Martijn,
This is a different problem. Apparently, you are changing the GYR electronics configuration in SCM without simply declaring the GYR unhealthy, which is tricky business to start with! It looks as if in addition, you did not wait long enough, our procedrue requires a minimum wait time of 3 min after the last command to the GYR is sent. Because the Gyr is not declared unhealthy and all GYR checks are disabled, the check can become very confused.

I propose you do the reconfiguration in OCM or SAM to avoid this problem, or wait much longer before re enabling the checks

Marc

From: Theunissen, Martijn
Sent: Saturday, 05 July, 2008 19:47
To: Oort, Marc
Cc: Alessio Di Capua; yvan.roche@thalesalieniaspace.com; Much, Christoph; johnjennyhall@hotmail.com; nicjknight@aol.com; Hohn, Ruediger
Subject: GYR STR cross check, again

Hi Marc,

During AFT4 (after vibration test & with new ACMS 3.8 SW) we had a re-occurence of the GYR STR cross check (NC 4178 & 4257) just when we re-enable after a commanded GYR (real) unit reconfiguration.

See the DS ftp Astrium/20080507

Before we raise an NC, can you have a look to the data, if this is a re-occurence of the problem, or a new problem ?

Regards,
Martijn

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09/07/2008

Attachment 3 to Section 6.7:
As Run Procedure HP-2-ASED-TP-0206

Title: **Herschel Instrument Power ON-OFF and Mode Switching Procedure for Functional Testing**

CI-No:

Prepared by: S. Hamer TERMA A/S Date: 25.04.2008

Checked by: S. Idler

Product Assurance: R. Stritter *pp J. Hall* 30/4/2008

Configuration Control: W. Wietbrock

Project Management: Dr. Fricke 12.05.08

Project Management: D. Montet 30/4/2008

Distribution: See Distribution List (last page)

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Issue	Date	Sheet	Description of Change	Release
1	07.01.2008		Initial version	
1	21.04.2008		Revised version covering all instruments including simulated science modes. HIFI ICU only configuration	1
1	25.04.2008		Revised version HIFI "ICU only" plus HIFI Mode Transitions procedure	2

Table of Content

Table of Content	4
1 Scope	7
1.1 Objective	7
1.2 Constraints	7
1.3 Operational Flow	8
2 Documents/Drawings	10
2.1 Applicable Documents	10
2.2 Reference Documents	10
2.3 Other Documents	11
2.4 Acronyms	11
3 Requirements to be verified	12
4 Configuration	13
4.1 Herschel S/C Configuration	13
4.1.1 Hardware Configuration	13
4.1.2 Software Configuration	13
4.1.3 Test Configuration	13
4.1.3.1 SVM	13
4.1.3.2 HIFI	13
4.1.3.3 PACS	13
4.1.3.4 SPIRE	13
4.1.4 Simulated Equipments	13
5 Conditions	14
5.1 Personnel	14
5.2 Environmental	14
5.3 General Precautions and Safety	14
5.3.1 General Safety Requirements, Precautions	14
5.3.2 Special condition and hazards	14
5.3.2.1 HIFI	14

5.3.2.2	PACS	15
5.3.2.3	SPIRE	16
5.3.3	ESD constraints	16
5.3.4	Special QA Requirements	17
5.4	GSE	18
5.4.1	MGSE	18
5.4.2	CVSE	18
5.4.3	EGSE	18
5.4.3.1	EGSE Hardware Configuration	18
5.4.3.2	EGSE User Software	18
5.4.3.3	Grounding Configuration	18
5.4.3.4	Test Equipment	18
5.4.3.5	Data Acquisition System	18
5.4.4	OGSE	18
5.4.5	Special Equipment	18
6	Verification Requirements and Test Criteria	19
7	Step-by-Step Procedures	20
7.1	PACS Instrument Procedures	20
7.1.1	PACS I-EGSE Configuration/Connection	20
7.1.2	PACS Prime OFF to Standby (SAFE)	22
7.1.3	PACS Prime Standby (SAFE) to OFF	26
7.1.4	PACS Redundant OFF to Standby (SAFE)	29
7.1.5	PACS Redundant Standby (SAFE) to OFF	33
7.1.6	PACS Standby (SAFE) to Nominal Spectroscopy (to Standby)	36
7.1.7	PACS Standby (SAFE) to Burst Mode (to Standby)	38
7.1.8	PACS to Standby (SAFE)	40
7.1.9	PACS I-EGSE Disconnection	41
7.2	SPIRE Instrument Procedures	42
7.2.1	SPIRE I-EGSE Configuration/Connection	42
7.2.2	SPIRE Prime OFF to Standby (REDY)	44
7.2.3	SPIRE Prime Standby (REDY) to OFF	48
7.2.4	SPIRE Redundant OFF to Standby (REDY)	51
7.2.5	SPIRE Redundant Standby (REDY) to OFF	55
7.2.6	SPIRE Standby (REDY) to Simulated Science (OPS)	58
7.2.7	SPIRE Simulated Photometer Science (OPS) to Standby (REDY)	60
7.2.8	SPIRE I-EGSE Disconnection	62
7.3	HIFI Instrument Full Configuration Procedures	63
7.3.1	HIFI I-EGSE Configuration/Connection	63

7.3.2	HIFI Nominal OFF to Standby1	65
7.3.3	HIFI Nominal Standby1 to OFF	71
7.3.4	HIFI Redundant OFF to Standby1	74
7.3.5	HIFI Redundant Standby1 to OFF	80
7.3.6	HIFI Nominal Standby1 to Science (PRIME)	83
7.3.7	HIFI Nominal Science (PRIME) to Standby1	85
7.3.8	HIFI I-EGSE Disconnection	87
7.4	HIFI Instrument ICU Only Configuration Procedures	88
7.4.1	HIFI Nominal OFF to ICU ON	88
7.4.2	HIFI Nominal ICU ON to OFF	91
7.4.3	HIFI Redundant OFF to ICU ON	94
7.4.4	HIFI Redundant ICU ON to OFF	97
7.4.5	HIFI Nominal ICU ON to Simulated Science	100
7.4.6	HIFI Nominal Simulated Science (PRIME) to ICU ON	102
8	ANNEX - Script hierarchy	104
8.1	General	104
8.2	PACS	104
8.3	SPIRE	105
8.4	HIFI Full Configuration	106
8.5	HIFI ICU Configuration	107
8.6	Procedure Variation Summary	108
8.7	Non Conformance Report (NCR) Summary	109
8.8	Sign-off Sheet	110

1 Scope

1.1 Objective

This document details the Instrument (PACS, SPIRE & HIFI) procedures provided to support primarily SVM oriented IST activities. The procedures can also be used where appropriate to support other non-specific instrument tests (e.g. EMC, shipping health check). The procedures cover the following basic activities:

- Instrument (Prime & Redundant) Switch ON/OFF to/from Standby* mode
- Configuration of, and connection to, the Instrument EGSEs (I-EGSEs)
- Transition from "Standby" to a simulated** Science producing mode

* "Standby" is an artificial mode which cannot be characterised by one particular parameter for any instrument. Each instrument also uses an alternative name to indicate "Standby" mode; for PACS this is SAFE and for SPIRE it is REDY, HIFI has two standby modes Standby1 & Standby2, the primary difference between the two is whether the lasers are switched ON (2) or OFF (1).

** Simulated Science is sufficient for the needs of non-specific instrument IST activities and is representative in terms of APID allocation and bandwidth but not data content.

This document will, where necessary, evolve during the system level AIT activities in order to reflect the configuration of the instruments (completion of integration activities) and the Herschel satellite (the latter in order to handle operation of the instruments in warm, Hel and Hell conditions)

1.2 Constraints

The instrument procedures are designed to be run without the need for Instrument specific support, and for PACS, SPIRE plus HIFI ICU only without need of connection to the I-EGSEs.

For HIFI full configuration (the so called "Mode Transitions") connection to the HIFI I-EGSE is required, as is support from SRON personnel (latter TBC).

However, it is mandatory for any PACS usage that PACS OBCPs/EATs have been loaded and are enabled for the duration of the test.

HIFI and SPIRE currently do not require OBCPs/EATs to be operational; however the test itself may require this, but is not a constraint for the instruments.

1.3 Operational Flow

Chapter 7 provides the detailed step-by-step procedures for each instrument, which are summarised below:

PACS

- I-EGSE Configuration & Connection
- PACS Prime OFF to Standby (SAFE)
- PACS Prime Standby (SAFE) to OFF
- PACS Redundant OFF to Standby (SAFE)
- PACS Redundant Standby (SAFE) to OFF
- PACS Standby (SAFE) to Nominal Spectroscopy (to Standby)
- PACS Standby (SAFE) to Burst Mode (to Standby)
- I-EGSE Disconnection

SPIRE

- I-EGSE Configuration & Connection
- SPIRE Prime OFF to Standby (REDY)
- SPIRE Prime Standby (REDY) to OFF
- SPIRE Redundant OFF to Standby (REDY)
- SPIRE Redundant Standby (REDY) to OFF
- SPIRE Standby to OPS (Simulated Photometer)
- SPIRE OPS to Standby
- I-EGSE Disconnection

HIFI Full Configuration (I-EGSE Mandatory)

- I-EGSE Nominal/Redundant Configuration & Connection
- HIFI Nominal OFF to Standby1
- HIFI Nominal Standby1 to OFF
- HIFI Nominal Standby1 to PRIME (Science)
- HIFI Nominal PRIME (Science) to Standby1
- HIFI Redundant OFF to Standby1

- HIFI Redundant Standby1 to OFF
- I-EGSE Disconnection

- **HIFI ICU Configuration (without I-EGSE)**
- HIFI Nominal ICU ON
- HIFI Nominal ICU OFF
- HIFI Redundant ICU ON
- HIFI Redundant ICU OFF
- HIFI Start Simulated Science
- HIFI Stop Simulated Science

2 Documents/Drawings

This document incorporates, by dated or undated references, provisions from other publications. These normative references are cited at appropriate places in the text and publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these apply to this document only when incorporated into it by amendment or revision. For undated references, the latest edition of the publication referred to apply.

2.1 Applicable Documents

AD-1	Herschel SAT Emergency Switch Off Procedure	H-P-2-ASED-PR-071
AD-2	Procedure for setup and operation of the HIFI cooling system	HP-2-ASED-PR-125

2.2 Reference Documents

RD-1	Herschel PCDU & CDMS nominal switch on / off procedure	HP-2-ASED-PR-0070
RD-2	HIFI Switch On Procedure, Issue 1.16	SRON-G/HIFI/PR/2007-017
RD-3	PACS Switch On/Off, ref. email Helmut Feuchtgruber	17. April 2007 11:58
RD-4	SPIRE Integration System Test Debugging Procedures, Issue 1.3	SPIRE-RAL-PRC-002880
RD-5	PACS I-EGSE User Manual, Issue 1, 19-Jul-2007	PICC-ME-MN-010
RD-6	HIFI IEGSE setup procedure	SRON-U/HIFI/PR/2007-005
RD-7	SPIRE I-EGSE Set-Up, Issue 2.2	SPIRE-RAL-DOC-002841
RD-8	FIRST/PLANCK Instrument Interface Document part A	PT-IID-A-04624
RD-9	FIRST/PLANCK Instrument Interface Document part B (HIFI)	PT-IIDB/HIFI-02125
RD-10	FIRST/PLANCK Instrument Interface Document part B (PACS)	PT-IIDB/PACS-02126
RD-11	FIRST/PLANCK Instrument Interface Document part B (SPIRE)	PT-IIDB/SPIRE-02124

RD-12 LO SFT Procedure using LO Dummy, Issue 1.01

MPIfR/HIFI/PR/2006-565

RD-13 HIFI Mode Transitions Procedure, Iss 1.16

SRON-G/HIFI/PR/2007-020

2.3 Other Documents

N/A

2.4 Acronyms

See calling procedure.

