ALCATEL SPACE	**HERSCHEL/PLANCK**	REF. : H-P-ASP-MN-3485	
		DATE : 28/07/03	PAGE : 1/
COMPTE RENDU DE REUNION / *MINUTES OF MEETING*		LIEU / *PLACE : teleconf*	

OBJET / *PURPOSE :*

CLASSIFICATION :

Review of WIH comments (Instruments + ASED)
in order to release routing final definition

PARTICIPANTS *ATTENDEES*	SOCIETE *FIRM*	SIGNATURE *SIGNATURE*	PARTICIPANTS *ATTENDEES*	SOCIETE *FIRM*	SIGNATURE *SIGNATURE*
Pletinckx K.	NXH				
Dassy S.	NXH				
Bottaro G.	ALS				
Marchand B.	ASP				
REDACTEUR / *WRITTEN BY* : Marchand B.					

CONCLUSION :

HERSCHEL :

- Finalisation of harness routing can start where no interference is detected.
- Comments from Intruments to take into account
- interference with CryoH. to be solved before ending final routing in concerned areas.

PLANCK :

- finalisation of harness routing can start
- REU-PAU harness study to be carried out by NXH (basing on ASP concept)
- LFI BEU still unknown

NXH feedback on schedule is expected (delivery of final routing)

DISTRIBUTION : PARTICIPANTS / *ATTENDEES*		
	POUR ACTION : *FOR FURTHER ACTION*	ALS (Bottaro G.) / ASED (Lang J.+ Fehringer A.) / NXH (Pletinckx K.) / ASP (Marchand B.) HIFI / SPIRE
	POUR INFORMATION : *FOR INFORMATION*	PACS / HFI / LFI / SCS ASP : B.C/JPC/GD/GL/OF/PhC/PR/JJJ

APPROUVE PAR / *APPROVED BY*				
NOM / *NAME*				
SIGNATURE / *SIGNATURE*				

SUITE / *CONTINUED* :

ACTION

General Point :

A database common to ASED/ALS/NXH shall be managed by ASP to group following documents :
- Warm Units mechanical ICDs
- WU electrical ICDs + all relevant documents
- WU CAD models in line with the list
- SVM CAD models
- CAD models of harness routing

A list will be created, maintained and distributed by ASP to all parts at each update. The info will be available on the ftp server.
Official CRs shall then follow the updates.

The list of the WU MICD is given in annex 1 of the present MoM.

Access to the server has to be given to Nexans. — AI#1 ASP 31/08/03

Review of ASED comments

(refer to mail sent on 28/07/03 and given in annex 2 and also to MoM H-P-ASP-MN-3422).

PACS panel

1) Agreed by Nexans who will assess it and reduce the place taken by WIH+SVMH. — AI#2 NXH 31/08/03

2) Information to be cross-checked basing on own document and with next database — AI#3 ASED / NXH / ASP 05/09/03

Additional :
- DECMEC : to avoid interference between WIH and CryoH. on top side of DECMEC, NXH will route the bundles via the other sides (same for internal H.). When not possible, H. volume taken shall be minimised and routed as close as possible to the units (fixed to it)
- BOLC : H. other than Cryo running on the unit stay as is (fixed on left side of the unit and minimised volume). Cryo to be updated by ASED taking this constraint into account.

SPIRE panel

1) agreed by NXH, will be updated accordingly — AI#4 NXH 31/08/03

2) OBDH routing has been updated and is shown in Annex 3. ASED shall shift upward their supports to avoid interference with this H.. OBDH cannot be routed lower because it is not compatible with Pwr H. (red) – different EMC class-. Eventually, ASED can add a support in-between Pwr H. (red) and Signal H. (blue) — AI#5 ASED 31/08/03

3) Agreed in the principle by NXH, occupied volume will be minimised (alternate tie-bases, to reduce inter-bundles distance, and bring harnesses closer to the unit may save 20 mm) — AI#6 NXH 31/08/03

Additional :
- major interference between CCH and SVM H. in CCU lower left corner area. The routing here is under assessment by ASED and feedback is expected, NXH does not need to modify its design for the moment. — AI#7 ASED 31/08/03

HIFI –Y-Z panel

1) ALS and ASED feedback expected before updating / finalising of the routing in FCU/Up-converter area by NXH.

