

TRR MoM	Date: 15 th Dec 2003	NUMBER	SPIRE-RAL-MOM-001902
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Spacecraft / Project	HERSCHEL
Instrument / Model	<i>SPIRE / CQM</i>
Sub System / Serial No.	

Type of Test	<i>FPU Cold Verification</i>
AIV Facility Test No.	<i>TBD</i>
Date(s) of Testing	<i>2 Jan 2004</i>
Applicable Test Specification (Document No. & Issue)	<i>SPIRE RAL DOC 1888 cold thermal verification master test procedure</i>
Applicable Test Procedure (Document No. & Issue)	<i>AS ABOVE BEFORE TEST 0.1 TO BE UP ISSUED</i>

Assignment of Personnel		
Function	Name	Contact number
Test Director	DAVE SMITH	LIST IN AIV LAB
Project Manager	ERIC SAWYER	LIST IN AIV LAB
AIV Facility Manager	DAVE SMITH	LIST IN AIV LAB
Safety Officer	DAVE SMITH	LIST IN AIV LAB
Product Assurance	Dave Kelsh Eric Clark	LIST IN AIV LAB

Documentation / Inspection Status	
<u>Test Documentation available:</u> <ul style="list-style-type: none"> AIV Facility Test Plan (if applicable?) Verification Procedures 	CRYO TEST PROCEDURE DAVE SMITH TO SUPPLY OFF LINE Harness x talk check to be updated harness integration to be marked up Bruce ran through the verification to be completed Verification matrix
<u>Inspection Status and Records:</u> <ul style="list-style-type: none"> Cleanliness Unit/Item Bagged Screws Locked Connector Savers Hazards Identified Other 	FPU bagged covers still on Particle counts TBD before test See above FET BOXES ok some items are still open to be checked before start of test NOT FITTED See Procedure SPIR RAL DOC 1888

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CONTINUATION SHEET

As Built Status (Will the following have an impact on the test performance / results?)	
Outstanding "NCR's"	NCR 41.1 OPEN mains filter to be connected to pump 13 use as is CEA NCRs to be reviewed before delta trr delta 19 dec with Bruce / Dave Eric
Outstanding "Waiver's"	
"Open Work"	Disconnect harnesses Complete warm functional test return to G56 Fit cooler Temperature harness Fit level nought straps Fit ND filters to black body Potting harness, fitting harness to cryostat, Alignment of telescope sim. Final verification test to be completed on tel sim. Purge tel sim. Up load calibration curves, GSE thermometry harness to be re routed Terminate ground wires to BDA
Other	Dave Smith to produce a schedule for cover over Christmas. Sunil ran through the status of tests MCU test has inrush current problem NCR to be raise Check CEA NCRs there may be one raised NCR to be raised against warm functional test Sunil to do.

HARDWARE COMMENTS/ OBSERVATIONS:

Decision for test continuation		
Company	Name	Signature
RAL	Ken King	
RAL	Eric Sawyer	
RAL	Bruce Swinyard	
RAL	Eric Clark	

TRR MoM	Date: 14 th Jan 2004	NUMBER	SPIRE-RAL-MOM-001902 rev 1
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Spacecraft / Project	HERSCHEL
Instrument / Model	<i>SPIRE / CQM</i>
Sub System / Serial No.	

Type of Test	<i>FPU Cold Verification Delta TRR</i>
AIV Facility Test No.	<i>TBD</i>
Date(s) of Testing	<i>Warm test 2 Jan 2004. Cold Verification planned 17th Jan</i>
Applicable Test Specification (Document No. & Issue)	<i>SPIRE RAL DOC 1888 cold thermal verification master test procedure</i>
Applicable Test Procedure (Document No. & Issue)	<i>AS ABOVE BEFORE TEST 0.1 TO BE UP ISSUED</i>

Assignment of Personnel		
Function	Name	Contact number
Test Director	DAVE SMITH	LIST IN AIV LAB
Project Manager	ERIC SAWYER	LIST IN AIV LAB
AIV Facility Manager	DAVE SMITH	LIST IN AIV LAB
Safety Officer	DAVE SMITH	LIST IN AIV LAB
Product Assurance	Dave Kelsh Eric Clark	LIST IN AIV LAB

Documentation / Inspection Status	
<u>Test Documentation available:</u> <ul style="list-style-type: none"> AIV Facility Test Plan (if applicable?) Verification Procedures 	CRYO TEST PROCEDURE DAVE SMITH TO SUPPLY OFF LINE Harness x talk check to be updated harness integration to be marked up Bruce ran through the verification to be completed Verification matrix to be done (Bruce)
<u>Inspection Status and Records:</u> <ul style="list-style-type: none"> Cleanliness Unit/Item Bagged Screws Locked Connector Savers Hazards Identified Other 	FPU bagged covers still on Particle counts tests performed witness mirrors assed particle count to be carried out before aperture covers removed and doors close FET BOXES ok some items are still open to be checked before start of test OK locking inserts used NOT FITTED See Procedure SPIR RAL DOC 001888