3 Requirements to be verified

N/A

4 Configuration

4.1 Herschel S/C Configuration

4.1.1 Hardware Configuration

See relevant TRR MoM

4.1.2 Software Configuration

See relevant TRR MoM

4.1.3 Test Configuration

4.1.3.1 SVM

See relevant TRR MoM

4.1.3.2 HIFI

All warm units & FPU integrated. For this issue (1.1) Hel/Hell conditions can be supported but LOU must be warm.

If LOU is cold (i.e. for TB/TV) then this procedure must be updated according to RD2 & RD13.

4.1.3.3 PACS

All warm units and FPU is integrated and connected to the warm units. Warm or Cold Hel/Hell conditions.

4.1.3.4 SPIRE

All warm units integrated. Warm or Cold Hel/Hell conditions.

4.1.4 Simulated Equipments

N/A

5 Conditions

5.1 Personnel

See relevant TRR MoM

5.2 Environmental

See relevant TRR MoM

5.3 General Precautions and Safety

5.3.1 *General Safety Requirements, Precautions*

- For HIFI, Handling precautions according to RD-8 and RD-9 are applicable.
- For PACS, Handling precautions according to RD-8 and RD-10 are applicable.
- For SPIRE, Handling precautions according to RD-8 and RD-11 are applicable.

5.3.2 *Special condition and hazards*

The following Operational restrictions shall be carefully taken into account:

- In case of any failure, the activities shall be stopped until troubleshooting plan is generated and approved.

A general constraint for all instrument DPUs (or ICU in the case of HIFI), there shall be a 5 minute wait between switching off a DPU/ICU and switching it back on again.

5.3.2.1 HIFI

None when powering on/off HIFI ICU only as per sections 7.4.1 to 7.4.4.

When operating HIFI using the full configuration, ref. sections 7.3.2 to 7.3.7 the following applies:

- 1) Connection/Disconnection with the HIFI I-EGSE is required as per section 7.3.1 & 7.3.8.
- 2) The following Cryo temperature limits shall be observed when operating HIFI:

S/C Environmental	Limits	Actual
Cryostat Connection (Valves)	N/A	
Cryostat Status (Hel/Hell)	N/A	
Cryostat Level 0 Temp (T107 - CCUB)	<20K	
Cryostat Level 1 Temp (T231-T237 - CCUB)	<20K	
Cryostat Level 2 Temp (T207 read from CryoSCOPE)	<=40K	
Cryostat Level 3 Temp	N/A	

3) The following shall be observed if HIFI is commanded to "Standby1" mode or above:

If switched on the WBS laser temperature (HM023193 HWH_Laser_T and HWV_Laser_T) may rise above a red limit (30degC) in the MIB. If this occurs the test can continue, but the time of occurrence should be logged. If the temperature rises to 35degC the lasers will be automatically switched off by the instrument.

It is recommended to start active cooling of the HIFI panel see AD-2 before the WBS laser temperatures reach 30degC to avoid "HIGH HIGH" alarms being reported repeatedly and unnecessarily by the HPCCS.

NB: If temperature trend is rising during the test then Cooling on HIFI panel may need to be adjusted (ref. AD-2).

5.3.2.2 PACS

Prior to switching ON PACS, PACS specific OBCPs & EATs shall be loaded and enabled on the CDMU. Note: the PACS power on scripts (ref. sections 7.1.2 & 7.1.4) will prompt for confirmation of this before allowing the operator to continue with power on of the instrument.

CDMU must be in AFO mode for the duration of PACS operations. Note this maybe extended to all instruments in the future.

Note during power off of PACS FDIR may be triggered due to expected (5,2) events being reported from PACS DPU. To avoid this PACS specific OBCPs are disabled for the duration of the power down sequence, and then re-enabled.

Connection of the PACS I-EGSE is not mandatory, however if MPE (PACS responsible) want to monitor the test from the I-EGSE then sections 7.1.1 & 7.1.9 apply.

5.3.2.3 SPIRE

Connection of the SPIRE I-EGSE is not mandatory, however if RAL (SPIRE responsible) want to monitor the test from the I-EGSE then sections 7.2.1 & 7.2.8 apply.

5.3.3 *ESD constraints*

See the Lead Procedure for the test concerned and the following:

- For HIFI, ESD precautions according to RD-8 and RD-9 are applicable.
- For SPIRE according to nominal ESD protection
- For PACS according to nominal ESD protection

5.3.4 Special QA Requirements

N/A

5.4 GSE

5.4.1 MGSE

N/A

5.4.2 CVSE

N/A

5.4.3 EGSE

5.4.3.1 EGSE Hardware Configuration

See TRR MoM for test concerned.

5.4.3.2 EGSE User Software

See TRR MoM for test concerned.

5.4.3.3 Grounding Configuration

N/A

5.4.3.4 Test Equipment

N/A

5.4.3.5 Data Acquisition System

N/A

5.4.4 OGSE

N/A

5.4.5 Special Equipment

N/A

6 Verification Requirements and Test Criteria

No specific requirements are verified by this procedure, it is purely acts as a supporting procedure to the main lead test procedure where the overall test criteria and verification requirements are defined.

7 Step-by-Step Procedures

7.1 PACS Instrument Procedures

7.1.1 PACS I-EGSE Configuration/Connection

The following procedure is NOT normally required for switching PACS ON or OFF.

It is only used when it is required to use the PACS I-EGSE to support the test being performed, either for monitoring of PACS specific TM on the IEGSE.

It is also required when performing PACS FDIR OBCP IST.

This procedure is independent of PACS redundancy configuration.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	If not already on, Switch on & configure PACS I-EGSE i.a.w. RD-5					
2.	From HPCCS Test Conductor console issue command to connect to PACS I-EGSE connect HPACSEGSE	YZS28940== CONNECTED		AND: SYS_PARS		
	<i>Perform the following two steps if command parameter exchange is required between the IEGSE and HPCCS for the test concerned.</i>					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	If not already running from the HPCCS test conductor console execute the test script: ALL_SubscribeParams					
4.	Verify HPCCS-IEGSE connection by sending the following test command from manual command stack (repeater value 0) and verify received OK on IEGSE: YC00X964	OK				
5.	Return to calling Procedure					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.1.2 PACS Prime OFF to Standby (SAFE)

The following will switch ON and configure PACS Prime instrument in SAFE mode in any satellite configuration (i.e. warm, or Cold Hel/Hell). HKTM packets will be generated on APIDs 1152 dec and 1154 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at any one time).

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs: 1152, 1154	OK				
2.	From the HPCCS test conductor console start the test script to power PACS Prime to SAFE: Z102999SCVT010_ASDGEN_PACSPWRON_P					
3.	On HPCCS when prompted: "FM PACS Switch ON in Warm or Cold conditions, FPU connected - Select NO to abort TS if not correct"	YES				
4.	On HPCCS when prompted: " PACS FDIR OBCPs/EATs loaded and enabled? - If not select NO to abort TS"	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.					
	If YES is selected the test script will go on to automatically power on all PACS warm units, force boot the DPU ASW and configure the instrument to SAFE (Standby mode)					
5.	If AFO mode not already selected for CDMU the script P102999SCVT905_ASDISTPACS_PWR_ON_N will prompt that AFO will be commanded next. Click OK to continue the script if the prompt appears.	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
6.	<p>On HPCCS when all autonomous actions have been completed by the power on script P102999SCVT905_ASDISTPACS_PWR_ON_N it will prompt:</p> <p><i>"Set Bus Profile Back to Original Setting?"</i></p> <p>Select YES if it is likely that other non-PACS instrument related activities are to be performed, otherwise select NO.</p>	NO				
7.	<p>If YES selected the original Bus Profile will be restored.</p> <p><i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby, in which case the following prompt will appear:</i></p> <p><i>"Bus Profile left unchanged, as original setting 0 (Launch)"</i></p> <p>If prompted select OK to continue</p>	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
8.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK				
9.	The script will automatically terminate	OK				
10.	Verify HK TM packets are being received on APIDs 1152 & 1154	OK				
11.	Either using the ANDs indicated verify the correct status of the following PACS specific TM parameters or if the IEGSE is connected request IEGSE Operator to confirm that PACS is in SAFE mode: DM_BOL_REC_PAC (PM038420) is incrementing	Incrementing		AND: PA019420		
12.	PACS in SAFE mode. Return to calling Procedure	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.1.3 PACS Prime Standby (SAFE) to OFF

The following procedure will switch PACS Prime from SAFE to OFF.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to power OFF PACS Prime from SAFE: Z102999SCVT011_ASDGEN_PACSPWROFF_P					
2.	On HPCCS when prompted: "EM PACS Switch OFF in Warm or Cold conditions, FPU connected - Select NO to abort TS if not correct"	YES				
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.					
	If YES is selected the test script will go on to automatically power off all PACS warm units.					
3.	Note: During switch off of PACS (5,2) TM event packets are expected	(5,2) events observed				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	On HPCCS when all autonomous actions have been completed by the power on script P102999SCVT906_ASDISTPACS_PWR_OFF_N it will prompt: <i>"Set Bus Profile Back to Original Setting?"</i>	NO				
5.	Select YES if it is likely that other non-PACS instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> <i>"Bus Profile left unchanged, as original setting 0 (Launch)"</i>	OK				
6.	If NO selected then at the prompt: <i>"Bus Profile left unchanged"</i> Select OK to continue	OK				
7.	On HPCCS stop Packet History displays for the following APIDs:1152,1154	OK				

Enter Date Time:		Sign Off TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
8.	PACS OFF. Return to calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

7.1.4 PACS Redundant OFF to Standby (SAFE)

The following will switch ON and configure PACS Redundant instrument in SAFE mode in any satellite configuration (i.e. warm, or Cold: Hel/Hell). HKTM packets will be generated on APIDs 1153 dec and 1155 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at any one time).

