

Herschel/Planck Project

date	3 September 2004	reference	SCI-PT-30365	page	1 / 4
meeting date	03/09/2004	meeting place	Telecon		
chairman	C. Scharmberg				
participants	Bernard Collaudin	ALCATEL	copy	Participants +	
	Guy Doubrovik	ALCATEL		Matt Griffin	
	Horst Faas	ASTRIUM		Bruce Swinyard	
	Eric Sawyer	RAL		Doug Griffin	
	Carsten Scharmberg	ESA		Thomas Passvogel	
				Gerald Crone	
				Peter Oldeman	
				Chris Jewell	
				Flemming Pedersen	
				Goeran Pilbratt	
				Sarah Leeks	

subject **SPIRE Progress Telecon #10**

Agenda

1. Action status of previous SPIRE telecons (MoM: SCI-PT-21435 & SCI-PT-29150)
2. QM/PFM status report.
3. Changes of SPIRE detailed planning w.r.t. previous schedule
4. Status of ILT CQM 2
5. CPPA missing component list
6. Interface Issues (it is assumed, that Alcatel/ASED will provide their action status list prior to the telecon)
 - Inconsistencies of DRCU MICD's, included in SPIRE IID-B w.r.t SVM panel MICD's of IID-A
 - SPIRE to comment on ASEd RfW (L3 temperature of SPIRE JFET's in space @15.6K worst case including uncertainties)
7. AOB

1. Action status of previous SPIRE telecons (MoM: SCI-PT-21435 & SCI-PT-27717)

SPIRE Progress Telecon #2 (MoM: SCI-PT-21435 - 29/10/03)

AI#3 SPIRE to issue the Harness Definition Document version 1.2, which will reflect HDD 1.1 plus update according annex 5 of SPIRE IID-B version 3.0 "SPIRE HDD 1.1 Deltas"

SPIRE will update the relevant document "with low priority", because the relevant information is already available within:

- *SPIRE HDD1.1 and*
- *SPIRE HDD 1.1 Deltas (SPIRE-RAL-NOT-001819)*

And will be included in the next IID-B issue.

This open action has been delayed several times since many monthes. It was agreed to get the updated version **AT LATEST** at the IQR Kick-off Meeting.

New due date was agreed to be 16th November 2004

- **OPEN** -

SPIRE Progress Telecon #9 (MoM: SCI-PT-29150 - 23/07/04)

AI#1 B. Collaudin to answer by email who at ASP side will be the contact person to address construction guidelines for the warm interconnecting harness

Bernard promised to clarify immediately after this telecon

(Due date: 3rd September 2004)

- **OPEN** -

AI#2 SPIRE to answer on ASED email HP-ASED-EM-0564-04 (LOU baffle design) from 25.06.2004 (Due date: 30th July 2004)

Action closed by email from Bruce Swinyard 26/07/2004, however, the issue of the LOU baffle design is not yet closed

- **CLOSED** -

SPIRE Actions Status List from previous Interface Meeting has been updated during this telecon (Annex #3).

2. CQM/PFM status report.

The status of CQM, Warm electronics, PFM, AIV and schedule was presented by Eric in a power point file provided prior to the telecon to all participants (Annex #1).

CQM:

After initial problems with ground shorts in the instrument test harness, which delayed the start of the 2nd cold verification at RAL, SPIRE is currently in the test chamber. Cool down will start on Saturday, 4th September, followed by thermal and performance tests. SPIRE explained, that the performance part of the ILT CQM2 will be quite similar to the corresponding performance test performed during ILT CQM1. SPIRE FPU is expected to be out of the test chamber mid of October. Program schedule still compliant with November delivery to Astrium.

PFM:

Because the FM cooler will be late w.r.t. system needs, one option to save time is to interrupt the cooler qualification test, by using the cooler at RAL for initial FPU PFM tests, before proceeding with the qualification program.

SPIRE reported the SMEC schedule getting a serious issue. SMEC CQM (current delivery date is October 2004) will be used in the early phase of SPIRE PFM program. In parallel the SMEC qualification will be done with SMEC DM. Cold vibration in November 2004.