HIFI –Y

1) Due to EMC class separation, Signal H. above LSU cannot be brought closer to the unit (presence of PWR H.). NXH proposes to route FHLCU Signal H. on the lateral panel toward left side, through the 2 cut-outs in left shear web. This has to be first checked with ASED.
PWR H. already runs close to LSU and LCU, if still possible, volume occupied will be minimised. — AI#8 ASP/ASED 01/08/03

2) Information to be cross-checked basing on own document and with next database — AI#9 ASED / NXH / ASP 05/09/03

3) See 1)

Star Trackers H. routing

Star Trackers H. routing will be studied once the final accommodation has been reached.

Telescope harness

CAD model giving new location for this bracket to be sent to NXH by ALS — AI#10 ALS 01/08/03

Review of instruments comments
(refer to mail sent on 22/07/03 and given in annex 4)

HERSCHEL

HIFI Instruments

1) In principle, EMC class separation has been taken into account, to be checked when finalising routing. — AI#11 NXH 31/08/03

   Following example has been given : "One example are the IF semi-rigid cables, which run from left to right over the HIFI -Y panel and in the same area also cables with other EMC classes are routed. »

   HIFI shall clarify and identify all areas that do not respect the criterion. If not, Industry cannot guarantee that all constraints have been understood nor taken into account. — AI#12 ASP/HIFI 01/08/03

2) This comment applies to WEV-WOV and WEH-WOH harness routing

3) 4) OK, will be implemented for final routing

5) the new backshells (see Annex 4 bis) impacts strongly the definition of the routing in WOH/V and WEH/V areas (interference with other bundles routing near units like semi-rigid cables). This will be assessed during final routing. — AI#13 NXH 31/08/03

   Remark : if problematic, semi-rigid cables could be heightened / panel by using of shims.

SPIRE

1) Comment not understood, please clarify.
All Tie-bases implemented are TC-105 ones supporting elementary bundles each. Sometimes bundles are running in parallel. — AI#14 ASP/SPIRE 01/08/03

PACS

1) backshells type is of NXH responsibility.

2) Comment not understood because FHFPU is not in SVM

PLANCK

HFI 4K subsystem

1) on 4K CDE, J9 (15 way connector) connects to one of the "unused" D Connnectors on the compressors (Specifically C137P). This carries the AD590 temperature sensors on the compressors (Compressor A & B temperatures and PPO A & B temperatures).

2) The small connector on 4K CAU does not connect to the CDE (previously J9) but runs along the pipe up to the disconnection box (see picture in Annex 4 ter).

3) Information shown in Annex 4 quarterio extracted from document SEA/02/TN/3683 IC-PHDC-000064-SEA Issue 1 draft A dated from January 03 which has been sent to ALS/NXH already.

Additional :
An issue of the REU-PAU harness study made by ASP is that REU has to be lowered of 20 to 25 mm on the lateral panel. The bundles routing between 4K CDE and REU shall then be grouped to form a single bundle either routing still on the panel or fixed to the 4K or REU lateral side.

Routing can be finalised.

HFI 0.1 K subsystem

No point

Routing can be finalised.

HFI DPU

No point.
NXH indicates that DPU nom and redundant are identified. Nevertheless this has no impact as it is only a writing play, so NXH can stay with its assumption (DPU nom on left side of panel). TBC ASP

AI#15 ASP 05/09/03

Routing can be finalised.

HFI REU-PAU harness

ASP will transmit the CAD models by mail to ALS/NXH giving the configuration retained for the routing.

A dedicated discussion shall be held between ASP/NXH/ALS after review of the CAD model CW#31.