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1153,1155	OK				
2.	From the HPCCS test conductor console start the test script to power PACS Redundant to SAFE: Z102999SCVT012_ASDGEN_PACSPWRON_R					
3.	On HPCCS when prompted: "FM PACS Switch ON in Warm or Cold conditions, FPU connected - Select NO to abort TS if not correct"	YES				
4.	On HPCCS when prompted: " PACS FDIR OBCPs/EATs loaded and enabled? - If not select NO to abort TS"	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.					
	If YES is selected the test script will go on to automatically power on all PACS redundant warm units, force boot the DPU ASW and configure the instrument to SAFE (Standby mode).					
5.	If AFO mode not already selected for CDMU the script P102999SCVT907_ASDISTPACS_PWR_ON_R will prompt that AFO will be commanded next. Click OK to continue the script if the prompt appears.	OK				
6.	On HPCCS when all autonomous actions have been completed by the power on script P102999SCVT907_ASDISTPACS_PWR_ON_R it will prompt: <i>"Set Bus Profile Back to Original Setting?"</i>	NO				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	Select YES if it is likely that other non-PACS instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK				
8.	The script will automatically terminate					
9.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK				
10.	Verify HK TM packets are being received on APIDs 1153 & 1155					
11.	Either using the ANDs indicated verify the correct status of the following PACS specific TM parameters or if the IEGSE is connected request IEGSE Operator to confirm that PACS is in SAFE mode: DM_BOL_REC_PAC (PM038420) is	Incrementing		AND: PA019420		

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
	incrementing					
12.	PACS in SAFE mode. Return to calling Procedure	OK				

Enter Date Time:			Sign Off TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.1.5 PACS Redundant Standby (SAFE) to OFF

The following procedure will switch PACS Redundant from SAFE to OFF.

Note that during PACS switch-off, OBCPs for PACs are disabled and re-enabled at the end to avoid unwanted triggering of FDIR.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to power OFF PACS Redundant from SAFE: Z102999SCVT013_ASDGEN_PACSPWROFF_R					
2.	On HPCCS when prompted: "FM PACS Switch OFF in Warm or Cold conditions, FPU connected - Select NO to abort TS if not correct"	YES				
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.					
	If YES is selected the test script will go on to automatically power off all PACS Redundant warm units.					

Enter Date Time:		Sign Off TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	Note: During switch off of PACS (5,2) TM event packets are expected	(5,2) events observed				
4.	On HPCCS when all autonomous actions have been completed by the power on script P102999SCVT908_ASDISTPACS_PWR_OFF_R it will prompt: "Set Bus Profile Back to Original Setting?"	NO				
5.	Select YES if it is likely that other non-PACS instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK				
6.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206
 Issue: 1.2
 Date: 25.04.08

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	On HPCCS stop Packet History displays for the following APIDs: 1153, 1155	OK				
8.	PACS OFF. Return to calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

7.1.6 PACS Standby (SAFE) to Nominal Spectroscopy (to Standby)

Running the following procedure will configure PACS from SAFE to Simulated Nominal Spectroscopy for a period of 14400 seconds. The test script will autonomously return PACS to SAFE after the allotted time.

Notes:

- 1) HPCCS does not acquire the science packets in SCOS but archives them into TMDUMP files instead. However, it will route the packets to the IEGSE if the link is enabled.
- 2) If PACS is switched off autonomously the script will remain running in the background, in which case it can be terminated manually.
- 3) If it is required to stop science data production before the allotted duration the script can be terminated manually and the SAFE mode procedure executed as per section 7.1.8.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put PACS in simulated Nominal Spectroscopy from SAFE: P102999SCVT904_ASDGENPACS_NomSpect					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
2.	PACS in Simulated Nominal Spectroscopy for 60 mins.			If it is required to return PACS to SAFE before the script completes it is possible to abort the script and then perform section 7.1.8.		
3.	Return to or synchronise with calling Procedure					

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.1.7 PACS Standby (SAFE) to Burst Mode (to Standby)

Running the following procedure will configure PACS from SAFE to Simulated Burst mode for a period of 60 mins. The test script will autonomously return PACS to SAFE after the allotted time.

Notes:

- 1) HPCCS does not acquire the science packets in SCOS but archives them into TMDUMP files instead. However, it will route the packets to the IEGSE if the link is enabled.
- 2) If PACS is switched off autonomously the script will remain running in the background, in which case it can be terminated manually.
- 3) If it is required to stop science data production before the allotted duration the script can be terminated manually and the SAFE mode procedure executed as per section 7.1.8.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put PACS in simulated Nominal Spectroscopy from SAFE: P102999SCVT913_ASDGENPACS_BurstMode					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
2.	PACS in Simulated Burst mode for 60 mins.			If it is required to return PACS to SAFE before the script completes it is possible to abort the script and then perform section 7.1.8.		
3.	Return to or synchronise with calling Procedure					

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.1.8 PACS to Standby (SAFE)

Running the following procedure will configure PACS to SAFE from Simulated Burst or Science mode.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put PACS into SAFE (Standby) mode from either simulated Burst or Science mode: <p style="text-align: center;">PACS_SAFE_Mode</p>			Ensure that PACS Prime Bus Profile is still selected		
2.	Return to or synchronise with calling Procedure					

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.1.9 PACS I-EGSE Disconnection

This procedure is only used if the complementary connection procedure has been performed previously. For most IST activities envisaged it is not required.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From HPCCS Test Conductor console issue command to disconnect PACS I-EGSE disconnect HPACSEGSE	DISCONNECTED		AND: SYS_PARS		
2.	If no longer required for other instrument activities, from the HPCCS test conductor console terminate the test script: ALL_SubscribeParams					
3.	Return to calling Procedure					

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.2 SPIRE Instrument Procedures

7.2.1 SPIRE I-EGSE Configuration/Connection

The following procedure is NOT normally required for switching SPIRE ON or OFF.

It is only used when it is required to use the SPIRE I-EGSE to support the test being performed, either for monitoring of SPIRE specific TM on the IEGSE.

This procedure is independent of SPIRE redundancy configuration.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	If not already on, Switch on & configure SPIRE I-EGSE i.a.w. RD-7					
2.	From HPCCS Test Conductor console issue command to connect to SPIRE I-EGSE connect HSPIREEGSE	YZS29940= CONNECTED		AND SYS_PARS		
	<i>Perform the following two steps if command parameter exchange is required between the IEGSE and HPCCS for the test concerned.</i>					

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	If not already running from the HPCCS test conductor console execute the test script: ALL_SubscribeParams					
4.	Verify HPCCS-IEGSE connection by sending the following test command from manual command stack (repeater value 0) and verify received OK on IEGSE: YC00X966	OK				
5.	Return to calling Procedure					

Enter Date Time:			Sign Off	TD:		PA:		Test Location:	
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7.2.2 SPIRE Prime OFF to Standby (REDY)

The following will switch ON and configure SPIRE Prime instrument in REDY (Standby) mode. HKTM packets will be generated on APIDs 1280 dec and 1282 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at one time).

During power on of SPIRE a number of soft/hard OOLs are reported due to the sequential switch on of the units. This is expected and will clear when SPIRE is in REDY mode. When in REDY mode one parameter remains OOL (soft) namely SMD2V505 this is also expected.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1280,1282	OK			✓	
2.	From the HPCCS test conductor console start the test script to power SPIRE Prime to REDY: Z102999SCVT004_ASDGEN_SPIREPWRON_P				✓	
3.	On HPCCS when prompted: "SPIRE Switch ON for IST activities in any conditions - Select NO to abort TS if not correct"	YES			✓	

Enter Date Time:	5/7/08	Sign Off	TD: S. Ilm	PA: D. Lamenby	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
5.	If YES is selected the test script will go on to automatically power on all SPIRE warm units, force boot the DPU ASW and configure the instrument to REDY (Standby mode).				✓	
6.	On HPCCS when all autonomous actions have been completed by the power on script S102999SCVT017_ASDGENSPIR_PWR_ON_P it will prompt: "Set Bus Profile Back to Original Setting?"	NO			✓	

Enter Date Time:	5/7/08	Sign Off	TD: S. Ilson	PA: D. Lamonty	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206
 Issue: 1.2
 Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	Select YES if it is likely that other non-SPIRE instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK			✓	
8.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK			✓	
9.	Verify HK TM packets are being received on APIDs 1280 & 1282				✓	
10.	Either using the ANDs indicated verify the correct status of the following SPIRE specific TM parameters or if the IEGSE is connected request IEGSE Operator to confirm that: THSK (SM00T500) parameter refreshing @ 0.25 Hz	OK		AND: SA_1_559 <i>every 4 seconds!</i>	✓	

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
	TM1N and TM2N parameters are incrementing as indicated: TM1N (SMT0N500) by 2 every 4 secs ✓ TM2N (SMT1N500) by 1 every 4 secs ✓ MODE parameter is set to "REDY" mode (RAW value 0x0200)	OK SM00M500 = 0x0200 ✓ (REDY)			✓	
11.	SPIRE powered and in REDY mode Return to calling Procedure				✓	

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Doc. No: HP-2-ASED-TP-0206
 Issue: 1.2
 Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



7.2.3 SPIRE Prime Standby (REDY) to OFF

The following procedure will switch SPIRE Prime from REDY to OFF.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to power OFF SPIRE Prime from REDY: Z102999SCVT005_ASDGEN_SPIREPWROFF_P	OK			✓	
2.	On HPCCS when prompted: "SPIRE Switch OFF for IST activities in any conditions - Select NO to abort TS if not correct"	YES			✓	
3.	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
4.	If YES is selected the test script will go on to automatically power off all SPIRE warm units.				✓	

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Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
5.	<p>During Switch OFF of SPIRE the following (5,1) and (5,4) event messages on APID 1280 are expected and do not indicate a problem:</p> <p>a) EVID 1313 No_MCU_Response_Error b) EVID 21773 ALARM_LSMCU_DEAD</p>				✓	
6.	<p>On HPCCS when all autonomous actions have been completed by the power on script S102999SCVT019_ASDGENSPIR_PWR_OFF_P it will prompt:</p> <p><i>"Set Bus Profile Back to Original Setting?"</i></p>	NO			✓	
7.	<p>Select YES if it is likely that other non-SPIRE instrument related activities are to be performed.</p> <p><i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i></p> <p><i>"Bus Profile left unchanged, as original setting 0 (Launch)"</i></p>	OK			✓	

Enter Date Time:	5/7/06	Sign Off	TD: S. [Signature]	PA: D. Lamanby	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

49

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Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
8.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK			✓	
9.	On HPCCS stop Packet History displays for the following APIDs:1280,1282	OK			✓	
10.	SPIRE OFF. Return to calling Procedure				✓	

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Doc. No: HP-2-ASED-TP-0206
 Issue: 1.2
 Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



7.2.4 SPIRE Redundant OFF to Standby (REDY)

The following will switch ON and configure SPIRE Redundant instrument in REDY (Standby) mode. HKTM packets will be generated on APIDs 1281 dec and 1283 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at one time).