DPU situation is still uncertain. DPU software version, available at RAL has worked well during ILT CQM1.

SPIRE pointed out, that in the timeframe between mid November 2004 (CQM delivery to Astrium) and end of February 2005 (DRCU QM2 delivery to SPIRE) the DRCU QM1 which is supposed to be delivered together with the CQM FPU, is also needed at RAL to support the PFM program.

Real need dates at Astrium side has to be agreed with industry during next AIT Meeting on 9th September.

Astrium stated, that probably HIFI will be invited to the next SPIRE AIT Meeting (09/09/04).

[AI#1 Astrium to clarify and send out the final agenda. \(Due date: 7th September 2004\)](#)

3. Changes of SPIRE detailed planning w.r.t. previous schedule

SPIRE has provided their updated schedule prior to the telecon to industry and ESA (Annex #2). Now major changes w.r.t. last schedule.

4. Status of ILT CQM 2

Due to initial ground short problems, ILT CQM2 has not yet started. Cooldown start expected for Saturday, 4th September.

5. CPPA missing component list

List of all missing CPPA procured components have been sent to SPIRE for review by email. Replies from CEA and LAM are available. Concerning the only not yet delivered component to RAL (CX1030), SPIRE stated that the expected CPPA delivery (01/11/04) is well compliant with the instrument schedule.

6. Interface Issues

- **Inconsistencies of DRCU MICD's, included in SPIRE IID-B w.r.t SVM panel MICD's of IID-A**

In the frame of the H/P System CDR it turns out, that some dimensions between mounting holes included in the SVM panel ICD's included in IID-A are not given in the corresponding instrument unit ICD's. However Alcatel verified with CEA, that the dimensions are correct (all information was already available at Alcatel !). Alcatel asked SPIRE to formally issue new ICD's, that shall include the correct dimension.

- **SPIRE to comment on ASED RfW (L3 temperature of SPIRE JFET's in space @15.6K worst case including uncertainties)**

SPIRE accepted 15.6K as worst case condition for Level 3 (Ref. HP-2-ASED-RD-0020).

FPU and MGSE ICD's currently included in the IID-B are not compliant with recent agreements of recent interface meetings and telecon (Lo-straps, Lifting device).

[AI#2 SPIRE to issue update of FPU and MGSE ICD's according to current already agreed status. Due date: 16.11.2004](#)

7. AOB

Next SPIRE Interface Meeting: Thursday, 7th October 2004 at RAL.

Next SPIRE Progress Telecon #11 on Wednesday, 27th October, 2004 @15:00 CEST



Progress/Status

Eric Sawyer

SPIRE

AVM

- No update from last telecon
- Next test phase is planned for after the CQM cold test, probably mid Sept start

CQM

Cold Qualification model

- Modifications to internal thermal interfaces on the detector box have been implemented.
- The instrument is now in the cryostat
- More problems with ground isolation.
- Latest estimate, Cold on 13th
- Thermal tests 13th to 20th
- Performance tests 20th to 9th Oct
- Out of chamber 12th
- One month for delivery preparation.
- L0 straps in manufacture
- November delivery to Spacecraft ok.

Warm electronics

- QM2/FM manufacture underway
- Delivery to SPIRE unchanged
- One outstanding issue.
- WIH specification required, this is becoming urgent

PFM

- Structure manufactured, except CFRP legs and L0 straps
- Cooler –In manufacture filling started, delivery now November which will delay PFM, work around being explored.
- DRCU QM2 in manufacture
- SMEC – CQM in assembly and test, delivery now October, this is becoming a serious issue.
- Mirrors –delivered
- BDA - SSW delivered, SLW delivered
- DPU – Status uncertain
- Calibrators, filters – SCAL and filters ready, PCAL in final test,.
- BSM – Built, some problems with range, FM will be delivered as is, FS has been fitted with new magnets and will be fitted in place of the FM
- PFM FPU Mirror mounts integrated, metrology completed.
- Alignment completed, well within spec.
- PFM on hold, effort back on CQM.
- Restart very soon

AIV

- CQM tests phase 1 complete
- Test facility ready for next phase
- Next phase started

schedule

Milestones.

