

Minutes of Meeting

Date:	17.12.04	Herschel	
Doc.-No.:	HP-2-ASED-MN-0836		
Meeting place:	Otn	Chairman:	Lamprecht
Date/Time:		Secretary:	
Agenda dated:	IRR Std. Agenda on annex 1	Close of Meeting:	

Subject: **IRR** for Spire integration to PLM EQM

Participants:	H. Pinter-Krainer (ESTEC)	Additional Distribution:	ESA, ASP
	C. Scharnberg (ESTEC)		
	E. Sawyer (RAL)		
	A. Pearce (RAL)		
	S. Idler (ASED)		
	P. Mack (ASED)		
	T. Bayer (ASED)		
	E. Lamprecht (ASED)		

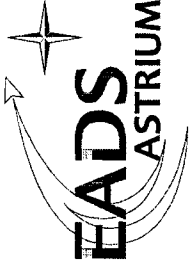
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<input type="checkbox"/> Brief-Minutes (except following sheets)	<input type="checkbox"/> Summary of Results of Sheets 2 till
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Summary and Conclusion :

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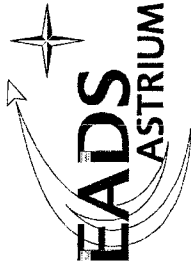


Reference	Results	Remarks
	<p>IRR Agenda :</p> <p>1. H/W Identification (Model, SN#, CI#, CIL) -PLM EQM CI: 150000</p> <p>-SPIRE CQM FPU + 2 JFET HS/ FPU CQ, CI: 142512-01, 142512-02, 142512-021, 142512-022</p> <p>2. Qualification / Acceptance Reference / Status of H/W to be integrated -Spire incoming and bench test successful performed SPIRE CQM FPU + 2 JFET are qualified in point of view to mechanical/ thermal and functional behaviour. Reports are included in the delivered EIDP. During incoming inspection a bench test was performed successful and therefore it is stated by RAL the SPIR is ready for integration to the PLM</p> <p>3. H/W ABCL Reference / Status -for ISO PLM EQM see HP-2-ASED-MN-0252 see Annex 1 S/N of major components -or Spire: there was an action to update the ABCL which have been performed closed by the document SPIRE-RAL-DOC-001971 issue 4.2 which has been handed over to ASED today.</p> <p>4. H/W ADP EIDP Reference / Status -for ISO PLM EQM see HP-2-ASED-MN-0252 - CCH: HP-2-CASA-DP-0005 - CIH: HP-2-CASA-DPÜ-0006 - OBA: HP-2-SEN-DP-0005 - OBHCL: HP-2-AIRL-DP-0008</p>	



Reference	Results	Remarks
	<ul style="list-style-type: none"> - MLI: HP-2-AAEM-DP-0002 - Electrical ring: HP-2-APCO-DP-0032 - Upper bulkhead: HP-2-APCO-DP-0043 - Delta TS: HP-2-AIRS-DP-0003 - SPIRE: RAL-PRJ-001898 <p>(Final issue 2 will be delivered by RAL at mid of December 2004)</p> <ul style="list-style-type: none"> -Delta tubing : HP-RILAM-ADP-0001 <p>5. Integration Procedure / Status</p> <ul style="list-style-type: none"> -EQM integration Part 1: HP-2-ASED-PR-0013, working copy -EQM integration Part 2: HP-2-ASED-PR-0014, working copy -EQM piping modification: HP-2-ASED-PR-0067, working copy -AXT Lo HP-2-ASED-TP-0033, working copy -OBA Harness HP-ASED-PR-0037, working copy -The OBA integration will be performed according to: OBA integration procedure HP-2-ASED-PR-0026, draft version available on site -SPIRE integration procedure: SPIRE-RAL-PRC-001923 available on site -ASED Spire integration procedure not yet available, to be formalized by procedure variation sheet or test change. <p>HIFI, PACS harness rails not yet available on site in OTN therefore it shall be checked to change the integration sequence in order to integrate first the OBA to the PLM and afterwards the instrument to the already integrated OBA.</p> <p>Closed: possible as checked by ASED</p>	<p style="text-align: center;">AI ASED</p>

