



Minutes of Meeting

Date: 16.05.08

Herschel

Doc.-No.: HP-2-ASED-MN--1552

Meeting place: ESTEC

Chairman: R.Goossens

Date/Time: 16/5/2008 21:00

Secretary: B.Collaudin

Agenda dated: PTR Standard Agenda

Close of Meeting: 22:30

Subject: PTR for SPIRE SMEC test in He 1

Participants: B.Swinyard (RAL, teleconf)
 D. Pouliquen (SPIRE LAM)
 S. Hamer, ASED
 A.Koppe (ASED)
 K. Goodey, ESA
 C. Scharnberg, ESA
 M. Cesa, ESA
 R.Goossens

Additional Distribution: ESA
 TAS-F
 SPIRE

Some redmarks added after signing MOM for purpose of completion. See next pages
 Changes are sidlined.

Page: 1 of Page(s) & annex

 Brief-Minutes (except following sheets)

 Summary of Results of Sheets 2 till

Conclusion:

Test is not successful, as only part of nominal SMEC test has been executed.

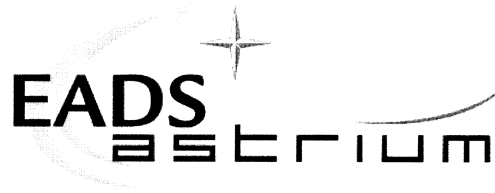
- Main issue is the presence of sticking region near the mechanical end stop
- It was demonstrated that the SMEC can be moved in closed loop outside of that sticking region- (new strategy to use the SMEC to be analysed)
- LPU was tested on nominal
- Micro-vibration test & Redundant SMEC test were not performed

Delta SMEC test is needed. (date (before or after vibration) TBC by NRB. AFTER ANALYSIS OF PRESENT TEST

Test configuration can be broken for the next planed activities (no restriction on S/C movement).



Reference	Results	Remarks
	<p>PTR Agenda:</p> <ul style="list-style-type: none">0. Introduction1. Test Identification2. Review of Test Data / Reports3. Review of ACS / Procedure Variation Sheets4. NCR / RFD Review5. Open Work / Open Actions Identification6. AOB7. Conclusion	



Reference	Results	Remarks
	<p>0. Introduction</p> <p>This PTR is for the SMEC test He 1 16.05.2008 (2 day shift), according to HP-2-ASED-TP-0217_1 - SPIRE FM IST Instrument Commissioning Cold Functional Test Procedure (sections dedicated to SMEC 7.2.5, 7.2.6, 7.2.7)</p> <p>1. Test Identification</p> <p>See TRR minutes: HP-2-ASED-MN-1547 - TRR Spire SMEC 1 Hel</p> <p>2. Review of Test Data / Reports</p> <p>SMEC at He 1:</p> <ul style="list-style-type: none"> • Switch on SPIRE Prime delayed because of SC reconfiguration not finished (started at 10:00) • PVS 1 to change test order was not followed to be able to execute microvibration test during day (availability of ETS) • Problem of time synchronisation between CCS & EGSE (checks to be done systematically for all instruments) no NCR • Then NCR 4221 SPIRE Launch lock does not Open during SPIRE SMEC test nominal. Further test result analysis show that after the LPU test the SMEC was moving, and test could be continued. • LPU test on nominal has been executed to confirm the position of the LPU relays. It has been realized that without previous LPU test, the relay status could be random. The confirmation of the relay position by high levels command 5 & 6 shall be executed before any LL unlatch. • The SPIRE LL EGSE does not change status (show green light) even when the Launch lock is 	



