

ALCATEL

SPACE

HERSCHEL/PLANCK

REF.: H-P-ASP-MN-3408

DATE: 16/7/03

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COMPTE RENDU DE REUNION / MINUTES OF MEETING

LIEU / PLACE: Cannes - Alcatel

OBJET / PURPOSE:

CLASSIFICATION:

instrument schedules and deliveries

Splinter Meeting

PARTICIPANTS ATTENDEES	SOCIETE FIRM	SIGNATURE SIGNATURE	PARTICIPANTS ATTENDEES	SOCIETE FIRM	SIGNATURE SIGNATURE
see attached list			Collaudin		
			O. H. Poite		
			N. Ruhe		
			J. J. Tulliet		
			T. Passvogel		
			Kwafelbakkor		
			E. Sawyer		
REDACTEUR / WRITTEN BY: B. Collaudin					

CONCLUSION:

DISTRIBUTION :
PARTICIPANTS /
ATTENDEES

POUR ACTION :
FOR FURTHER ACTION

ESA, ASTRUM, PACS, SAIRE, HIFI,
Alenia HFI, LFI

POUR INFORMATION :
FOR INFORMATION



APPROUVE PAR / APPROVED BY

NOM / NAME

SIGNATURE /
SIGNATURE

Participants listschedule splinter meeting

NAME	Company	Name	Company
Juillet J-J	ASP.	P. MUJI	ALENIA
Collaudin B	ASP	H. FAAS	Astrium/EADS
J. Charva	IAS	D. Schinke	Astrium
Suy GUYOT	IAS	G. LUND	ALCATEL
M. BALASINI	CAB	E. Hölzel	Astrium/EADS
R.C. BUTLER	IASP/CNR	H. Peitzker	Astrium/EADS
Carsten Schramberg	ESA	W. Tühe	Astrium/EADS
JP CHARBELLAND	ALCATEL	C. CROWE	ESA/ESTEC
J. MARTI CANALES	ESA	G. Pilbratt	ESA
Luis Aloy	ESA	E. SAWYER	RAL; SPIRE
OSVALDO PIERANTI	ESA	MATT GRIFFIN	CARDIFF; SPIRE UNIV.
A. HESKE	ESA	D. MONTET	ALCATEL
T. Passvogel	ESA	G. DOUBROVNIK	ALCATEL
J.C. Boschel	ASP		
O.H. Pœuier	MPE		
A. Poglitsch	MPE		
C. Wafelhaekker	SRON		
Th. de Graauw	SRON		
H.K. von Lüding	Astrium		
MONICA CHIAPPOSIO	ALENIA		
M. SUIVA	ALENIA		
G. DE BERNARDI	ALENIA		
M. CESA	ALENIA		

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Objective of the meeting:

agree on a set of delivery dates for instruments QM - AM - FM which are a realistic baseline for all parties.

1) planck schedule. (see annex 1)

QM staggered delivery: Feb to April 04

Questions 1) why DPU are needed early.

Participation of IIF & Database.

e) LFI express the need to perform an early test of the 1533 IIF.

+ instrument EGSE vs CCS.

- Alcatel replies that PLM EGSC is delivered in Sept 03, and that test should be possible Oct-Nov 03.

- ESA stress that this should be debated in AIV meeting.



- HFI DPU could also be tested at the same period

SUITE / CONTINUED:

3) Alcatel repeat that we need definition of the RAA. (FPU & BEU) to start manufacturing of RAA STM

LABEN reply that the CAD files & ICD's are available for delivery, but not manufacturing or detailed drawings

ACTION

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SUITE / CONTINUED :

ACTION

- ESA ask why manufacturing drawing cannot be delivered.
- LABEN has replied to Alcatel Request in a fax.
- ESA ask formally LFI to deliver the manufacturing drawings.

4) Alcatel ask HFI / LFI their position on proposed delivery dates (annes 1)

QM

HFI: the proposed sequence (by HFI) is different.

- coolers are available earlier (except DCCU)

HFI sequence: + calibration of instrument
↓ general Electrical verification.

so DPU would be available later.

~~DATA:~~

FPU : 15 June 04.

DPU : 2 weeks to 1 month later.



4K cooler : earlier than 1/4/04

DCCU Not before May 04.

REU/PAU (Bellow) : with FPU

SUITE / CONTINUED :

ACTION

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Globally: HFI is late by \sim 4 months wrt proposed schedule.

precision - FPU Assembly means HFI + LFI integrated Together
 HFI FPU would be necessary early February 04.