During power on of SPIRE a number of soft/hard OOLs are reported due to the sequential switch on of the units. This is expected and will clear when SPIRE is in REDY mode. When in REDY mode one parameter remains OOL (soft) namely SMD2V505 this is also expected.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1281,1283	OK			✓	
2.	From the HPCCS test conductor console start the test script to power SPIRE Prime to REDY: Z102999SCVT006_ASDGEN_SPIREPWRON_R				✓	
3.	On HPCCS when prompted: "SPIRE Switch ON for IST activities in any conditions - Select NO to abort TS if not correct"	YES			✓	

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Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
5.	If YES is selected the test script will go on to automatically power on all SPIRE warm units, force boot the DPU ASW and configure the instrument to REDY (Standby mode).				✓	
6.	On HPCCS when all autonomous actions have been completed by the power on script S102999SCVT018_ASDGENSPIR_PWR_ON_R it will prompt: "Set Bus Profile Back to Original Setting?"	NO			✓	

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	Select YES if it is likely that other non-SPIRE instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK			✓	
8.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK			✓	
9.	Verify HK TM packets are being received on APIDs 1281 & 1283				✓	
10.	Either using the ANDs indicated verify the correct status of the following SPIRE specific TM parameters or if the IEGSE is connected request IEGSE Operator to confirm that: THSK (SM00T500) parameter refreshing @ 0.25 Hz	OK		AND: SA_1_559	✓	

Enter Date Time:	5/7/06	Sign Off TD:	S. Iln	PA:	D. Damento	Test Location:	Estec
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Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
	TM1N and TM2N parameters are incrementing as indicated: TM1N (SMT0N500) by 2 every 4 secs ✓ TM2N (SMT1N500) by 1 every 4 secs ✓ MODE parameter is set to "REDY" mode (RAW value 0x0200)	OK SM00M500 = 0x0200 ✓ (REDY)				
11.	SPIRE powered and in REDY mode Return to calling Procedure	✓				

Enter Date Time:	5/2/08	Sign Off	TD: S. Ilan	PA: D. Lamonty	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206
 Issue: 1.2
 Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



7.2.5 SPIRE Redundant Standby (REDY) to OFF

The following procedure will switch SPIRE Redundant from REDY to OFF.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to power OFF PACS Redundant from REDY: Z102999SCVT007_ASDGEN_SPIREPWROFF_R	OK			✓	
2.	On HPCCS when prompted: "SPIRE Switch OFF for IST activities in any conditions - Select NO to abort TS if not correct"	YES			✓	
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
3.	If YES is selected the test script will go on to automatically power off all SPIRE warm units.				✓	

Enter Date Time:	5/7/08	Sign Off	TD: S. I. [Signature]	PA: D. Lamerby	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	<p>During Switch OFF of SPIRE the following (5,1) and (5,4) event messages on APID 1281 are expected and do not indicate a problem:</p> <p>c) EVID 1313 No_MCU_Response_Error d) EVID 21773 ALARM_LSMCU_DEAD</p>				V	
5.	<p>On HPCCS when all autonomous actions have been completed by the power on script S102999SCVT020_ASDGENSPIR_PWR_OFF_R it will prompt:</p> <p><i>"Set Bus Profile Back to Original Setting?"</i></p>	NO			V	
6.	<p>Select YES if it is likely that other non-SPIRE instrument related activities are to be performed.</p> <p><i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i></p> <p><i>"Bus Profile left unchanged, as original setting 0 (Launch)"</i></p>	OK			V	

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

56

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK			✓	
8.	On HPCCS stop Packet History displays for the following APIDs:1281,1283	OK			✓	
9.	SPIRE OFF. Return to calling Procedure				✓	

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

S. Ilven

D. Lamsonby

7.2.6 SPIRE Standby (REDY) to Simulated Science (OPS)

Running the following procedure will configure SPIRE from REDY to Simulated Simulated PhotometerScience (OPS) mode.

Note HPCCS does not acquire the science packets in SCOS but archives them into TMDUMP files instead. However, it will route the packets to the IEGSE if the link is enabled.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put SPIRE in simulated science from REDY: Z102999SCVT008_ASDGEN_SPIRESTBY2OPS					
2.	On HPCCS when prompted: "Command SPIRE from REDY to OPS mode in any conditions - Select NO to abort TS if not correct" Select YES	YES				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when prompted: "Bus profile left as SPIRE PRIME while in OPS mode - OK to continue" Select OK	OK				
4.	Return to or synchronise with calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.2.7 SPIRE Simulated Photometer Science (OPS) to Standby (REDY)

Running the following procedure will return SPIRE to REDY (Standy) from Simulated Simulated Photometer Science (Ops) mode.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put SPIRE in REDY from simulated Science: Z102999SCVT009_ASDGEN_SPIREOPS2STBY					
2.	On HPCCS when prompted: "Command SPIRE from OPS to REDY mode in any conditions - Select NO to abort TS if not correct" Select YES	YES				
3.	On HPCCS when prompted: "Bus profile left as SPIRE PRIME, change manually after if required - OK to continue" Select OK	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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<i>Step- No.</i>	<i>Test-Step-Description</i>	<i>Nominal Value</i>	<i>Actual Value</i>	<i>Remarks</i>	<i>P</i>	<i>N</i>
4.	Return to or synchronise with calling Procedure	OK				

Enter Date Time:		Sign Off TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.2.8 SPIRE I-EGSE Disconnection

This procedure is only used if the complementary connection procedure has been performed previously. For most IST activities envisaged it is not required.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From HPCCS Test Conductor console issue command to disconnect PACS I-EGSE disconnect HSPIREEGSE	DISCONNECTED		AND: SYS_PARS		
2.	If no longer required for other instrument activities, from the HPCCS test conductor console terminate the test script: ALL_SubscribeParams					
3.	Return to calling Procedure					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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7.3 HIFI Instrument Full Configuration Procedures

7.3.1 HIFI I-EGSE Configuration/Connection

This procedure is independent of HIFI redundancy configuration apart from I-EGSE configuration in step 1.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	<p>If not already on, Switch on & configure HIFI I-EGSE i.a.w. RD-6.</p> <p>If switching on Nominal units then confirm I-EGESE configured for nominal and FPU cold and LOU warm without attenuators</p> <p>If switching on Redunant units then confirm I-EGESE configured for redundant and FPU cold and LOU warm without attenuators</p>	<p>OK</p> <p>Nominal/Redundant configuration</p>			✓	
2.	<p>From HPCCS Test Conductor console issue command to connect to HIFI I-EGSE</p> <p>connect HHIFIEGSE</p>	<p>YZS27940 = CONNECTED</p>		<p>AND SYS_PARS</p>	✓	
	<p><i>Perform the following two steps if command parameter exchange is required between the IEGSE and HPCCS for the test concerned.</i></p>					

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

63



Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	If not already running from the HPCCS test conductor console execute the test script: ALL_SubscribeParams	OK			✓	
4.	Verify HPCCS-IEGSE connection by sending the following test command from manual command stack (repeater value 0) and verify received OK on IEGSE: YC00X962	OK			✓	
5.	Patch HIFI synthetic parameters for warm conditions by executing the following scripts: HIFIST_ASED_PatchPtvChecksum HIFIST_ASED_PatchTempLimits <i>Note these scripts replace HIFIST_CCS_conf_ptv_checksum_warm due to NCR-3652</i>	OK			✓	
6.	Return to calling Procedure				✓	

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7.3.2 HIFI Nominal OFF to Standby1

The following will switch ON and configure HIFI Nominal instrument in Standby1 mode. HKTM packets will be generated on APIDs 1024 dec and 1026 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at one time).

During power on of HIFI a number of soft/hard OOLs are reported due to the sequential switch on of the units. Some of these are to be expected when in Hel conditions and the others are expected because the unit is typically cold at switch ON.

Parameters OOL when in Hel:

HM248191 – HF_AP_2K_IF_CT

HM243191 – HF_APR_SCCS_CT

HM244191 – HF_APR_S10K_CT

HM250191 – HF_AP_4K_END_CT

Parameters OOL expected to come back in limits when units warmed up:

HM187192 – HRV_ACS_1_T

HM188192 – HRV_AVS_2_T

HM062192 – HRH_ACS_1_T

HM063192 – HRH_AVS_2_T

Parameter OOL until HIFI powered in Standby1

HD247194 – HL_ptv_checksum

HM258194 – HL_MODE_S

HM259194 – HL_error_word_S

Enter Date Time:	5/7/08	Sign Off	TD: <i>S. Ilan</i>	PA:	<i>D. Lamorby</i>	Test Location:	<i>Estec</i>
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



Some additional parameters may exhibit OOL during the test:

Parameter OOL expected during test but which should be monitored for duration of test (should be kept below 30degC to avoid HIGH-HIGHs being reported):

HM062193 – HWV_Laser_T

HM023193 – HWH_Laser_T

Parameter OOL expected during test but which need not be monitored:

HM022193 – HWH_CCD_T

HM061193 – HWV_CCD_T

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1024,1026	OK			✓	
2.	From the HPCCS test conductor console start the test script: Z102999SCVT014_ASDGEN_HIFIPWRON_P	OK		ANDs HA000289 HA004289	✓	
3.	On HPCCS when prompted: "FM HIFI Switch ON for IST or SFT in Hel/Hell conditions with warm LOU - Select NO to abort TS if not correct"	YES			✓	

Enter Date Time:	5/17/08	Sign Off	TD: S. I. Oren	PA: D. Lamonby	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

66



Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
	If in any doubt about the script being executed NO should be selected to abort the script when prompted in the next step. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
	If YES is selected the test script will go on to automatically power on all HIFI warm units, force boot the DPU ASW and configure the instrument to Standby. NB: In principle the HIFI instrument support responsible shall be on hand to observe the status of HIFI. So he should be contacted before the next test step.				✓	
4.	At prompt to record OBS_ID_per_hk during subsequent table readback commanding (which starts when OK is pressed); record value of HM003190 (typical reading = 9000xxxx hex), Note: at start & end value is 90000000 hex "Select OK to continue" Select OK	OK		OK 9000 0000		

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Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
5.	Value of OBS_ID during table read commanding: HM003190			AND: HA000289 OX90004AEA ✓	✓	
6.	Request I-EGSE operator to run the command 'verifyreadback <OBSID>' from a terminal window (opened from the terminal icon " >_" at bottom left of HIFIEGSE workstation screen) using the <OBSID> retrieved in the previous step. If the word PASS does not appear on the screen at the end of the verifyreadback, this is a nogo on this test procedure. If OK respond to prompt accordingly, otherwise contact SRON to investigate and resolve before continuing.	OK		PASS	✓	
7.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT015_ASDISTHIFI_PWR_ON_P it will prompt: "Set Bus Profile Back to Original Setting?"	NO				

Enter Date Time:	5/7/08	Sign Off TD:	S. Ila	PA:	D. Lamberby	Test Location:	Estee
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

68

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
8.	<p>Select YES if it is likely that other non-HIFI instrument related activities are to be performed.</p> <p><i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i></p> <p>"Bus Profile left unchanged, as original setting 0 (Launch)"</p> <p>Select OK to continue</p>	OK			✓	
9.	<p>If NO selected then at the prompt:</p> <p>"Bus Profile left unchanged"</p> <p>Select OK to continue</p>	OK			✓	
10.	<p>Verify HK TM packets are being received on APIDs 1024 & 1026</p>	OK			✓	
11.	<p>Start Active Cooling of HIFI Panel i.a.w. AD-2</p>	OK			✓	

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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

69



Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
12.	Using TM Plot application on CCS start monitoring the temperature of the WBS lasers; parameters: HM062193 (HWV_Laser_T) & HM023193 (HWH_Laser_T). See Section 5.3.2.1 for details of this activity.	OK			✓	
13.	HIFI Nominal powered and in Standby1 mode Return to calling procedure	OK			✓	

