



## Minutes of Meeting

Date:	20.10.2006	<b>Herschel</b>	
Doc.-No.:	HP-2-ASED-MN-1279		
Meeting place:	ESTEC Noordwijk	Chairman:	S. Idler / <i>D. Hendry</i>
Date/Time:		Secretary:	S. Idler
Agenda dated:	PTR Standard Agenda	Close of Meeting:	

Subject: PTR for STM2 Straylight Test

Participants:	C. Jewell (ESA) <i>[Signature]</i> B. Collaudin (ASP) <i>[Signature]</i> P. Martin (ASP) <i>[Signature]</i> B. Swinyard (RAL) <i>[Signature]</i> D. Hendry (ASED) <i>[Signature]</i> P. Hargrave (RAL) <i>[Signature]</i> S. Idler (ASED) <i>[Signature]</i> <i>L. Schomberg (ESA)</i>	Additional Distribution:	ESA ASP
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Page: 1 of 8 Page(s)

<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:

The STM2 Straylight Test has been successfully completed. The test objectives have been fully met. RAL express their thanks to ASED, AAS-F and ESA for the support and cooperation during the preparation and testing.



Reference	Results	Remarks
	<p data-bbox="412 424 636 464"><b>PTR Agenda:</b></p> <ol data-bbox="501 539 1335 831" style="list-style-type: none"><li data-bbox="501 539 707 571">1. Introduction</li><li data-bbox="501 592 891 624">2. Identification of Test Item</li><li data-bbox="501 644 1335 676">3. Review of Procedure Variations / Test Data / Test Reports</li><li data-bbox="501 697 949 729">4. Review of NCR / RFW Status</li><li data-bbox="501 750 913 782">5. Open Work / Open Actions</li><li data-bbox="501 802 703 834">6. Conclusion</li></ol>	



Reference	Results	Remarks
	<p data-bbox="414 422 660 454"><b>1. Introduction</b></p> <p data-bbox="414 494 1758 598">The STM2 Straylight test has been performed from 19.10.2006 until 20.10.2006. This test is part of the NCR ASED-NC-1675 related activities. See also related PTR minutes of the EQM straylight test HP-2-ASED-MN-1134.</p> <p data-bbox="414 638 1288 670">For the STM2 straylight test three test blocks have been defined:</p> <p data-bbox="414 710 1052 742">Background radiation measurements by SPIRE</p> <ul data-bbox="459 782 1612 925" style="list-style-type: none"><li>• During illumination through band 3 LO window and alignment windows with a high temperature blackbody source.</li><li>• At different cryocover mirror temperatures.</li><li>• At different thermal shield temperatures.</li></ul> <p data-bbox="414 965 1377 997">The related TRR minutes are HP-2-ASED-MN-1270, dated 11.10.2006.</p> <p data-bbox="414 1037 1713 1101">The minutes of the checkpoint meeting prior to start of the test are HP-2-ASED-MN-1278, dated 19.10.2006.</p> <p data-bbox="414 1173 884 1204"><b>2. Identification of Test Item</b></p> <p data-bbox="414 1252 974 1284">See TRR minutes HP-2-ASED-MN-1270.</p>	



Reference	Results	Remarks
	<p><b>3. Review of Procedure Variations / Test Data / Test Reports</b></p> <p><b>Procedure variations</b></p> <p>Principle test flow not changed.</p> <p>Some changes as regards test preparation and finalisation, since SPIRE PLM level EMC test has been conducted directly prior to the straylight test and continued immediately after it.</p> <p>The illumination through the windows has been done as planned; however, no tilting of the hot blackbody source was possible. Instead, for angular illumination the hot blackbody source has been horizontally shifted wrt. the optical axis of the band 3 LO window. A separate test has been done with the band 3 LO window being covered by aluminium tape (sensitivity measurements).</p> <p>The photoconductor could not be used since it did not provide a usable signal.</p> <p><b>Preliminary Assessment of Test data</b></p> <p>No variation of straylight during illumination through LO windows has been observed. Only a thermal effect has been seen (hot blackbody temperature: 1200 °C).</p> <p>The straylight level measured by SPIRE at cold lid and shield conditions is close to the systematic measurement error of SPIRE (about 2 orders of magnitude lower than for EQM). No straylight spots have been observed (as measured during EQM).</p> <p>Based on the measurements RAL estimates an emissive of 0.2 % of the cryocover mirror at 500 µm.</p> <p>This is basically in line with the findings of the ASED test prediction.</p>	



Reference	Results	Remarks
	<p><b>Test reports</b></p> <p>During the test an as-run procedure (filled out step-by-step procedure of HP-2-ASED-TP-0110) has been compiled by ASED and is available for review and signature.</p> <p>In addition, RAL will compile a separate report related to the SPIRE operation (incl. log sheets) and the test data analysis (post processing). Completion of report by 03.11.2006.</p> <p>ASED will provide a log of all relevant CryoSCOPE data as input to the RAL report. Required minimum sampling rate is 1 min.</p> <p>Photos taken during the test have been handed over to RAL.</p> <p>Note: From the SPIRE Pcal measurements a potential He film on the SPIRE 300 mK block can be determined. RAL will provide such data gained (as additional information) during the straylight test for further input to the present NCR on the helium leak.</p> <p><b>4. Review of NCR / RFW Status</b></p> <p>The NCR status prior to start of the tests is as per the TRR (HP-2-ASED-MN-1132).</p> <p>The following anomalies have been detected during the test:</p> <p><u>Photoconductor does not provide meaningful signals</u>        Either detector is faulty or too cold. All read out equipment and connections are ok.        No NCR will be raised.</p>	<p><i>done</i>  <i>CryoSCOPE data 17/10</i>  <i>to 19/10</i></p>



Reference	Results	Remarks
	<p data-bbox="409 454 902 491"><b>5. Open Work / Open Actions</b></p> <p data-bbox="409 529 1012 561">The following open work has been identified:</p> <ul data-bbox="454 603 1736 890" style="list-style-type: none"><li data-bbox="454 603 1675 667">• Completion of straylight test prediction by ASED with input from RAL and correlation of predictions with measurements.</li><li data-bbox="454 675 1697 778">• Compilation of test and test evaluation report by RAL. The SPIRE straylight data shall be normalised to the telescope back radiation. The exact details will be provided to RAL by ASED/AAS-F.</li><li data-bbox="454 786 1697 850">• The hot blackbody source together with the corresponding GSE will be de-integrated and shipped back to RAL as a loan item.</li><li data-bbox="454 858 1736 890">• De-integration, packing and shipping of SPIRE WUs to be advised by RAL (after EMC test).</li></ul> <p data-bbox="409 965 645 1002"><b>7. Conclusion</b></p> <p data-bbox="409 1040 1765 1145">The STM2 Straylight Test has been successfully completed. The test objectives have been fully met. RAL express their thanks to ASED, AAS-F and ESA for the support and cooperation during the preparation and testing.</p>	



Name	Dep./Comp.	Name	Dep./Comp.
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Fehringer Alexander	ASG13	Wagner Klaus	ASG22
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X Hohn Rüdiger	AED65	X RAL (SPIRE)	RAL
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X Idler Siegmund	AED312	Air Liquide, Space Department	AIRS
Ilsen Stijn	Terma	Air Liquide, Orbital System	AIRT
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