

## Minutes of Meeting

Date: 14.01.2005

**Herschel**

Doc.-No.: HP-2-ASED-MN-0875

Meeting place: Telecon

Chairman: B. Kettner

Date/Time: 14.01.05 / 12:30

Secretary: C. Schlosser

Agenda dated:

Close of Meeting:

Subject: NRB to Flexible Link NCR's

Participants:

O. Bauer	MPE
M. Thiel	MPE
J. Schubert	MPE
G. Jakob	MPE
A. Heske	ESTEC
J. Rautakoski	ESTEC
C. Scharmberg	ESTEC
C. Jewell	ESTEC
W. Pinter-Krainer	ESTEC
K. Wildeman	SRON
A. Knight	ASP

Participants: B. Collaudin ASP (14:00)  
 (cont'd) S. Idler ASED  
 E. Lamprecht ASED  
 P. Mack ASED  
 B. Kettner ASED  
 D. Schink ASED  
 C. Schlosser ASED

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Brief-Minutes (except following sheets)

Summary of Results of Sheets 2 till



Reference	Results	Remarks
	<p>In this meeting consequences on the flexible link NCR's raised during a fit check with the PACS FPU and HIFI FPU during their integration have been discussed. The related NCR's are: HP-50000-ASED-NC-0626/0627/0628 (PACS) and HP-142511-SRON-NC-0653 (HIFI).</p> <p>The following agenda has been agreed during the meeting:</p> <ol style="list-style-type: none"> <li>1. Status of Requirements</li> <li>2. Reasons for Anomaly</li> <li>3. Recommendations</li> <li>4. Next Steps</li> </ol> <p><b><u>1. Status of Requirements</u></b></p> <p><b>IID-B of PACS:</b>        50 N for Photometer for static mechanical loads        108 N lateral, 2680 N axial, 1.8 Nm torque for Red &amp; Blue Detector        50 N requirement for the flexible links has been handed over to Sener.</p> <p><b>IID-B of HIFI:</b>        Mass of 120 g specified for all flex links</p> <p>2 NCR's have been raised on unit level:        HP-121144-AIRL-NC-0569 has been raised on the flexible links delivered to ASED because the mass requirements of some links are exceeded:</p> <ul style="list-style-type: none"> <li>• OBTL 0 PACS Cooler evaporator H0400E110 A3 is 314 g (290 g specified)</li> <li>• OBTL 0 HIFI H0400E114 A4 is 227g (166 g specified)</li> </ul> <p>HP-121144-AIRL-NC-0434 has been raised on the L0 HIFI and PACS Red detector flexible links because they cannot be elongated according to the displacement requirements.</p>	



Reference	Results	Remarks
	<p><b><u>2. Reason for anomaly:</u></b>            All parties agree that the problems with the flexible links, detected on the EQM, will be the same with the PFM.            There are no ICD problems.            Top level requirements from instruments are not clearly enough defined to allow a top down approach of requirements -&gt; requirements could be misunderstood</p> <p><b><u>3. Possible Solutions:</u></b>  <u>PFM:</u> It seems that new flexible links are required for PFM (with a re-design and/or different material). According PACS information about 10 weeks is needed for design, manufacturing and qualification of links similar to the links used at PACS. Time needed for material procurement comes on top.   <u>STM:</u> The best would be that the new PFM links are already be used already with the MTD's, but programmatic aspects have to be regarded.   <u>EQM:</u> The best would be that the new PFM links are as well used for EQM. In parallel work around solutions shall be prepared for programmatic reasons.            HIFI raised constraints due to potential additional forces due to displacements coming from the shrinking during cool-down. This additional force – if any – could be analysed.             Programmatic aspects have not been discussed in that meeting and are not regarded in the recommendations!</p> <p><b><u>4. Recommendations:</u></b>            The following recommendations were made in the meeting:</p> <ul style="list-style-type: none"> <li>• Establish a <u>complete</u> set of mechanical and thermal requirements for he flexible links in an interaction between instruments and industry</li> <li>• Establish new design for the PFM taking into account the new set of requirements</li> <li>• Agree on work around solutions for the EQM using existing hardware</li> </ul>	