Enter Date Time:	5/9/08	11:38:00	Sign Off TD:	S. IJSEN	PA:	D. Lamonby	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



7.3.3 HIFI Nominal Standby1 to OFF

The following procedure will switch HIFI Nominal from Standby1 to OFF.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	Stop Active Cooling of HIFI Panel i.a.w. AD-2	OK	<i>not performed</i>	<i>Since HIF redundant is next.</i>		
2.	From the HPCCS test conductor console start the test script: Z102999SCVT015_ASDGEN_HIFIPWROFF_P	OK			✓	
3.	On HPCCS when prompted: "FM HIFI Switch OFF for IST or SFT in Hel/Hell conditions with warm LOU - Select NO to abort TS if not correct"	YES			✓	
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
	If YES is selected the test script will go on to automatically power off all HIFI warm units.				✓	

Enter Date Time:	<i>5/7/06</i>	Sign Off TD:	<i>S. Illen</i>	PA:	<i>D. Lamorby</i>	Test Location:	<i>Estec</i>
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

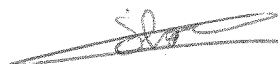
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Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT016_ASDISTHIFI_PWR_OFF_P it will prompt: "Set Bus Profile Back to Original Setting?"	NO			✓	
5.	Select YES if it is likely that other non-HIFI instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK			✓	
6.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK			✓	

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Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	On HPCCS stop Packet History displays for the following APIDs:1024,1026	OK			✓	
8.	HIFI OFF Return to calling Procedure	OK			✓	

Enter Date Time:	5/2/08	11:53	Sign Off	TD: S. Ilson	PA: D. Lamorby	Test Location:	Estee
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc



7.3.4 HIFI Redundant OFF to Standby1

The following will switch ON and configure HIFI Redundant instrument in Standby1 mode (Lasers OFF). HKTM packets will be generated on APIDs 1025 dec and 1027 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at one time).

During power on of HIFI a number of soft/hard OOLs are reported due to the sequential switch on of the units. Some of these are to be expected when in Hel conditions and the others are expected because the unit is typically cold at switch ON:

Parameters OOL when in Hel:

- HM248191 – HF_AP_2K_IF_CT
- HM243191 – HF_APR_SCCS_CT
- HM244191 – HF_APR_S10K_CT
- HM250191 – HF_AP_4K_END_CT

Parameters OOL expected to come back in limits when units warmed up:

- HM187192 – HRV_ACS_1_T
- HM188192 – HRV_AVS_2_T
- HM062192 – HRH_ACS_1_T
- HM063192 – HRH_AVS_2_T

Parameters OOL until HIFI powered in Standby1

- HD247194 – HL_ptv_checksum
- HM258194 – HL_MODE_S
- HM259194 – HL_error_word_S

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Some additional parameters may exhibit OOL during the test:

Parameters OOL expected during test but which should be monitored for duration of test (should be kept below 30degC to avoid HIGH-HIGHs being reported):

HM062193 – HWV_Laser_T

HM023193 – HWH_Laser_T

Parameter OOL expected during test but which need not be monitored:

HM022193 – HWH_CCD_T

HM061193 – HWV_CCD_T

*reconfigure IEASE
connect HM.FIEASE } → P/B*

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1025,1027	OK			✓	
2.	From the HPCCS test conductor console start the test script: Z102999SCVT016_ASDGEN_HIFIPWRON_R	OK		ANDs HA000289 HA004289	✓	
	If in any doubt about the script being executed NO should be selected to abort the script when prompted in the next step. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	

Enter Date Time:	5/07/08	Sign Off	TD: <i>S. J. [Signature]</i>	PA: <i>D. Lamerby</i>	Test Location:	<i>Estee</i>
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Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when prompted: "FM HIFI Switch ON for IST or SFT in Hel/Hell conditions with warm LOU - Select NO to abort TS if not correct"	YES			✓	
	If YES is selected the test script will go on to automatically power on all HIFI warm units, force boot the DPU ASW and configure the instrument to Standby. NB: In principle the HIFI instrument support responsible shall be on hand to observe the status of HIFI. So he should be contacted before the next test step.				✓	
4.	At prompt to record OBS_ID_per_hk during subsequent table readback commanding (which starts when OK is pressed); record value of HM003190 (typical reading = 9000xxxx hex), Note: at start & end value is 90000000 hex "Select OK to continue" Select OK	OK	before 0x9000 0000 0x9000 41 EF		✓	

Enter Date Time:	5/11/08	Sign Off	TD: S. [Signature]	PA: D. Lamenby	Test Location:	Estee
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

76



Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
5.	Value of OBS_ID during table read commanding: HM003190			AND: HA000289	✓	
6.	Request I-EGSE operator to run the command 'verifyreadback <OBSID>' from a terminal window (opened from the terminal icon " >_" at bottom left of HIFIEGSE workstation screen) using the <OBSID> retrieved in the previous step. If the word PASS does not appear on the screen at the end of the verifyreadback, this is a nogo on this test procedure. If OK respond to prompt accordingly, otherwise contact SRON to investigate and resolve before continuing.	OK	PASS		✓	
7.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT017_ASDISTHIFI_PWR_ON_R it will prompt: "Set Bus Profile Back to Original Setting?"	NO			✓	

Enter Date Time:	5/7/08	Sign Off	TD: S. Ilan	PA: D. Laverby	Test Location:	Ester
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

77

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
8.	<p>Select YES if it is likely that other non-HIFI instrument related activities are to be performed.</p> <p><i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i></p> <p>"Bus Profile left unchanged, as original setting 0 (Launch)"</p> <p>Select OK to continue</p>	OK			✓	
9.	<p>If NO selected then at the prompt:</p> <p>"Bus Profile left unchanged"</p> <p>Select OK to continue</p>	OK			✓	
10.	<p>Verify HK TM packets are being received on APIDs 1025 & 1027</p>	OK			✓	
11.	<p>Start Active Cooling of HIFI Panel i.a.w. AD-2</p>	OK			✓	

Enter Date Time:	5/7/08	Sign Off TD:	S. T. [Signature]	PA:	D. Lanonby	Test Location:	Estee
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Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
12.	Using TM Plot application on CCS start monitoring the temperature of the WBS lasers; parameters: HM062193 (HWV_Laser_T) & HM023193 (HWH_Laser_T). See Section 5.3.2.1 for details of this activity.	OK			✓	
13.	HIFI Redundant powered and in Standby1 mode Return to calling procedure	OK			✓	

Enter Date Time:	5/7/08	13:05	Sign Off TD:	S. Jensen	PA:	S. Jensen D. Jensen	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

79



7.3.5 HIFI Redundant Standby1 to OFF

The following procedure will switch HIFI Redundant from Standby1 to OFF.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	Stop Active Cooling of HIFI Panel i.a.w. AD-2	OK			✓	
2.	From the HPCCS test conductor console start the test script: Z102999SCVT017_ASDGEN_HIFIPWROFF_R	OK			✓	
3.	On HPCCS when prompted: "FM HIFI Switch OFF for IST or SFT in Hel/Hell conditions with warm LOU - Select NO to abort TS if not correct"	YES			✓	
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.				✓	
	If YES is selected the test script will go on to automatically power off all HIFI warm units.				✓	

Enter Date Time:	S/7/08	Sign Off TD:	S. T. [Signature]	PA:	D. Lamonby [Signature]	Test Location:	Estec
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[Signature]

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT018_ASDISTHIFI_PWR_OFF_R it will prompt: "Set Bus Profile Back to Original Setting?"	NO			✓	
5.	Select YES if it is likely that other non-HIFI instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK			✓	
6.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK			✓	

Enter Date Time:	5/7/08	Sign Off	TD: S. T. [Signature]	PA: D. Lanorby	Test Location:	Estec
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Page

81

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	On HPCCS stop Packet History displays for the following APIDs:1025,1027	OK			✓	
8.	HIFI OFF Return to calling Procedure	OK			✓	

Enter Date Time:	5/7/08	13:16	Sign Off	TD: S. Ilan	PA: S. Ilan D. Lamonby	Test Location:	Estee
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Doc. No: HP-2-ASED-TP-0206
 Issue: 1.2
 Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

S. Ilan



7.3.6 HIFI Nominal Standby1 to Science (PRIME)

Running the following procedure will configure HIFI Nominal from STANDBY1 to Prime mode via Standby2 mode.

When in Prime mode, simulated science is started which will generate packets on APIDs 1028, 1029, 1030 & 1031. It should be noted that HPCCS does not acquire the science packets in SCOS but archives them into TMDUMP files instead. However, it will route the packets to the IEGSE if the link is enabled.

Note: Transitions above Standby1 are not considered for HIFI Redundant at present.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put HIFI into science from Standby1: Z102999SCVT020_ASDGEN_HIFISTBY1_2OPS_P	OK				
2.	On HPCCS when prompted: "Command HIFI from STANDBY1 via STANDBY2 to PRIME mode in Hel/Hell with WARM LOU - Select NO to abort TS if not correct" Select YES	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when prompted: "Bus profile left as HIFI PRIME while in Science Prime mode - OK to continue" Select OK	OK				
4.	HIFI Nominal in Science Prime Return to or synchronise with calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.3.7 HIFI Nominal Science (PRIME) to Standby1

Running the following procedure will configure HIFI from Science (Prime) to STANDBY1 via Standby2 mode. The transition from Standby2 to Standby1 switches off the WEV & WEH lasers. The active cooling from external GSE (see section 5.3.2.1 for details) should therefore be stopped.

Note: Transitions above Standby1 are not considered for HIFI Redundant at present.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put HIFI in Standby1 from simulated Science: Z102999SCVT021_ASDGEN_HIFIOPS2_STBY1_P	OK				
2.	On HPCCS when prompted: "Command HIFI from PRIME via STANDBY2 to STANDBY1 mode in Hel/Hell with WARM LOU - Select NO to abort TS if not correct" Select YES	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when prompted: "Bus profile left as HIFI PRIME, change manually after if required - OK to continue" Select OK	OK				
4.	HIFI Nominal in Standby1 Return to or synchronise with calling Procedure	OK				

Enter Date Time:			Sign Off	TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.3.8 HIFI I-EGSE Disconnection

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From HPCCS Test Conductor console issue command to disconnect PACS I-EGSE disconnect HHIFIEGSE	DISCONNECTED		AND: SYS_PARS		
2.	If no longer required for other instrument activities, from the HPCCS test conductor console terminate the test script: ALL_SubscribeParams					
3.	Return to calling Procedure					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.4 HIFI Instrument ICU Only Configuration Procedures

7.4.1 HIFI Nominal OFF to ICU ON

The following will switch ON and configure HIFI Nominal ICU. HKTM packets will be generated on APIDs 1024 dec and 1026 decimal (these can be observed using TMPH with corresponding filter -- note however a limited number of TMPHs should be running at one time).