- CQM build complete 5/12/03 Complete
- CQM cold verification 1 start 31/01/04 Complete
- Cold vibration end 28/4/04 completed 8/5/04
- CQM Ready for delivery Nov with DRCU QM1 (temp)
- DRCU (QM1) required for FM programme.
- FM delivery delayed to Oct 05 with QM2 electronics, due to slip in QM2 delivery

ID	Task Name	Duration	Start	Finish	2003					2004					2005					2006								
					Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov
1	SM AIV programme	417 days	Wed 26/03/03	Fri 05/11/04																								
2	SM FPU Subsystem deliveries	396 days	Fri 25/04/03	Fri 05/11/04																								
3	✓ CQM Mirrors and OGSE Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
4	✓ CQM Mirrors Acceptance	3 days	Mon 28/04/03	Wed 30/04/03																								
5	✓ STM Filters, Dichroics, Beamsplitters and OGS	0 days	Fri 25/04/03	Fri 25/04/03																								
6	✓ STM Filters, Dichroics, Beamsplitters Acceptan	3 days	Mon 28/04/03	Wed 30/04/03																								
7	✓ STM BSMm Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
8	✓ STM BSMm Acceptance	3 days	Mon 28/04/03	Wed 30/04/03																								
9	✓ CQM BSM Harness Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
10	✓ CQM BSM Harness Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
11	✓ Optical Dummy SMECm Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
12	✓ Optical Dummy SMECm Acceptance	3 days	Mon 28/04/03	Wed 30/04/03																								
13	✓ CQM Thermal Straps Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
14	✓ CQM Thermal Straps Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
15	✓ STM Cooler Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
16	✓ STM Cooler Acceptance	3 days	Mon 28/04/03	Wed 30/04/03																								
17	✓ CQM Cooler Harness Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
18	✓ CQM Cooler Harness Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
19	✓ STM BDAs Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
20	✓ STM BDAs Acceptance	1 day	Mon 28/04/03	Mon 28/04/03																								
21	✓ CQM BDAs Harness Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
22	✓ CQM BDAs Harness Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
23	✓ STM SCAL Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
24	✓ STM SCAL Acceptance	1 day	Mon 28/04/03	Mon 28/04/03																								
25	✓ STM SCAL Harness Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
26	✓ STM SCAL Harness Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
27	✓ STM SMECm Delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
28	✓ STM SMECm Acceptance	1 day	Mon 28/04/03	Mon 28/04/03																								
29	✓ STM SMECm Harness Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
30	✓ STM SMECm Harness Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
31	✓ CQM FPU RF Filter Modules Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
32	✓ CQM FPU RF Filter Modules Acceptance	1 day	Tue 06/01/04	Tue 06/01/04																								
33	✓ STM/CQM 300mK strap delivery	0 days	Fri 25/04/03	Fri 25/04/03																								
34	STM/CQM 300mK strap acceptance	13 days	Mon 28/04/03	Fri 05/11/04																								
35	✓ CQM Cooler Delivery	0 days	Mon 05/01/04	Mon 05/01/04																								
36	✓ CQM Cooler Acceptance	3 days	Tue 06/01/04	Thu 08/01/04																								
37	SM Structure Integration	17 days	Wed 26/03/03	Thu 17/04/03																								

Project: SPIRE 3_10_03
Date: Thu 02/09/04

Task		Summary		Rolled Up Progress		Group By Summary	
Critical Task		Rolled Up Task		Split			
Progress		Rolled Up Critical Task		External Tasks			
Milestone		Rolled Up Milestone		Project Summary			