Reference	Results	Remarks
	<p>Lead of all activities is on Bernard Collaudin</p> <p><b><u>5. Next Steps:</u></b> A meeting is scheduled for 20.01.05 at EADS Astrium Ottobrunn at 09:30 to discuss mechanical and thermal requirements.</p> <p>E. Lamprecht will invite to that meeting.</p>	

Meeting:

Title:

Date:

## Action Item List

Herschel

No.:	Description:	Due Date	Originator Comp./Pers.	Actionee Comp./Pers.	Source	Completion
	No formal actions raised					

	Name	Dep./Comp.		Name	Dep./Comp.
X	Alberti von Mathias Dr.	AOE22			
	Barlage Bernhard	AED11			
X	Bayer Thomas	AET52			
	Fehringer Alexander	AOE13			
	Gerner Willi	AED11			
	Grasl Andreas	OTN/AET52			
	Grasshoff Brigitte	AET12			
X	Hauser Armin	AOE23			
X	Hendry David	Terma Resid.			
	Hinger Jürgen	AOE22	X	Alcatel	ASP
X	Hohn Rüdiger	AET52	X	ESA/ESTEC	ESA
	Huber Johann	AOA4			
	Hund Walter	ASE4A		<b>Instruments:</b>	
X	Idler Siegmund	AED432	X	MPE (PACS)	MPE
	Ivány von András	FAE22	X	RAL (SPIRE)	RAL
	Jahn Gerd Dr.	AOE23		SRON (HIFI)	SRON
	Kalde Clemens	APE3			
	Kameter Rudolf	OTN/AET52		<b>Subcontractors:</b>	
X	Kettner Bernhard	AET42		Air Liquide, Space Department	AIR
	Knoblauch August	AET32		Air Liquide, Space Department	AIRS
	Koelle Markus	AET22		Air Liquide, Orbital System	AIRT
X	Kroeker Jürgen	AED65		Alcatel Bell Space	ABSP
	Kunz Oliver Dr.	AOE23		Astrium Sub-Subsyst. & Equipment	ASSE
X	Lamprecht Ernst	OTN/ASI21		Austrian Aerospace	AAE
	Lang Jürgen	ASE4A		Austrian Aerospace	AAEM
	Langfermann Michael	AET52		APCO Technologies S. A.	APCO
X	Mack Paul	OTN/AET52		Bieri Engineering B. V.	BIER
X	Pastorino Michel	ASPI Resid.		BOC Edwards	BOCE
	Peltz Heinz-Willi	AOE13		Dutch Space Solar Arrays	DSSA
	Pietroboni Karin	AED65		EADS CASA Espacio	CASA
	Platzer Wilhelm	AED22		EADS CASA Espacio	ECAS
	Rebholz Reinhold	AET52		EADS Space Transportation	ASIP
	Reuß Friedhelm	AED62		Eurocopter	ECD
X	Rühe Wolfgang	AED65		HTS AG Zürich	HTSZ
	Runge Axel	OTN/AET52		Linde	LIND
	Sachsse Bernt	AED21		Patria New Technologies Oy	PANT
X	Schink Dietmar	AED422		Phoenix, Volkmarsen	PHOE
X	Schlosser Christian	OTN/AET52		Prototech AS	PROT
	Schmidt Rudolf	FAE22		QMC Instruments Ltd.	QMC
	Schweickert Gunn	AOE22		Rembe, Brilon	REMB
	Steininger Eric	AED422		Rosemount Aerospace GmbH	ROSE
X	Stritter Rene	AED11		RYMSA, Radiación y Microondas S.A.	RYM
X	Tenhaeff Dieter	AOE22		SENER Ingenieria SA	SEN
	Thörmer Klaus-Horst Dr.	OTN/AED65		Stöhr, Königsbrunn	STOE
	Wagner Klaus	AOE23		Terma A/S, Herlev	TER
	Wietbrock Walter	AET12			
	Wöhler Hans	AOE22			