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1024,1026	OK				
2.	From the HPCCS test conductor console start the test script: Z102999SCVT014_ASDGEN_HIFIPWRON_P	OK		ANDs HA000289 HA004289		
3.	On HPCCS when prompted: "FM HIFI ICU Standalone Switch ON - Select NO to abort TS if not correct"	YES				

Enter Date Time:		Sign Off TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT009_ASDGENHIFI_ICU_ON_P it will prompt: "Set Bus Profile Back to Original Setting?"	NO				
5.	Select YES if it is likely that other non-HIFI instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)" Select OK to continue	OK				
6.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK				

Enter Date Time:		Sign Off TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	Verify HK TM packets are being received on APIDs 1024 & 1026	OK				
8.	HIFI Nominal ICU powered Return to calling procedure	OK				

Enter Date Time:			Sign Off	TD:		PA:		Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.4.2 HIFI Nominal ICU ON to OFF

The following procedure will switch HIFI Nominal ICU OFF.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script: Z102999SCVT015_ASDGEN_HIFIPWROFF_P	OK				
2.	On HPCCS when prompted: "FM HIFI ICU Standalone Switch OFF - Select NO to abort TS if not correct"	YES				
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.					
	If YES is selected the test script will go on to automatically power off all HIFI warm units.					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT010_ASDGENHIFI_ICU_OFF_P it will prompt: "Set Bus Profile Back to Original Setting?"	NO				
4.	Select YES if it is likely that other non-HIFI instrument related activities are to be performed. However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby: "Bus Profile left unchanged, as original setting 0 (Launch)"	OK				
5.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK				

Enter Date Time:		Sign Off TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
6.	On HPCCS stop Packet History displays for the following APIDs:1024,1026	OK				
7.	HIFI OFF Return to calling Procedure	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.4.3 HIFI Redundant OFF to ICU ON

The following will switch ON and configure HIFI Redundant ICU. HKTM packets will be generated on APIDs 1025 dec and 1027 decimal (these can be observed using TMPH with corresponding filter – note however a limited number of TMPHs should be running at one time).

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	On HPCCS start Packet History displays for the following APIDs:1025,1027	OK				
2.	From the HPCCS test conductor console start the test script: Z102999SCVT014_ASDGEN_HIFIPWRON_R	OK		ANDs HA000289 HA004289		
3.	On HPCCS when prompted: "FM HIFI ICU Standalone Switch ON - Select NO to abort TS if not correct"	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
4.	<p>On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT011_ASDGENHIFI_ICU_ON_R it will prompt:</p> <p><i>"Set Bus Profile Back to Original Setting?"</i></p>	NO				
5.	<p>Select YES if it is likely that other non-HIFI instrument related activities are to be performed.</p> <p><i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i></p> <p><i>"Bus Profile left unchanged, as original setting 0 (Launch)"</i></p> <p>Select OK to continue</p>	OK				
6.	<p>If NO selected then at the prompt:</p> <p><i>"Bus Profile left unchanged"</i></p> <p>Select OK to continue</p>	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
7.	Verify HK TM packets are being received on APIDs 1025 & 1027	OK				
8.	HIFI Redundant ICU powered Return to calling procedure	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.4.4 HIFI Redundant ICU ON to OFF

The following procedure will switch HIFI Nominal ICU OFF.

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script: Z102999SCVT015_ASDGEN_HIFIPWROFF_P	OK				
2.	On HPCCS when prompted: "FM HIFI ICU Standalone Switch OFF - Select NO to abort TS if not correct"	YES				
	If in any doubt about the script being executed NO should be selected to abort the script. Before restarting consult the relevant instrument support engineer to confirm the correct script to be used for the test in question.					
	If YES is selected the test script will go on to automatically power off all HIFI warm units.					

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when all autonomous actions have been completed by the power on script H102999SCVT010_ASDGENHIFI_ICU_OFF_P it will prompt: "Set Bus Profile Back to Original Setting?"	NO				
4.	Select YES if it is likely that other non-HIFI instrument related activities are to be performed. <i>However note that if the original Bus Profile was 0 (launch) the script will automatically leave the Bus Profile unchanged as this profile is not compatible with instruments being powered in Standby:</i> "Bus Profile left unchanged, as original setting 0 (Launch)"	OK				
5.	If NO selected then at the prompt: "Bus Profile left unchanged" Select OK to continue	OK				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
6.	On HPCCS stop Packet History displays for the following APIDs:1025,1027	OK				
7.	HIFI OFF Return to calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.4.5 HIFI Nominal ICU ON to Simulated Science

Running the following procedure will configure HIFI from ICU ON to Simulated Science mode.

Note HPCCS does not acquire the science packets in SCOS but archives them into TMDUMP files instead. However, it will route the packets to the IEGSE if the link is enabled.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to put HIFI into simulated science: Z102999SCVT020_ASDGEN_HIFISTBY1_2OPS_P	OK				
2.	On HPCCS when prompted: "Command HIFI from ICU ON to Simulated Science mode in Hel/Hell conditions - Select NO to abort TS if not correct" Select YES	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when prompted: "Bus profile left as HIFI PRIME while in Science Prime mode - OK to continue" Select OK	OK				
4.	HIFI Nominal in Simulated Science Return to or synchronise with calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

7.4.6 HIFI Nominal Simulated Science (PRIME) to ICU ON

Running the following procedure will configure HIFI from Simulated Science (Prime) to ICU ON.

When in Prime mode, simulated science is started which will generate packets on APIDs 1028, 1029, 1030 & 1031. It should be noted that HPCCS does not acquire the science packets in SCOS but archives them into TMDUMP files instead. However, it will route the packets to the IEGSE if the link is enabled.

Note: Transitions above Standby1 are not considered for HIFI Redundant at present.

Step-No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
1.	From the HPCCS test conductor console start the test script to HIFI Stop simulated Science: Z102999SCVT021_ASDGEN_HIFIOPS2_STBY1_P	OK				
2.	On HPCCS when prompted: "Command HIFI from Simulated Science mode to ICU ON in Hel/Hell conditions - Select NO to abort TS if not correct" Select YES	YES				

Enter Date Time:		Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

Step- No.	Test-Step-Description	Nominal Value	Actual Value	Remarks	P	N
3.	On HPCCS when prompted: "Bus profile left as HIFI PRIME, change manually after if required - OK to continue" Select OK	OK				
4.	HIFI Nominal in ICU ON Return to or synchronise with calling Procedure	OK				

Enter Date Time:			Sign Off	TD:	PA:	Test Location:	
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Doc. No: HP-2-ASED-TP-0206

Issue: 1.2

Date: 25.04.08

File: HP-2-ASED-TP-0206_Issue_1r2.Doc

8 ANNEX - Script hierarchy

Detailed in the following sub-sections:

8.1 General

ALL_SubscribeParams

8.2 PACS

Z102999SCVT010_ASDGEN_PACSPWRON_P

-> P102999SCVT905_ASDISTPACS_PWR_ON_N
-> -> Z010999MMXX002UNITS_CHECK

Z102999SCVT011_ASDGEN_PACSPWROFF_P

-> P102999SCVT906_ASDISTPACS_PWR_OFF_N
-> -> Z010999MMXX002UNITS_CHECK

Z102999SCVT012_ASDGEN_PACSPWRON_R

P102999SCVT907_ASDISTPACS_PWR_ON_R
-> -> Z010999MMXX002UNITS_CHECK

Z102999SCVT013_ASDGEN_PACSPWROFF_R

-> P102999SCVT908_ASDISTPACS_PWR_OFF_R
-> -> Z010999MMXX002UNITS_CHECK

P102999SCVT904_ASDGENPACS_NomSpect

P102999SCVT913_ASDGENPACS_BurstMode

PACS_SAFE_Mode

8.3 SPIRE

Z102999SCVT004_ASDGEN_SPIREPWRON_P

- > S102999SCVT017_ASDGENSPIR_PWR_ON_P
- > -> SPIRE-IST-DBG-OFF2DPUON-SP
- > -> SPIRE-IST-DBG-DPUON2STBY
- > -> SPIRE-IST-DBG-LOAD-VM-TABLES
- > -> Z010999MMXX002UNITS_CHECK

Z102999SCVT005_ASDGEN_SPIREPWROFF_P

- > S102999SCVT019_ASDGENSPIR_PWR_OFF_P
- > -> SPIRE-IST-DBG-STBY2OFF
- > -> Z010999MMXX002UNITS_CHECK

Z102999SCVT006_ASDGEN_SPIREPWRON_R

- > S102999SCVT018_ASDGENSPIR_PWR_ON_R
- > -> SPIRE-IST-DBG-OFF2DPUON
- > -> SPIRE-IST-DBG-DPUON2STBY
- > -> SPIRE-IST-DBG-LOAD-VM-TABLES
- > -> Z010999MMXX002UNITS_CHECK

Z102999SCVT007_ASDGEN_SPIREPWROFF_R

- > S102999SCVT020_ASDGENSPIR_PWR_OFF_R
- > -> SPIRE-IST-DBG-STBY2OFF
- > -> Z010999MMXX002UNITS_CHECK

Z102999SCVT008_ASDGEN_SPIRESTBY2OPS

- > S102999SCVT911_ASDDBGSPIR_STBY2OPS
- > -> SPIRE-IST-DBG-STBY2OPS

Z102999SCVT009_ASDGEN_SPIREOPS2STBY

- > S102999SCVT912_ASDDBGSPIR_OPS2STBY
- > -> SPIRE-IST-DBG-OPS2STBY

8.4 HIFI Full Configuration

HIFIST_ASED_PatchPtvChecksum

HIFIST_ASED_PatchTempLimits

Note that the above 2 scripts have to be maintained in line with latest version of HIFI script(s) HIFIST_CCS_conf_ptv_checksum_<env>.tcl (where <env> = warm or cold) based on satellite environmental conditions.

Z102999SCVT014_ASDGEN_HIFIPWRON_P

```
-> H102999SCVT005_ASDGENHIFI_PWR_ON_P
-> -> HIFIST_nom_Startup_force_boot_warm
-> -> HIFIST_nom_Startup_OBS_SFT_warm
-> -> HIFIST_nom_Startup_FCU_on_warm
-> -> HIFIST_nom_Startup_lasertemp_override_warm
-> -> HIFIST_nom_Startup_WBSH_on_warm
-> -> HIFIST_nom_Startup_WBSV_on_warm
-> -> HIFIST_nom_Startup_HRS_on_warm
-> -> HIFIST_nom_Startup_LCU_on_warm
-> -> HIFIST_nom_Startup_LCU_table_load_warm
-> -> HIFIST_nom_Startup_LCU_table_read_warm
-> -> Z010999MMXX002UNITS_CHECK
```

Z102999SCVT015_ASDGEN_HIFIPWROFF_P

```
-> H102999SCVT006_ASDGENHIFI_PWR_OFF_P
-> -> HIFIST_nom_Startup_FPU_standby_warm
-> -> HIFIST_nom_Startup_WBS_standby_warm
-> -> HIFIST_nom_Startup_HRS_standby_warm
-> -> HIFIST_nom_Startup_all_off_warm
-> -> Z010999MMXX002UNITS_CHECK
```