Harness AIT description :

1) harness is first set on the subplatform, then connected to PAU. It is also preliminary set in SVM running through upper closure panel cut-out (along subplatform), then on cone over pipes.
2) REU is integrated on the lateral panel (horizontal position) with other units and cabling of all units on panel is in place (certainly prior to units setting).
3) Lateral panel starts being tilted with its MGSE up to a angle of 50°/60° wrt horizontal (limit angle allowing accessibility to REU connectors).
4) Connectors are mounted on REU.
5) Lateral panel is tilted vertically, harness is finally set on rest of the cone and on shear web up to REU.

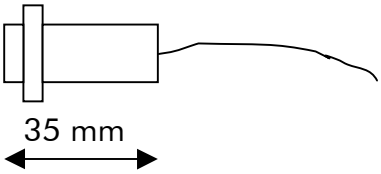
NXH is expected to support ASP globally but mainly for point 1) –design of cut-out- in upper closure panel-, point 3) –checking of the panel tilting and for REU position adjustment.

NXH will finalise the routing and update LFI routing (BEU/DAE & BEU/REBA) to match with it.

The constraints are :

- 12 cables of ∅15 mm splitting in 2 bundles of ∅9 mm on PAU side and on 7 bundles of ∅6 mm on REU side.
- Maximum length end-to-end of 5 m
- No interruption

- Identical lengths (end-to-end) for each cable, or at maximum 3 different lengths (to minimise harnesses spare numbers)
- PAU backshells : DC37 : DC 8949 405 1NM – IDS is shown in Annex 5-
- On REU side : 6 MWDM9 connectors and 1 MWDM25 connector, no backshell, they are molded. The distance from connecting plane to harness is 35 mm



- bundles shall be grounded every 200 mm as far as possible. A bonding strap (ribbon+pod) will go out of the bundle and grounded to the structure (max. length of the ribbon : 50 mm)

There is an error in REU ICD :

p. 30 :
PHCBC12-J06 becomes PHCBC12-J07 : REU PROC Module 12 Power +28V
PHCBC12-J07 becomes PHCBC12-J06 : High Speed Link with DPU-DP N

p. 31:
PHCBC13-J06 becomes PHCBC13-J07 : REU PROC Module 13 Power +28V
PHCBC13-J07 becomes PHCBC13-J06 : High Speed Link with DPU-DP R

LFI

No comment received except bundles characteristics shown in Annex 6 and transmitted by mail (file "Cables_Balax_1.xls")

BEU unit is still under development, and no design can be given at this moment. DAE and REBA are not expected to change so ***routing can be finalised in these areas***.

SCS

No comment has been received.
ASP to request for possibility to attach harness around SCCs connecting plate truss.

AI#16 ASP 01/08/03

Routing can be finalised.

	ACTION			**DATE**
INITIATOR Firm / person	N°	DESCRIPTION	ACTIONEE Firm / person	DUE
NXH	1	Access to server and common database	ASP / BM	31/08/03
ASED	2	Reduce place taken by WIH/SVMH	NXH/KP	31/08/03
ASED/NXH/ASP	3	DECMEC connectors interference between CryoH and WIH	ASED/NXH/ASP	05/09/03
ASED	4	Enlarge free-space area at FCU left	NXH/KP	31/08/03
NXH	5	Shift CryoH. support upward and implement one in-between PWR/Signal	ASED/JL	31/08/03
ASED	6	Reduce place taken by WIH/SVMH	NXH/KP	31/08/03
NXH	7	CCH to be re-designed in CCU lower left corner	ASED/JL	31/08/03
NXH	8	Check possibility to route LCU Signal through shear web cut-outs	ASP/ASED	31/08/03
ASED/NXH/ASP	9	DECMEC connectors interference between CryoH and WIH	ASED/NXH/ASP	05/09/03
NXH	10	CAD model of Cone bracket for Telescope Heaters to be sent	ALS	01/08/03
ASP	11	Check segregation of all different bundles	NXH	31/08/03
NXH	12	Identify problematic areas	HIFI/ASP	01/08/03
ASP	13	Check backshells implementation	NXH	31/08/03
NXH	14	Clarify comment	SPIRE/ASP	01/08/03
NXH	15	Clarify which DPU is nominal and redundant	ASP	05/09/03
NXH	16	Ask for possibility to attach harness on SCC connecting plate	JPL/ASP	01/08/03