ID	Task Name	Duration	Start	Finish	2003					2004					2005					2006					
					Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May
223	Manufacture new 2K straps	20 days	Fri 25/06/04	Thu 22/07/04																					
224	Modify detector boxes	10 days	Mon 23/08/04	Fri 03/09/04																					
225	Paint SM12 and baffle	10 days	Mon 23/08/04	Fri 03/09/04																					
226	SLW and SSW BDA Integration into detector b	3 days	Mon 06/09/04	Wed 08/09/04																					
227	Spectrometer Detector Box Integration and Ali	1 day	Thu 09/09/04	Thu 09/09/04																					
228	Spectrometer Detector Harness Integration	3 days	Fri 10/09/04	Tue 14/09/04																					
229	Harness integration	5 days	Tue 24/08/04	Mon 30/08/04																					
230	SCAL integration	1 day	Fri 03/09/04	Fri 03/09/04																					
231	Filters Integration	5 days	Fri 08/10/04	Thu 14/10/04																					
232	FPU RF Filters Integration	1 day	Mon 23/08/04	Mon 23/08/04																					
233	SMECM CQM Integration	3 days	Mon 20/09/04	Wed 22/09/04																					
234	FPU final assembly	5 days	Thu 21/10/04	Wed 27/10/04																					
235	Warm electronics Deliveries	5 days	Thu 20/01/05	Wed 26/01/05																					
236	EQM DPU Delivery	0 days	Thu 20/01/05	Thu 20/01/05																					
237	EQM DPU acceptance	5 days	Thu 20/01/05	Wed 26/01/05																					
238	QM1 Warm Electronics re Integration	15 days	Wed 20/10/04	Tue 09/11/04																					
239	Warm Electronics Integration Test	10 days	Wed 20/10/04	Tue 02/11/04																					
240	Test Facility Integration	5 days	Wed 03/11/04	Tue 09/11/04																					
241	Instrument integration and test phase 1	50 days	Thu 28/10/04	Wed 05/01/05																					
242	Instrument Integration I	13 days	Thu 28/10/04	Mon 15/11/04																					
243	FPU and JFET Preparation and Transport	3 days	Thu 28/10/04	Mon 01/11/04																					
244	FPU and JFET Integration into Cryostat	2 days	Tue 02/11/04	Wed 03/11/04																					
245	FPU and JFET Integration with Warm Elec	1 day	Wed 10/11/04	Wed 10/11/04																					
246	Warm Functional Test I	3 days	Thu 11/11/04	Mon 15/11/04																					
247	Instrument Cold Verification 1	37 days	Tue 16/11/04	Wed 05/01/05																					
248	Pumpdown	1 day	Tue 16/11/04	Tue 16/11/04																					
249	Cooldown	3 days	Wed 17/11/04	Fri 19/11/04																					
250	Thermal performance verification	3 days	Mon 22/11/04	Wed 24/11/04																					
251	FIR alignment check	5 days	Thu 25/11/04	Wed 01/12/04																					
252	Cold Functional Test III	2 days	Thu 02/12/04	Fri 03/12/04																					
253	Subsystem Performance Verification	5 days	Mon 06/12/04	Fri 10/12/04																					
254	Instrument verification 1	10 days	Mon 13/12/04	Fri 24/12/04																					
255	Warmup	3 days	Mon 27/12/04	Wed 29/12/04																					
256	FPU/FTB De-integration from Cryostat	2 days	Tue 04/01/05	Wed 05/01/05																					
257	QM1 DRCU available for CQM delivery	0 days	Wed 05/01/05	Wed 05/01/05																					
258	QM1 DRCU available for CQM delivery	0 days	Wed 05/01/05	Wed 05/01/05																					
259	FPUintegration phase 2	31 days	Thu 06/01/05	Thu 17/02/05																					

Project: SPIRE 3_10_03
Date: Thu 02/09/04

Task		Summary		Rolled Up Progress		Group By Summary	
Critical Task		Rolled Up Task		Split			
Progress		Rolled Up Critical Task		External Tasks			
Milestone		Rolled Up Milestone		Project Summary			

SPIRE Actions Status 03/09/04
Still open or changed status since SPIRE PT #10 03/09/04 – SCI-PT-30365