Z102999SCVT016_ASDGEN_HIFIPWRON_R

```
-> H102999SCVT007_ASDGENHIFI_PWR_ON_R
-> -> HIFIST_red_Startup_force_boot_warm
-> -> HIFIST_red_Startup_OBS_SFT_warm
-> -> HIFIST_red_Startup_FCU_on_warm
-> -> HIFIST_red_Startup_lasertemp_override_warm
-> -> HIFIST_red_Startup_WBSH_on_warm
-> -> HIFIST_red_Startup_WBSV_on_warm
-> -> HIFIST_red_Startup_HRS_on_warm
-> -> HIFIST_red_Startup_LCU_on_warm
-> -> HIFIST_red_Startup_LCU_table_load_warm
-> -> HIFIST_red_Startup_LCU_table_read_warm
-> -> Z010999MMXX002UNITS_CHECK
```

Z102999SCVT017_ASDGEN_HIFIPWROFF_R

```
-> H102999SCVT008_ASDGENHIFI_PWR_OFF_R
-> -> HIFIST_red_Startup_FPU_standby_warm
-> -> HIFIST_red_Startup_WBS_standby_warm
```

- > -> HIFIST_red_Startup_HRS_standby_warm
- > -> HIFIST_red_Startup_all_off_warm
- > -> Z010999MMXX002UNITS_CHECK

Z102999SCVT020_ASDGEN_HIFISTBY1_2OPS_P

- > H102999SCVT028_ASDISTHIFI_STBY1_2PRIME_P
- > -> HIFIST_nom_HIFI_STBY_2_warm
- > -> HIFIST_nom_HIFI_Primary_warm

Z102999SCVT021_ASDGEN_HIFIOPS2_STBY1_P

- > H102999SCVT029_ASDISTHIFI_PRIME_2STBY1_P
- > -> HIFIST_nom_HIFI_STBY_2_warm
- > -> HIFIST_nom_HIFI_STBY_1_warm

8.5 HIFI ICU Configuration**H102999SCVT009_ASDGENHIFI_ICU_ON_P****H102999SCVT010_ASDGENHIFI_ICU_OFF_P****H102999SCVT011_ASDGENHIFI_ICU_ON_R****H102999SCVT012_ASDGENHIFI_ICU_OFF_R****H102999SCVT030_ASDISTHIFI_ICUON_2SIMSCI****H102999SCVT031_ASDISTHIFI_SIMSCI_2ICUON**

8.6 Procedure Variation Summary

	Test Change	Curr. No.:	
		Date	
		Page	of
Test designation	Test Procedure	Issue	Rev.
Test step changed	Reason for Change		
Prepared by:	Resp. Test Leader	Project Engineer	
PA/QA	Prime	Customer	

Table 8.6-1: Procedure Variation Sheet

8.7 Non Conformance Report (NCR) Summary

NCR - No.	NCR - Title	Date	Open Closed	PA sig.

Table 8.7-1: Non-Conformance Record Sheet


8.8 Sign-off Sheet

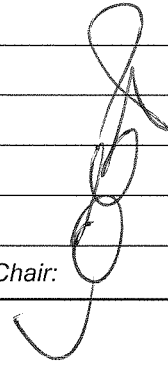
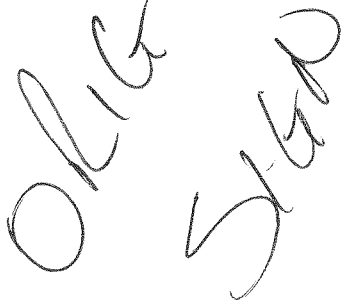
	Date	Signature
Test Director		
Test Conductor		
PA Responsible		
ESA Representative		


END OF DOCUMENT

	Name	Dep./Comp.		Name	Dep./Comp.
X	Alberti von Mathias Dr.	ASG22		Schweickert Gunn	ASG22
	Baldock Richard	FAE12	X	Sonn Nico	ASG51
	Barlage Bernhard	AED13		Steininger Eric	AED32
	Bayer Thomas	ASA42	X	Stritter Rene	AED11
	Brune Holger	ASA45		Suess Rudi	OTN/ASA44
	Edelhoff Dirk	AED2		Theunissen Martijn	Dutch Space
	Fehringer Alexander	ASG13		Wagner Klaus	ASG22
X	Fricke Wolfgang Dr.	AED 65	X	Wietbrock Walter	AET12
	Geiger Hermann	ASA42		Wöhler Hans	ASG22
	Grasl Andreas	OTN/ASA44		Wössner Ulrich	ASE252
X	Grasshoff Brigitte	AET12			
X	Hamer Simon	Terma			
	Hendry David	Terma			
	Hengstler Reinhold	ASA42			
	Hinger Jürgen	ASG22			
X	Hohn Rüdiger	AED65			
	Hözl Edgar Dr.	AED32			
	Huber Johann	ASA42			
	Hund Walter	ASE252			
X	Idler Siegmund	AED312			
	Ivány von András	FAE12			
	Jahn Gerd Dr.	ASG22			
	Kalde Clemens	ASM2			
	Kameter Rudolf	OTN/ASA42			
	Kettner Bernhard	AET42			
	Knoblauch August	AET32		Alcatel Alenia Space Cannes	AAS-F
X	Koelle Markus	ASA43		Alcatel Alenia Space Torino	AAS-I
X	Koppe Axel	AED312		ESA/ESTEC	ESA
X	Kroeker Jürgen	AED65			
X	La Gioia Valentina	Terma			
	Lang Jürgen	ASE252	X	Instruments:	
	Langenstein Rolf	AED15	X	MPE (PACS)	MPE
	Langfermann Michael	ASA41	X	RAL (SPIRE)	RAL
X	Maukisch Jan	ASA43	X	SRON (HIFI)	SRON
X	Much Christoph	ASA43			
	Müller Jörg	ASA42			
	Müller Martin	ASA43		Subcontractors:	
	Peltz Heinz-Willi	ASG13		Alcatel Alenia Space Antwerp	ABSP
	Pietroboni Karin	AED65		Austrian Aerospace	AAE
	Platzer Wilhelm	AED2		Austrian Aerospace	AAEM
	Reichle Konrad	ASA42		BOC Edwards	BOCE
	Runge Axel	OTN/ASA44		Dutch Space Solar Arrays	DSSA
	Schink Dietmar	AED32		EADS Astrium Sub-Subsyst. & Equipment	ASSE
	Schlosser Christian	OTN/ASA44		EADS CASA Espacio	CASA
	Schmidt Rudolf	FAE12		EADS CASA Espacio	ECAS
	Schmidt Thomas	ASA42		European Test Services	ETS
	Schuler Günter	ASA42		Patria New Technologies Oy	PANT
				SENER Ingenieria SA	SEN

Attachment 1 to Section 6.8:
TRR Minutes H-P_TASF-MN-10

	TRR – AFT 4	REF.: H-P-TASF-MN-10	
		HERSCHEL FM	
		DATE : 3 July 2008	PAGE : 1 of 7
MINUTES OF MEETING		PLACE : ESTEC	

PURPOSE			CLASSIFICATION :		
Test Readiness Review: Abbreviated Functional Test (AFT) 4 (post Sine Test)					
ATTENDEES	FIRM	SIGNATURE	ATTENDEES	FIRM	SIGNATURE
A. Knight	TASF				
S. Ilsen	TASF				
A. Gatti	ESA				
M.Cesa	ESA				
C Serlenga	ESA				
A di Capua	TASI				
WRITTEN BY : A. Knight		Chair: 		A. Knight	
CONCLUSION : <p>Pending closure of listed open work (in Test Release Sheet), go-ahead is given to run the AFT4.</p> <p></p>					
DISTRIBUTION : ATTENDEES	FOR FURTHER ACTION :				
	FOR INFORMATION : ASED, TAS-F, ESA:				
APPROVED BY					
NAME					
SIGNATURE					

	TRR – AFT 4	REF.: H-P-TASF-MN-10	
		HERSCHEL FM	
	DATE : 3 July 2008	PAGE : 7 of 7	
MINUTES OF MEETING		PLACE : ESTEC	

- The signed AFT Procedure shall be available

(note that the configuration control signature may not be present, this is acceptable. All technical signatories shall be complete).

- In case the Gyro calibration will be performed as part of AFT~~3~~⁴, a PVS (from AdC) shall be available.

(The gyro calibration may be performed as a separate activity prior to AFT~~3~~⁴)

- Confirmation of HIFI (remote) IEGSE support.

(in order to perform the HIFI switch on part of AFT~~3~~⁴ HIFI remote support is required)


4

The above issues shall be clarified prior to the start of AFT~~3~~⁴.

Test Director:

Test Conductor:

QA:

	TRR – AFT 4	REF.: H-P-TASF-MN-10	
		HERSCHEL FM	
		DATE : 3 July 2008	PAGE : 6 of 7
MINUTES OF MEETING		PLACE : ESTEC	

TEST RELEASE SHEET: Herschel S/C AFT ~~3~~⁴ Activities

- Prior to the start of the AFT test a hardware inspection will be performed by the Test Director / Test Conductor / QA. The purpose shall be to inspect the test specimen, test set-up (area access etc) and facility.
 - This inspection shall be performed w.r.t the skin connector list in the test procedure (HP-2-ASED-TP-1224 Annex 1).
- Upload of the following S/W:
 - ACMS
 - HPSDB
 - CCS
 - PACS OBSW

Note that the above is not strictly a "pre-requisite" for AFT~~3~~⁴ as the test can be run with the current S/W.

However the TRR strongly recommended that this S/W be uploaded as it represents a good opportunity to validate the operation of the S/C with the new S/W versions.

- **NC-4281: BSW problem events during PCDU swap**
 - There is an open action on this NCR:
 - Action AIT (Much) to decide which option shall be taken:
 - To disable the Thermal control during PCDU swap operation.
 - To consider as "expected" these events


As above, this is not a "pre-requisite" for AFT~~3~~⁴ but we should know which way we will go.

In case option 2 is chosen, this will require a script update which would be validated by this AFT.

- Closure of NRB / Agreement for ACS concerning:
- **NC-4272: PACS Blue Bolometer behaviour in SFT He 1 after acoustic test**
- Also, a PVS shall be raised (by AdC) to cover the interruption in the AFT to perform this ACS (test to be interrupted at the point of the instrument AFTs).

(Note, yet again, this is not a "pre-requisite" as the AFT could be run without this PACS investigation. However, if it is to be investigated then the PVS is required).

THALES/

	TRR – AFT 4	REF.: H-P-TASF-MN-10	
		HERSCHEL FM	
	DATE : 3 July 2008	PAGE : 5 of 7	
MINUTES OF MEETING		PLACE : ESTEC	

8. Cleanliness

All activities will be performed under Cleanroom Class 100 000 conditions in the Hydra area.

9. Test Personnel and Responsibilities

Test Director: Y Roche
 Test Conductor: A di capua / M Theunissen
 Quality Assurance: Provided i.a.w the Functional QA shift plan

For the HIFI section of the AFT HIFI (remote) IEGSE support is required. Personnel TBC.

10. Problem Areas

None.

11. AOB

Parallel Activities:

PACS investigations i.a.w NRB for NC-4272, see **TEST RELEASE SHEET**

Planning:


AFT4 will commence during the night shift from Friday 4 to Saturday 5 July 2008.
 The PACS investigations will commence on the morning of Saturday 5 July 2008.
 The AFT4 is expected to be completed at the end of the late shift on Saturday 5 July 2008.