Reference	Results	Remarks
	<p>6. DRB MoM</p> <p>The SPIRE DRB was performed on 11/ 12. 11. 2004 see H-P-ASP-5613 Review of action from the DRB see attached AI list AI 1: closed, JFET has been delivered AI 2: closed. LO strap will be delivered by SPIRE until the 15. of January 2005 AI 3: AI open the closure is announced for 15.december AI 4: Closed by document MSSL/ SPIRE/ PA016.01 which has been handed over to ASED today AI 5: Closed by the updated open work and shipping list which has been handed over to ASED today ,see attachment. AI 6: SPIRE EIDP log due date 15.12.04 AI still open AI 7: same as AI 6 AI 8: closed by document: SPIRE-RAL-DOC-001971 issue 4.2 AI 9: AI still open new due date 15. of December (AI ESA) AI 10: closed by the attachment SPIRE-RAL-REP-002237, issue 1 AI 11: verifications report provided, see SPIR-RAL-REP-002095 issue 1.0 AI closed AI 12: Qualification reference has been updated see SPIRE-RAL-DOC-002165; iss. 2, AI closed AI 13: Mistake in the Mom related AI list, since already same action as mentioned on AI 11 AI 14: Open until end of December AI 15: New due date agreed: 15. of December AI 16: Electrical bench test procedure not included in the EIDP , see update SPIRE RAL-NOT-002216 handed over today. AI closed AI 17: No response received; AI stays open, new due date 31.01.2004 AI 18: Alignment cube has been delivered and fitted to the FPU, AI to be formally closed until 15.12.04. AI SPIRE, update of the EIDP AI 19: ASED will provide a screw and grounding wire for each warm unit . AI considered closed! but AI to be transferred to the PLM EQ AI list! AI 20: AI closed (IDAS database verification test still to be performed not before end of February end of SPIRE PFM 1 ILT) AI 21: Same as AI8 (already closed)</p>	



Reference	Results	Remarks
	<p>AI 22: # 25 due date 15./ 12: still open AI 26: closed by PACS-MPE-MN-209; 23.11.2004 AI 27: open due date 25.12.</p> <p>see list of EIDP content SPIRE-RAL-PRJ-001898- Issue 2.0 attached to the moM</p> <p>All DRB related AI which could have affected the mechanical integration are closed!</p> <p>7. NCR's potentially affecting integration (H/W side, EPLM side) see attached NCR list</p> <p>THE PMIS NCR have been checked about NCR which could impact the SPIRE</p> <ul style="list-style-type: none"> - HR-SP-RAL-NCR-092 (see annex) <p>ASED clarified, that implementation of adapter (Ref. SPIRE-RAL-MoM-0022433) on the JFET's is not possible, due to missing clearance. Has to be finalized prior WU integration. Does not impact the mechanical integration of SPIRE</p> <ul style="list-style-type: none"> - ASER-0565 "OBA PFM cooling loop interference with FPA and LLP" Related to PFM, no impact to PLM EQM - ASER-0569 "Mass of thermal links out of specification" No impact for SPIRE since related only to HIFI and PACS - AIRL-0434 "Flexible thermal links cannot be elongated as required" no impact for SPIRE integration since the NCR is related to HIFI and PACS red detectors only no impact to SPIRE, only related to HIFI and PACS - AIRL-0499 "T 103 changed due to hardware failure no impact for SPIRE integration 	

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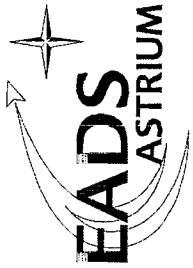
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Reference	Results	Remarks
	<p>- ASED-0528 "OBA cooling line in interference with the filling port" New brackets delivered and mounted as agreed, adoption of He line to be performed → open no Impact for SPIRE integration</p> <p>-AIRL-0537: NC to be closed since related NCRs from AIRL are agreed and formally closed no Impact for SPIRE integration</p> <p>-AIRL-0570: gas porous in weld seam: technically closed, NCR to be formally closed no Impact for SPIRE integration</p> <p>-ASED 0601: Connector T235 cannot be mounted, status open no Impact for SPIRE integration</p> <p>-ASED 0603: Harness rails cannot be mounted since interface does not fit, status open, no Impact for SPIRE integration</p> <p>8. Open Work Status Open actions to be performed prior to mounting of SPIRE The following integration sequence is proposed:</p> <ul style="list-style-type: none">-Check availability of all items which are needed for integration of SPIRE-Fit check of SPIRE on OBA and verification of exchangeability of LO struts (with SPIRE support)-Remove SPIRE-Preparation of optical bench plate for harness rail integration-Integration of OBA (planned for Friday)-Integration of SPIRE (planned for Tuesday but without SPIRE support tbc)-Pre-integration of washers and screws from underneath the OBA in order to allow later integration of the HIFI rail as workaround solution for NCR 0603 <p>Open actions which blocks not the integration of SPIRE but which have to transferred to the</p>	