From last H-P-ASP-MN-5081 SPIRE IF Meeting 30-06-04

N°	ACTION DESCRIPTION H-P-ASP-MN-5081 SPIRE IF Meeting 30-06-04	DUE DATE	Firm / person	ACTION STATUS
1	IID-B 5.9.6.1 Long peak TBD's to be replaced. SPIRE will propose update for long peaks (+ loan of LCL)	09/09/04	SPIRE	Open New due date (SPIRE AIT Meeting) agreed during SPIRE PT#10
2	IIDB Sections 5.11.1.1 & 5.11.1.2 to be re-edited (replaced by values in sub-frames/s) to reflect this agreement. (27 sub-frames/s in normal mode & 40 sub-frames/s in burst modes).	15/7/04	SPIRE	Closed by mail E.Sawyer 14/07/04 with file "Comments on IID-B 3.3 draft1", included in IIDB 3.3
3	ASED to verify and freeze the DRCU Power supply configuration (and compatibility with tilting of the cryostat)	15/7/04	ASED	Closed by mail (and re mails) H.Faas HP-ASED-EM-0591-04 dated 13/07
4	SVM integration: refer to new proposed RD28. SPIRE Warm electronic integration plan, SPIRERAL-DOC-001132, Issue 0.1, 10/01/02. SPIRE will check the relevance of this document & update if necessary	15/7/04	SPIRE	Closed by IIDB 3.3 (includes RD 28)
5	ASED will send the definition of FPU fixation bolts to SPIRE for approval.	15/7/04	ASED	Closed by mail H.Faas HP-ASED-EM-0609-04 dated 13/07
6	SPIRE will review this ASED list of relevant AIT documents (in annex 6 of these minutes) and provide comments and update if needed	15/7/04	SPIRE	Closed by mail E.Sawyer 06/07/04 with file SPIRE_AIT Document List+comments290604.doc
7	For IID-B 3.3, SPIRE to complete the front page annex 5 (HDD deltas) with update of differences between current agreed configuration and HDD 1.1	7/7/04	SPIRE	Closed by HDD 1.1 Deltas SPIRE-RAL-NOT-001819 issue 4 dated 08/07/04 (by mail DG 09/07, included in IIDB 3.3 annex 5)
8	SPIRE to review and comment the document "H-EPLM EMC test Plan HP-2-ASED-PL-0037", and to propose data for the TBD	09/09/04	SPIRE	Open New due date (SPIRE AIT Meeting) agreed during SPIRE PT#10
9	Organise Technical meetings (ASED/ASP + SPIRE) in order to prepare the EMC test specification / Procedures.	15/7/04	ASED/ASP	Closed by mail HP-ASED-EM-0644-04 dated 28/07

From previous meetings

N°	ACTION DESCRIPTION H-P-ASP-MN-4776 SPIRE IF Telecon 28-04-04	DUE DATE	Firm / person	ACTION STATUS
10	SPIRE to deliver detailed list of all necessary equipment to perform EQM tests .To be also added in IID-B section 5.16	09/09/04	30/06/04	Open Should include the interfaces to electrical test equipments (weight, size (DRCU power supply for instance) New due date (SPIRE AIT Meeting) agreed during SPIRE PT#10

From SPIRE Progress Telecon's

N°	ACTION DESCRIPTION Progress Telecon #	DUE DATE	Firm / person	ACTION STATUS
SCI-PT-29150 - SPIRE IF Telecon # 9 _ 23-07-04				
1	B. Collaudin to answer by email who at ASP side will be the contact person to address this issue (design and construction guidelines for the warm interconnecting harness.)	03/09/04	ASP	Open During SPIRE PT#10 Bernard promised to clarify immediately after the telecon.
2	SPIRE to answer on ASED email HP-ASED-EM-0564-04 from 25.06.2004 (baffle between the instrument shield and the HIFI LOU entrance)	30/07/04	SPIRE	Closed by mail B.Swinyard dated 26/07
SCI-PT-21435 SPIRE Progress Telecon #2_ 29-10-03				
3	SPIRE to issue the Harness Definition Document version 1.2, which will reflect HDD1.1 plus update according annex 5 of SPIRE IID-B version 3.0 "SPIRE HDD 1.1 Deltas"	16/11/04	SPIRE	Open Problem of availability. Patches in IID-B are equivalent (HDD 1.1 + patch v.3 (tech not v3.0 should be replaced in IID-B). Keep open. SPIRE shall issue this HDD with corresponding CR to IIDB 3.2 New due date (SPIRE IQR kick-off) agreed during SPIRE PT#10