It should be noted that during the AFT the optics are not directly stimulated (e.g. AAD end-to-end checks etc). The check of the optics (i.e. by optical stimulation) is performed by the SFT.
 The next SFT is planned to be performed after the Herschel FM TBTv test (confirmed by Y Roche).

12. Conclusion

Pending closure of listed open work (in **Test Release Sheet**), go-ahead is given to run the AFT4.

**OPEN
WORK**

	TRR – AFT 4	REF.: H-P-TASF-MN-10	
		HERSCHEL FM	
	DATE : 3 July 2008	PAGE : 4 of 7	
MINUTES OF MEETING		PLACE : ESTEC	

4. Open Work / Open Actions

See the **TEST RELEASE SHEET** at the end of these MoM

5. Test Specification / Procedures

AFT Test Specification: H-P-2-ASP-SP-1411 Iss 2

As has been noted in several previous AFT MoM, the test specification is not fully in line with the agreed test procedure. This specification has been discussed in detail between all parties and the test procedure to be applied is fully in line with these agreements.

Test Procedure: HP-2-ASED-TP-0224 Iss 1.1

Since AFT3 the test procedure has been up-issued from Iss 1 to Iss 1.1.
This update incorporates the Procedure Variation Sheets as agreed at previous AFT TRRs. Including:
Minor update to set SAS SCOE to full power
Instrument switch on / off and “togglng” RT terminals between Bus A & B

This procedure is currently in the signature loop:

- The signed AFT Procedure shall be available for the start of AFT 4

(note that the configuration control signature may not be present, this is acceptable. All technical signatories shall be complete).

Procedure Variations:

See the **TEST RELEASE SHEET**

Note, as the S/C will be moved from the shaker to the Hydra area prior to AFT4, a gyro calibration is required.

It is planned to perform this prior to AFT4.

This shall be confirmed:

- In case the Gyro calibration will be performed as part of AFT3, a PVS (from AdC) shall be available.

6. Safety Hazards and Hazardous Operations


No specific Hazardous operations have been identified.

7. Test Equipment / Facility and Calibration Status

A calibration list for all Herschel SCOEs is attached in Annex 2

OPEN WORK

OPEN WORK

	TRR – AFT 4	REF.: H-P-TASF-MN-10	
		HERSCHEL FM	
	DATE : 3 July 2008	PAGE : 3 of 7	
MINUTES OF MEETING		PLACE : ESTEC	

3. NCR Status

No NCRs were highlighted that block AFT3

The status of the following NCR shall be clarified for AFT4:

- **NC-4281: BSW problem events during PCDU swap**
 - There is an open action on this NCR:
 - **Action AIT (Much) to decide which option shall be taken:**
 - **To disable the Thermal control during PCDU swap operation.**
 - **To consider as "expected" these events**

OPEN
WORK

As above, this is not a "pre-requisite" for AFT3 but the way forward for this test shall be established.

In case option 2 is chosen, this will require a **script update** which would be validated by this AFT.

OPEN
WORK

The following NCR affects this test:

NC-4086: IST Nominal Mode Robustness – SPIRE DPU BSW boot problem.

This issue is well known (from previous AFTs) and the test script includes the forceboot command to boot from partition 2 instead of 1.

As a result of the following NCR:

- **NC-4272: PACS Blue Bolometer behaviour in SFT He 1 after acoustic test**

In accordance with the specific NRB decision (planned 17:00 3 July 2008) an agreed investigation ACS will be run during this AFT4.

The test will be interrupted at the start of the Instrument AFT section in order to perform these investigations:

- **Also, a PVS shall be raised (by AdC) to cover the interruption in the AFT to perform this ACS (test to be interrupted at the point of the instrument AFTs).**


OPEN
WORK

(Note, yet again, this is not a "pre-requisite" as the AFT could be run without this PACS investigation. However, if it is to be investigated then the PVS is required).

It was noted that during the AFT4 it will be decided whether the other instrument parts of the AFT4 (i.e. SPIRE / HIFI) can run in parallel with this investigation. If this is not possible then the AFT will be interrupted and wait for the culmination of the NC-4272 ACS.

RfD / RfW Status

None

	TRR – AFT 4		REF.: H-P-TASF-MN-10		
			HERSCHEL FM		
			DATE : 3 July 2008	PAGE : 1 of 7	
MINUTES OF MEETING			PLACE : ESTEC		

PURPOSE : **Test Readiness Review: Abbreviated Functional Test (AFT) 4 (post Sine Test)** **CLASSIFICATION :**

ATTENDEES	FIRM	SIGNATURE	ATTENDEES	FIRM	SIGNATURE
A. Knight	TASF				
S. Ilsen	TASF				
A. Gatti	ESA				
M.Cesa	ESA				
C Serlenga	ESA				
A di Capua	TASI				

WRITTEN BY : A. Knight **Chair:** A. Knight

CONCLUSION :

Pending closure of listed open work (in **Test Release Sheet**), go-ahead is given to run the AFT4.

DISTRIBUTION : ATTENDEES	FOR FURTHER ACTION :
	FOR INFORMATION : ASED, TAS-F, ESA:

APPROVED BY				
NAME				
SIGNATURE				

Test Release Sheet for AFT 3

- Upload of the following S/W:
 - ACMS
 - HPSDB
 - CCS
 - PACS OBSW

Note that the above is not strictly a "pre-requisite" for AFT 3 as the test can be run with the current S/W.

However the TRR strongly recommended that this S/W be uploaded as it represents a good opportunity to validate the operation of the S/C with the new S/W versions.

- NC-4281: BSW problem events during PCDU swap
- There is an open action on this NCR:
 - Action AIT (Much) to decide which option shall be taken:
 - To disable the Thermal control during PCDU swap operation.
 - To consider as "expected" these events *← chosen?*

As above, this is not a "pre-requisite" for AFT 3 but we should know which way we will go.

In case option 2 is chosen, this will require a script update which would be validated by this AFT.

- Closure of NRB / Agreement for ACS concerning:
- NC-4272: PACS Blue Bolometer behaviour in SFT He 1 after acoustic test
- Also, a PVS shall be raised (by AdC) to cover the interruption in the AFT to perform this ACS (test to be interrupted at the point of the instrument AFTs). *✓ (PVS#1)*

(Note, yet again, this is not a "pre-requisite" as the AFT could be run without this PACS investigation. However, if it is to be investigated then the PVS is required).

- The signed AFT Procedure shall be available *✓*

(note that the configuration control signature may not be present, this is acceptable. All technical signatories shall be complete).

- In case the Gyro calibration will be performed as part of AFT 3, a PVS (from AdC) shall be available. *done before start of AFT 4.*

(The gyro calibration may be performed as a separate activity prior to AFT 3)

- Confirmation of HIFI (remote) IEGSE support.

(in order to perform the HIFI switch on part of AFT 3 HIFI remote support is required)

The above issues shall be clarified prior to the start of AFT3

Test Director:

Test Conductor:

QA:

Van: "Alessio Di Capua" <alessiodicapua@gmail.com>
Onderwerp: Re: MoM: TRR AFT4
Datum: Do, 3 juli, 2008 17:47
Aan: nicjknight@aol.com
CC: ardo.Vascotto.external@astrium.eads.net,dlamonby@googlemail.com,"Liberatore Danilo (external)" <Danilo.Liberatore.external@astrium.eads.net>

Andy,

Martijn reminded me that before AFT we have the ACC SW Upload and that for the latter, v slightly change the configuration (we use QuickSwUpload cables instead of flight caps).

This activity is performed in second shift and during the night we already start with AFT. It means that IF (most likely) we don't have electric-guys available we have to keep the skin configuration.

THIS DOESN'T impact the test at all but, of course, is a deviation from the AFT procedure.

Can we put in the MoM or elsewhere a statement saying that for the AFT the SW upload configuration is suitable as well and it doesn't impact the test ?

Thanks,
Alessio

nicjknight@aol.com wrote:

Dear All

Please find attached the MoM for today's TRR for AFT4 including the TEST RELEASE SHEET.

I am still awaiting a MoM reference (Yvan can you help? I am guessing that Raymonde could be on holiday)

I will get the original in the signature loop as soon as I get the reference.

Regards

AndyK

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	Name	Dep./Comp.		Name	Dep./Comp.
	Baldock Richard	FAE12		Sonn Nico	ASG51
	Barlage Bernhard	AED13		Steininger Eric	AED321
	Bayer Thomas	ASA42	X	Stritter Rene	AED11
	Brune Holger	ASA45		Suess Rudi	OTN/ASA44
	Chen Bing	HE Space	X	Theunissen Martijn	DSSA
	Davis William	Captec	X	Vascotto Riccardo	HE Space
	Edelhoff Dirk	AED21		Wagner Klaus	ASG23
	Fehringer Alexander	ASG15	X	Wietbrock Walter	AET12
X	Fricke Wolfgang Dr.	AED 65		Wöhler Hans	ASG23
	Geiger Hermann	ASA42		Wössner Ulrich	ASE252
	Grasl Andreas	OTN/ASA44		Zumstein Armin	AED15
	Grasshoff Brigitte	AET12			
	Hamer Simon	Terma			
	Hanka, Erhard	FI522			
	Hendrikse Jeffrey	HE Space			
	Hendry David	Terma			
	Hengstler Reinhold	ASA42			
	Hinger Jürgen	ASG23			
X	Hohn Rüdiger	AED65			
	Hopfgarten Michael	AET32			
	Huber Johann	ASA42			
	Hund Walter	ASE252			
	Idler Siegmund	AED312			
	Ivány von András	FAE12			
	Jahn Gerd Dr.	ASG23			
	Jolk Matthias	AET1	X	ESA/ESTEC	ESA
	Klenke Uwe	ASG72	X	Thales Alenia Space Cannes	TAS-F
	Kölle Markus	ASA43		Thales Alenia Space Torino	TAS-I
	König Werner	AET32			
	Koppe Axel	AED312			
X	Kroeker Jürgen	AED65		Instruments:	
	La Gioia Valentina	Terma		MPE (PACS)	MPE
	Lang Jürgen	ASE252	X	RAL (SPIRE)	RAL
	Langenstein Rolf	AED15	X	SRON (HIFI)	SRON
	Langfermann Michael	ASA41			
	Leitermann Stefan	AET12			
	Liberatore Danilo	Rhea		Subcontractors:	
	Martin Olivier	Altec		Austrian Aerospace	AAE
X	Maukisch Jan	ASA43		Austrian Aerospace	AAEM
X	Much Christoph	ASA43		BOC Edwards	BOCE
	Müller Martin	ASA43		Dutch Space Solar Arrays	DSSA
	Pietroboni Karin	AED65		EADS Astrium Sub-Subsyst. & Equipment	ASSE
	Reichle Konrad	ASA42		EADS CASA Espacio	CASA
	Runge Axel	OTN/ASA44		EADS CASA Espacio	ECAS
	Saal Christoph	External		European Test Services	ETS
	Schink Dietmar	AED321		Patria New Technologies Oy	PANT
	Schmidt Thomas	AED15		SENER Ingenieria SA	SEN
	Schweickert Gunn	ASG23		Thales Alenia Space, Antwerp	TAS-ETCA