Reference	Results	Remarks																																								
	<p>EQM Open work list</p> <ul style="list-style-type: none"> -Leak test of OBA tubing -Finalisation of OBA harness, T233, T235, T236, T244, 4 L3, T249 # T252 repair according to NCR 0601 to be performed -Visual inspection of I/F connectors from SPIRE tbd (after dismounting of short circ. Connectors) -See AI 2 of SPIRE open work list: LO strap will be delivered by SPIRE until the 15. of January 2005 and therefore have to be exchanged on the PLM EQM <p>9. Cleanliness / Inspection Report / Reference</p> <ul style="list-style-type: none"> -The Molecular contamination of Spire QM have been measured/ evaluated by wipe test sample = $2,2 \times 10^{-7} \text{ g/cm}^2$ (inside the planned budget of $= 5 \times 10^{-5} \text{ g/cm}^2$ as per Contamination plan) -Visual inspection of SPIRE by using UV light successfully performed -Clean room Class 100 Molecular; max: $1,3 \text{ E-}09$, Requirement $<5,0 \text{ E-}08$ <p>Actual values</p> <table border="1" data-bbox="1093 1194 1476 1835"> <thead> <tr> <th>Sample</th> <th>Molec. overall</th> <th>days</th> <th>Mol./ day</th> </tr> </thead> <tbody> <tr> <td>y2</td> <td>5,8E-08</td> <td>43</td> <td>1,3E-09</td> </tr> <tr> <td>004/A</td> <td>4,1E-08</td> <td>44</td> <td>9,3E-10</td> </tr> <tr> <td>002/A</td> <td>4,3E-08</td> <td>51</td> <td>8,4E-10</td> </tr> <tr> <td>003/A</td> <td>3,8E-08</td> <td>66</td> <td>5,8E-10</td> </tr> <tr> <td>005/A</td> <td>4,8E-08</td> <td>58</td> <td>8,3E-10</td> </tr> <tr> <td>007/A</td> <td>4,7E-08</td> <td>64</td> <td>7,3E-10</td> </tr> <tr> <td>008/A</td> <td>3,9E-08</td> <td>83</td> <td>4,7E-10</td> </tr> <tr> <td>00/X</td> <td>1,1E-08</td> <td>64</td> <td>1,7E-10</td> </tr> <tr> <td>009/A</td> <td>7,0E-08</td> <td>155</td> <td>4,5E-10</td> </tr> </tbody> </table>	Sample	Molec. overall	days	Mol./ day	y2	5,8E-08	43	1,3E-09	004/A	4,1E-08	44	9,3E-10	002/A	4,3E-08	51	8,4E-10	003/A	3,8E-08	66	5,8E-10	005/A	4,8E-08	58	8,3E-10	007/A	4,7E-08	64	7,3E-10	008/A	3,9E-08	83	4,7E-10	00/X	1,1E-08	64	1,7E-10	009/A	7,0E-08	155	4,5E-10	
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007/A	5,4E-08	177	3,1E-10		
008/A	4,0E-08	167	2,4E-10		
006/A	6,0E-08	174	3,4E-10		
004/A	1,6E-07	169	9,5E-10		
006/A	7,3E-08	170	4,3E-10		
009/A	7,7E-08	125	6,2E-10		
008/A	7,5E-08	107	7,0E-10		
005/A	5,8E-08	98	5,9E-10		
004/A	5,5E-08	87	6,3E-10		
002/A	4,8E-08	97	4,9E-10		
008/A	7,5E-08	112	6,7E-10		
010/A	5,5E-08	109	5,0E-10		
009/A	5,8E-08	173	3,4E-10		
007/A	9,0E-07	252	3,6E-09		
Particular contamination inside 1,5 ppm per day as valid for Class 100					
10. Safety Constraints No specific safety constraints, ESD requirements as mentioned/ applicable according to the document CDS-PDB002-IN-D are fully applicable					
11. AOB None					
12. Release for Integration The release for integration have been given upon successful completion of open works as defined in chapter 8.					