Reference	Results	Remarks
	<p>Open (Different new NCR 4223 to be raised). EGSE to be sent to RAL for investigation & repair</p> <ul style="list-style-type: none"> • During further SMEC test it was observed that the SMEC has friction near the mechanical end stop. NCR 4222 has been raised). The consequence was that <ul style="list-style-type: none"> ○ the encoder did not work. (not allowing further close loop test) ○ The FF gain and FF offset could not be properly calculated. • Disposition 1 was to set up a reference out of the sticking region, and to check encoder & close loop. The reference was set at about 16mm from mechanical end stop, and the encoder worked properly, and the loop could be closed. • Disposition 2 (LED power) was not done (not needed). • Validation of close loop operation (procedure SPIRE-IST-COLD-FUNC-SMEC-7-P) had to be executed with manual commands and worked properly (4 scans between 1 & 8 mm from above new reference) SPIRE to investigate why the Script did not run • The latch was locked by procedure SMEC-2-B-P, and confirmed by using the maximum current to make sure that the launch lock was not hold in the sticking region. • SPIRE confirm that the SMEC launch lock is latched. • The test was stopped here.. <p>SPIRE states is OK to move the spacecraft. On nominal: SMEC-OFFSET-P could not be done SMEC-FFGAIN not performed SMEC-04P not successful SMEC-09P (Open loop Scan –Show the sticking problem) SMEC 07-P performed manually after change of reference) SMEC-4B not done SMEC LVDT-P was cancelled by SPIRE before the test (PVS 3) Micro-vibration test was not executed</p>	<p>AI 1</p>



Reference	Results	Remarks
	<p>LPU redundant test (needed to confirm the position of the relays) has not been performed. Redundant test was not executed.</p> <p>Test data: The session on CCS is: 2008_05_16_01_30_hercdmu_hpws22_REALTIME_SC_FDIR All relevant data are stored under this session. SPIRE to check that all science & HK are stored on IEGSE. Copy of Science data is on CCS in raw format, and dumps could be used in case of emergency.</p> <p>3. Review of PVS</p> <p>12 PVS's were raised 3 before the test (mail from Sunil, PVS 1 not executed) 9 During the test</p> <p>See annex 1.</p> <p>Configuration changes</p> <p>Addition and removal of the LL EGSE.</p> <p>LPU nominal was verified on nominal. (NC 4000 SPIRE LPU Wrong parameter for LCL in HPSDB: Current was as expected)</p> <p>SVM Shield was removed before the test. M1 M2 test was run in parallel.</p>	<p>AI2</p>



Reference	Results	Remarks
	<p>The script for RWL profile for microvibration has been updated after the debug on 15/5. But not used today. A new debug run will be needed to know the duration. Cryoscoe was not attached to CCS, as only few PT sensors (irrelevant for this test) are currently read by Cryoscoe</p> <p>4. NCR / RFW Status The following NCR were raised 4221: SPIRE Launch Lock does not open during SMEC test on nominal side 4222: SMEC mechanism friction behaviour in startregion 4223: SPIRE SMEC Launch Lock EGSE not properly function</p> <p>The following NCRs have been investigated:</p> <p>NC 4000 SPIRE LPU Wrong parameter for LCL in HPSDB NC 4001: Instrument Merged MIB failed to be loaded on IEGSE: SPIRE Merged MIB could be loaded on IEGSE and worked (with CCU. Cryoscoe not attached). OK For SPIRE (& PACS).</p> <p>5. Open Work / Open Actions The following open work has been identified:</p> <p>Run of the RWL script for microvibration</p> <p>Analysis of SMEC test data, why sticking now, how to run SMEC with it. Strategy for retest NRB to be organised middle of next week, after first assessment on the data.</p> <p>SMEC LL EGSE NCR to be analysed</p>	



Reference	Results	Remarks
	<p>6.AOB</p> <p>7. Conclusion</p> <p>Test is not successful, as only part of nominal SMEC test has been executed.</p> <ul style="list-style-type: none"> - Main issue is the presence of sticking region near the mechanical end stop - It was demonstrated that the SMEC can be moved in closed loop outside of that sticking region- (new strategy to use the SMEC to be analysed) - LPU was tested on nominal - Micro-vibration test & Redundant SMEC test were not performed <p>Delta SMEC test is needed. (date (before or after vibration) TBC by NRB.</p> <p>Test configuration can be broken for the next planed activities. (no restriction on S/C movement).</p>	



Action Items List

No.:	Description:	Due Date	Originator Comp./Pers.	Actionee Comp./Pers.	Source	Completion
1	SPIRE to investigate why the Script did not run	21.05.08	Collaudin	Sawyer		
2	SPIRE to check that all science & HK are stored on IEGSE.	21.05.08	Collaudin	Sawyer		
3						
4						
5						