Alternatives: DCCU could be replaced by a DGSE if too late (ie tanks if DCCU would be located outside of the CSL chamber)

- the Alcatel ^{QM} need dates are accepted as a target by HFI
- It is also accepted that the dilution control will be outside of the chambre.



SUITE / CONTINUED :

ACTION

FM - planck dates are about 1 year later (February to March 05) than QM.

HFI states that they are not compliant by \sim 2 months with these dates (31 March) ability to recover on CQM might change these dates.

Again - need date for FPU means HFI + LFI (+ 1 month)

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LFI current availability date ^{could be} 25/01/05 (goal)
 if no vibrations on RAA are necessary.
 otherwise, it is early 2/04/05 (baseline)

Alcatel states that planck ^{FM} vibrations are only end 2005. i.e. late with respect to discovery of problems

LABEM proposes to have vibration test on each set of Wave guides.

LFI ask for an expert discussion on the mechanical qualification of WG

- Alcatel will organise such a meeting - solution could be to integrate W Guides on STM - Pb is RF verification

- AI 1

SUITE / CONTINUED :

ACTION



- FPU (RAA) & scorpion cooler are integrated ~ together

- ESA states that the current need date for FPU (assembly 1/2/05) represents one month ^{earlier} wrt earlier agreed dates.

- delivery dates in I/O A 3.0 are 1/2/05.

- LFI ask for a need date for LFI AVM current need date is 01/3/05 (includes 15 days inspection)

LFI express a concern for supporting both the AVM campaign (system) and LFI

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FM campaign :

- HFI ask if "all the rest" in annex 1 includes SCE. answer is yes -

proposed dates are need dates w/ Satellite integration & testing (for a Sept 06 delivery to ESA) - they will be included in WDA -

SUITE / CONTINUED : Herschel

ACTION



need dates are proposed in annex 1.

- CQM Warm units . 7-Jan 04
- CQM FPU 31 March 04
- PFM WU & FPU 31 Jan. 05

these dates were negotiated with Astrum in the rationale : PFM have been fully tested together (ie no staggered delivery for PFM)

for CQM, the staggered delivery correspond to integration & verification of warm units & interface.

- AIFI propose an alternative to check the FPU electrical I/F. before closing the cryostat using dedicated EGSE.
- what would be then the need dates for WU ?

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- it is not possible to switch on the instrument warm units with FPU in warm conditions: electrical ^{health} check can be done.

For QM, integration of FPU on optical Bench takes place about 1 month after need date (early May for QM)

SUITE / CONTINUED:

(but this is linked to the delivery date of DBA, not accepted yet by ASED).

For FM 7/02/05 for warm units and 15/06/05 for FPU's (actual integration dates)

ACTION

PACS instruments state that CQM could be delivered near April 04 ^(to be optimised) but FM schedule is not stable enough to commit to any dates - clarification will not be done before fall 2003.

SPIRE: warm units are late compared to FPU. (which could be on time (end Jan 05)) in addition, warm units FM would have never been connected to FPU FM (DRCU).

HIFI QM would like to keep the LSU ^{QM} longer than expected.

- Spectrometers cannot be in CQM & AVM
- FM is still not ready before Oct 05.

Summary

for CQM, the schedules are marginally compliant - (to be optimised) - a solution can be found (=> dedicated working meeting to be organised)

for FM: a target date has to be found. for FM deliveries which allow to keep the launch date.

- delivery date of January 05 is not realistic for instrument
- Target date of May or June 05 is more realistic.

ACTION

Action

A12

25/7/03

- Assuming 1 week per instrument (with TBD EGSE) to verify the health of the FPU, Astrium should propose new Need date (scheduled exercise) for instrument FPU (e EGSE) (exercise technical concepts)

- instrument will prepare for this FPU verification (CQM & FM)

A I 3, 4, 5

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ACTION ITEM LIST

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MEETING TITLE:

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INITIATOR Firm / person	ACTION			DATE
	N°	DESCRIPTION	ACTIONEE Firm / person	DUE
	1	Alcatel will organise an expert meeting on the Mechanical validation/qualification of LFI wave guides	J.D. Chamberland	25/7
	2	Astrum will perform a schedule exercise, (assuming 1 week per instrument to verify the FPI inside the crystal) to define what would be need dates for instruments (for QM & FM)	Astrum W. Rine	25/7.
	3	PACS } will prepare a technical concept for FPI verification inside the crystal (QM & FM)	PACS: O. Bauer	25/7
	4		SAIRE: E. Sauryer	
	5		HIFI: K. Wafelbakker	



