
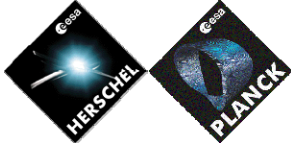
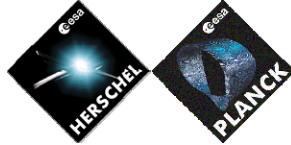
 Herschel Planck		REF.: H-P-TAS-MN-10030		
			DATE : 18-01-08	PAGE : 1/6	
MINUTES OF MEETING			PLACE : ESTEC		
PURPOSE :			CLASSIFICATION :		
Herschel TVTB test preparation					
ATTENDEES	FIRM	SIGNATURE	ATTENDEES	FIRM	SIGNATURE
A. Dowell	RAL		J. Kroeker	ASED	
H. Feuchtgruber (by telecon)	PACS		G. Jahn	ASED	
W. Laauwen	SRON		C. Jewell	ESA	
B. Swinyard (by telecon)	RAL		M. Linder	ESA	
Y. Roche	TAS-F		M. Cairola	TASI	
B. Collaudin	TAS-F		M. Theunissen	DS	
B. Demolder	TAS-F				
WRITTEN BY :		B. Demolder / Y. Roche			
CONCLUSION :					
DISTRIBUTION : ATTENDEES	FOR FURTHER ACTION :				
	FOR INFORMATION :				
APPROVED BY					
NAME					
SIGNATURE					

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	ACTION
<p>Review of the test spec (H-P-2-ASP-TS-0997 iss2)</p> <p>See annex 1, Presentation by TASF.</p> <p>There sets of comments have been issued , two by ASED, one by ESA. The last batch of ASED comments will be discussed in detail in another meeting, but comments related to instruments will be clarified.</p> <p>The AFT phase can be optimized by combination with Launch autonomy phase.</p> <p>Many phases are foreseen, related either to PLM, SVM, instruments..., running often in parallel. The organization of transition from phase to phase will be clarified and simplified in the frame of procedure elaboration.</p> <p>PACS can not switch to parallel mode without having recycled the cooler.</p> <p>The parallel mode in TB cold and hot will be replaced by PACS and SPIRE in Prime mode/ REDY mode.</p> <p>The difference between parallel mode and PACS/SPIRE prime will be checked.</p> <p>During real LEOP phase, all instruments are OFF. During the test, instruments are in standby or prime, hence dissipating on the FPU. The impact of all Instruments dissipation on LEOP phase will be checked.</p> <p>Dual cooler recycling during instrument testing: Parallel mode will be tested during SOVT (recycling of coolers shifted by ½ hour). see PT-CMOC-OPS-PL-6212-OPS-OAH, SOVT plan. But the massflow will be very high compared to TV/TB conditions.</p> <p>The commanding of parallel mode is normally performed through MTL. In fact, this phase will be a combined recycling of PACS/SPIRE coolers (shifted by 1/2h), and not the parallel mode as run in flight. This combined recycling phase is a thermal test only, not functional.</p>	<p>#A11</p> <p>#A12</p> <p>#A13</p> <p>#A14</p>



MINUTES OF MEETING

PLACE : ESTEC

PACS will provide the script for cooler recycling to SPIRE.

A specific script has to be developed for combined cooler recycling by SPIRE, which will include the PACS script. To be included in the procedure.

Instrument I/F testing:

Spire proposes a draft sequence of testing. Instr I/F test will also have SMEC high res mode with saw tooth Smec coil current and PTC. The proposal includes tests that can be performed outside (L0) or inside (L1/L2) the chamber.

No slot is yet available outside the chamber.

Pacs states that no heater located close to I/F can be activated. Pacs thermal model has not been correlated.

Hifi plans to issue a correlated model by mid February.

Instrument testing:

In flight conditions on temperature and mass flow can not be reproduced at the same time in the LSS chamber.

Close to in-flight temperatures can be obtained with a mass flow of ~3,5 mg/s. An increase of temperatures will occur if the massflow is switched to 2,2 mg/s.

In case of 3,7mg/s massflow, the response to a heat pulse would be divided by ~2 wrt 2,2 mg/s.

All parties agree that the massflow during instruments test phase will be adjusted in order to get representative temperature on the optical bench (typical value 3,5 mg/s).