TRR MoM

Date: 14th Jan 2004

NUMBER

SPIRE-RAL-MOM-001902 rev 1

CONTINUATION SHEET

As Built Status (Will the following have an Impact on the test performance / results?)	
Outstanding "NCR's"	<p>41.1 OPEN mains filter to be connected to pump, to be checked 13 use as is Closed CEA NCRs to be reviewed before delta TRR delta 14 Jan with Bruce / Dave Eric QMI use as is to remain open 51 bent pins Leak test to be done before use 52 Harness problem being fixed by tekdata 53 wheels changed on trolley 54 N/A 55 pin 25 J15 pushed in 56 detector ch do not follow icd use as is 57 still open</p>
Outstanding "Waiver's"	
"Open Work"	<p>Disconnect harnesses done Complete warm functional test return to G56 done Fit cooler done Temperature harness done Fit level nought straps nearly complete Fit ND filters to black body done Potting harness, done fitting harness to cryostat, done To be done when pumping down</p> <ul style="list-style-type: none"> • Alignment of telescope simulator. • Final verification test to be completed on telescope simulator. • Purge telescope simulator. <p>Up load calibration curves, ready to go on MIB GSE thermometry harness to be re routed done Terminate ground wires to BDA done</p> <p>Fit cold black body Connect thermometers to HOB plate Fit thermal links to hob plate Isolation check Prepare script for DCU warm functional check. Fit external Harnesses. Thermal test procedure to be updated Power dissipations etc to be converted to Commands CQM procedure to be marked up by Bruce (connector to be left disconnected)</p>
Other	<p>.MCU test has inrush current problem NCR to be raised Check CEA NCRs there may be one raised NCR to be raised against warm functional test Bruce to do. Still to do</p> <p>Emails to all concerned to be sent as from to day by Bruce Use the instrument Log book from now. Dave Smith to update procedures.</p>

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HARDWARE COMMENTS/ OBSERVATIONS:

Decision for test continuation		
Company	Name	Signature
RAL	Ken King	
RAL	Eric Sawyer	
RAL	Bruce Swinyard	
RAL	Eric Clark	

TRR MoM	Date: 27-Jan-04	NUMBER	SPIRE-RAL-MOM-001902 r2 (Action List)
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Spacecraft / Project	HERSCHEL
Instrument / Model	<i>SPIRE / CQM</i>
Sub System / Serial No.	

Type of Test	<i>FPU Cold Verification Delta TRR</i>
AIV Facility Test No.	<i>TBD</i>
Date(s) of Testing	<i>Warm test 2 Jan 2004. Cold Verification planned 17th Jan Slipped</i>
Applicable Test Specification (Document No. & Issue)	<i>SPIRE RAL DOC 001888 Issue 1 cold thermal verification master test procedure</i>
Applicable Test Procedure (Document No. & Issue)	<i>AS ABOVE: ISSUED 21 Jan 04 (CIDL updated Issue 2)</i>

Documentation / Inspection Status

<u>Test Documentation available:</u>		
AIV Facility Test Plan (if applicable?)	CRYO TEST PROCEDURE DAVE SMITH TO SUPPLY OFF LINE Harness x talk check to be updated harness integration to be marked up	
Verification Procedures	Bruce ran through the verification to be completed Verification matrix to be done (Bruce)	Still Open
<u>Inspection Status and Records:</u>		
• Cleanliness	FPU bagged all covers removed including Aperture covers	PFO In tank
• Unit/Item Bagged	Particle counts tests performed witness mirrors assed particle count to be carried out before FET BOXES ok some items are still open to be checked before start of test	
Screws Locked	OK locking inserts used	
Connector Savers	J13, 14, & 16 removed	
Hazards Identified	See Procedure SPIR RAL DOC 001888	
Other		

TRR MoM	Date: 27-Jan-04	NUMBER	SPIRE-RAL-MOM-001902 r2 (Action List)
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As Built Status (Will the following have an Impact on the test performance / results?)		
Outstanding "NCR's"		
41.1	OPEN mains filter to be connected to pump, to be checked	
	CEA NCRS to be reviewed before delta TRR delta 14 Jan with Bruce / Dave Eric QM1 use as is to remain open	
51	bent pins Leak test done before use	Closed 22 Jan 04
52	Harness problem being fixed by tekdata	Closed 22 Jan 04
54	N/A	
55	pin 25 J15 pushed in	Closed 4 Feb 04
56	detector ch do not follow icd use as i	Closed 14 May 04
57	Anomalous warm behavior of Detector System	Closed 14 May 04
58	MCU test has inrush current problem	Closed 14 May 04
59	Ground Short on DCU J28 LIA 5 connector	
60	Open Circuit on FPU Faraday Shield Link jumper on S5	
Outstanding "Waiver's"		
Open Work"		
To be done when pumping down	Alignment of telescope simulator.	
•	Final verification test to be completed on telescope simulator.	
	Purge telescope simulator.	
Fit level nought straps	Done	
Up load calibration curves,	ready to go on MIB	Done 26 /01/04
Fit cold black body	Done	
Connect thermometers to HOB plate		Done 26 /01/04
Fit thermal links to hob plate	Done	
Isolation check	Done	
Prepare script for DCU warm functional check		Done 26 /01/04
Fit external Harnesses.	NCR raised C1 not used for this test	N/A
Thermal test procedure to be updated	To Be done before we go Cold	
Power dissipations etc to be converted to Commands	To Be Checked by Dave	
CQM procedure to be marked up by Bruce (connector to be left disconnected)		Done 26 /01/04
Other		
Dave Smith to update procedures	.	
To Load MIB with Flight Thermometry		

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Decision for test continuation		
Company	Name	Signature
RAL	Ken King	
RAL	Eric Sawyer	
RAL	Bruce Swinyard	
RAL	Eric Clark	