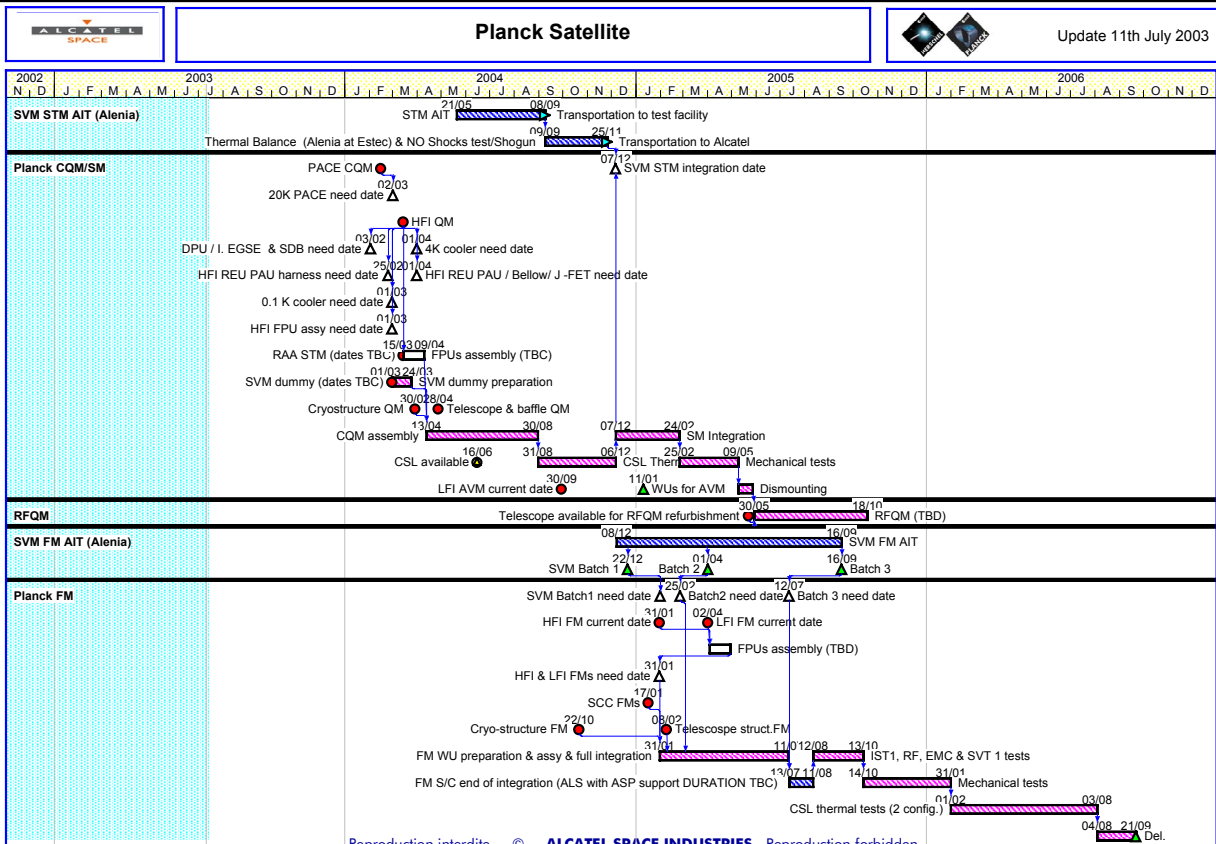
Instruments Schedule & Deliveries

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1

IA025-A

Planck Schedule Status



2

IA025-A

Assumptions :