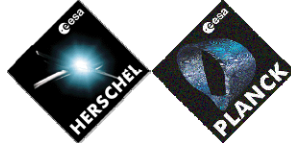
SPIRE will confirm if they request a change of massflow for the I/F verification.

Conditions for cooler recycling during test:

During the recycling of cooler, the cryostat has to be tilted by -20°.

During a previous filling operation, shut down of the pump occurred due to large mass flow caused by He film/bulk creeping in the He S/S lines. This may occur during the tilting of cryostat as HTT outlet and V104

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are close to liquid level.

The filling level will be adjusted in order to avoid this increase of massflow.

In case of large increase of massflow or pump shutdown, the V104 will be closed, cooler recycled, Cryostat tilted back to vertical before V104 opening and the following cooler recycling operations will be performed with a closed cryostat.

HIFI needs the same orientation throughout their test for calibration purpose

All HIFI test will be performed in vertical orientation.

All SPIRE/PACS tests will be performed in tilted orientation unless shut down of pumps.

Instrument test sequence

HIFI:

HIFI original sequence has been extended and modified in iss 2 of test spec.

To allow more time to HIFI for data analysis after INST-HIFI 3, the INST-PARA (Dual cooler recycle) phase will replace INST-PACS and vice versa.

HIFI request two additional slots of testing.

- AOT test, duration 20hours.
- RIPPLE investigation, 7 hours. Switch power source to BAT SIM.

TASF comment, if LCU filter is implemented for TV/TB, this phase may not requested.

Those two test slot requests shall be addressed to ESA.


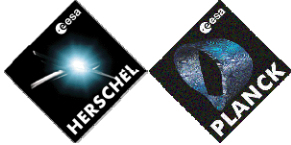
HIFI TV test procedure and test scripts will be available w.5.

SPIRE:

The principles of SPIRE test phase are given in TS-1083.

SPIRE procedure, resp. test scripts, will be available end of January, resp. mid-February for I/F test, TB, dual cooler recycle test with PACS .

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<p>Launch lock (LPU) test will be performed during TV/TB with NO actuation of launch lock . LL open can be performed by SPIRE command only while LPU test is performed through SVM commands.</p> <p>PACS: PACS procedure and test scripts are available. Among the four cooler recycling planned in the test sequence, only two are mandatory, nominal (within FFT sequence) and redundant. The two other recycling are optional. At TRR, The decision to perform those optional recycling will be taken, based on hold time observed during SPT test.</p> <p>Procedures: ASED will distribute the list of procedures to be issued and the associated need dates. ASED distributed a draft of step by step integrated procedure. Comments to this ITP will be provided by end of w.4</p> <p>TV/TB test specification will be updated according to this MoM, to MoM H-P-TAS-MN-9977 and to comments issued by ASED.</p> <p>Predictions: TASI is moving to ESATAN 10.0 ESA will check the possibility to transfer the PLM model to Version 10.0 Test predictions TBD by ESA</p> <p>Functions: The Control of the spacecraft remains under AIT team, whatever the kind of test performed.</p> <p style="text-align: center;">END OF MEETING</p>		#A17	#A18
		#A19	

ACTION ITEM LIST

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PURPOSE :

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ACTIONS					DATE
Origin	N°	Status	Description	Responsible	Due
	1		The difference between parallel mode and PACS/SPIRE prime will be checked.	TASI	31/01/08
	2		The impact of all Instruments dissipation on LEOP phase will be checked.	ASED/TASF	31/01/08
	3		PACS will provide the script for cooler recycling to SPIRE.	PACS	31/01/08
	4		A specific script has to be developed for combined cooler recycling by SPIRE, which will include the PACS script. To be included in the procedure.	SPIRE	15/02/08
	5		SPIRE will confirm if they request a change of massflow for the I/F verification	SPIRE	31/01/08
	6		Those two test slot requests shall be addressed to ESA.	HIFI	31/01/08
	7		ASED will distribute the list of procedures to be issued and the associated need dates.	ASED	31/01/08
	8		ASED distributed a draft of step by step integrated procedure. Comments to this ITP will be provided by end of w.4	ESA/TASF/TASI/Instr	25/01/08
	9		ESA will check the possibility to transfer the PLM model to Version 10.0	ESA	29/02/08