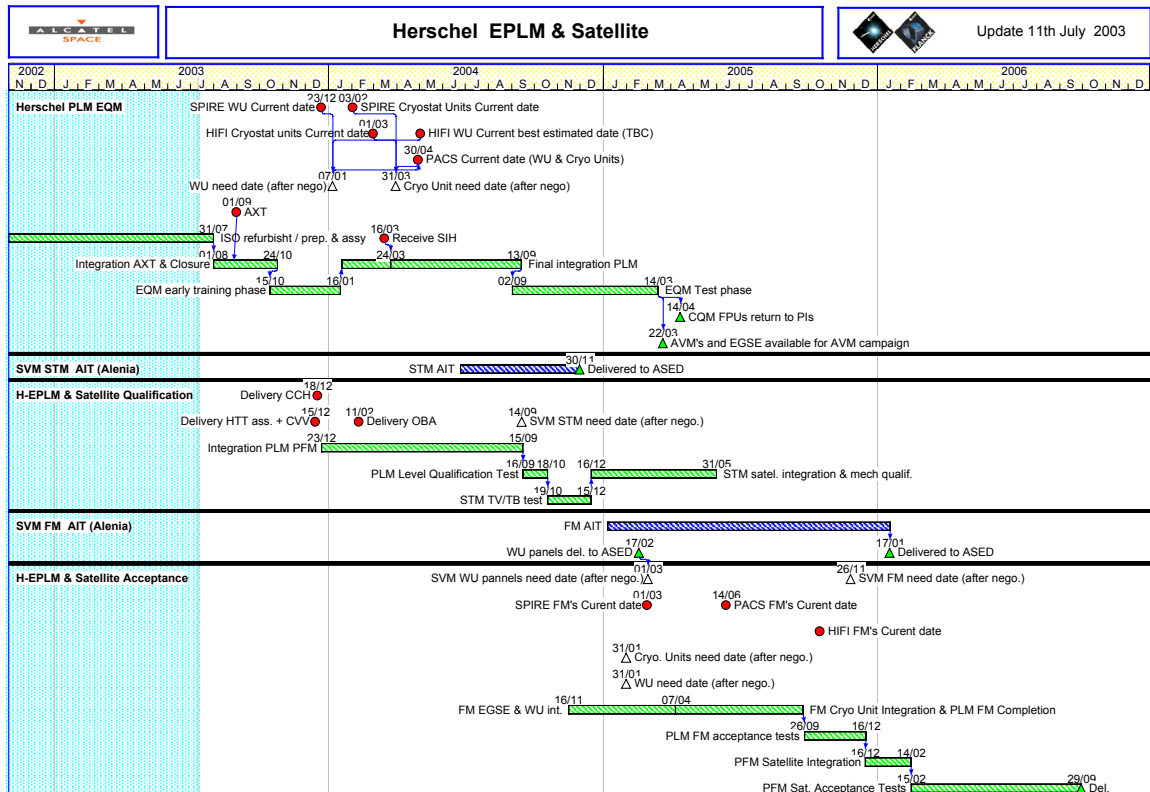
- ▼ Unit / "subsystem" qualification & acceptance completed at instrument level;
- ▼ LFI / HFI FPU FM integrated by a combined LFI / HFI team (in Cannes as proposed or anywhere else). If needed, post assembly checks made;
- ▼ support & assistance to piping integration and checks is provided by instruments team to Alcatel in Alcatel Cannes clean rooms

CQM :

- ▼ DPU | EGSE & DB 02/02/04
- ▼ REU / PAU harness 25/02/04
- ▼ HFI FPU assembly 01/03/04
- ▼ 20K PACE / 0.1K cooler 01/03/04
- ▼ 4 K cooler 01/04/04
- ▼ REU / PAU / bellow / J-FET 01/04/04

FM :

- ▼ RAA assembly (HFI & LFI) 01/02/05
- ▼ DPU & REBA 01/02/05
- ▼ SCC FM x 2 01/02/05
- ▼ 0.1K cooler 01/02/05
- ▼ Harness REU / PAU 01/02/05
- ▼ all the rest 01/03/05



MILESTONE DESCRIPTION	CURRENT DATE	NEED DATE (nego)
Spire WU	23/12/2003	07/01/2004
Pacs WU	30/04/2004	07/01/2004
Hifi WU	01/05/2004	07/01/2004
Spire FPU	03/02/2004	31/03/2004
Pacs FPU	30/04/2004	31/03/2004
Hifi FPU	01/03/2004	31/03/2004
Spire FM's WU	01/03/2005	31/01/2005
Pacs FM's WU	14/06/2005	31/01/2005
Hifi FM's WU	01/10/2005	31/01/2005
Spire FM's FPU	01/03/2005	31/01/2005
Pacs FM's FPU	14/06/2005	31/01/2005
Hifi FM's FPU	01/10/2005	31/01/2005

As per negotiation with Astrium-D, the AIT need dates (arrived at Integration site) are :

- ▼ CQM WU's : 7 Jan 04
- ▼ CQM FPU's : 31 Mar 04
- ▼ PFM WU's & FPU's : 31 Jan 05

The PFM cold and warm units are needed together for having the required common Short Functional Test of real flight hardware (and Cryo harness) before the PFM Cryostat closure.

The entire link warm unit / I-EGSE / PLM EGSE shall be properly tested and validated before the Cryostat AIT phase.

- Both

- ▼ PFM WU's / FPU's check before closure cancellation,
- ▼ and the FM link WU's / updated I-EGSE / updated PLM EGSE be checked at the latest,

are unacceptable risks for Industry.

- Contractual baseline shall remain =

- ▼ Instrument real Flight configuration (WU's & FPU's serial numbers) formally tested and accepted at Instruments premises before delivery.

- Industry do not intend to require Instrument delivery before real need.