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Spacecraft / Project	HERSCHEL / SPIRE	Meeting Place	SPIRE Project room
Instrument / Model	All	Subsystem	

Participants		Agenda	
<i>Print Name</i>	<i>Signature Required</i>		
Chairman Eric Clark		<ul style="list-style-type: none"> • Review Open NCR's • A.O.B. 	
Secretary Eric Clark			
Doug Griffin			
Eric Sawyer			
Attendees for parts of the meeting			
Bruce Swinyard			
Ken King			
John Delderfield			
			Additional Distribution Dave Smith Judy Long

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Action			Title & Description
No	Responsibility	Due Date	
1	EC	14/05/04	HR-SP-RAL-NCR-013 Add note "Use as is, Has been found to be leak tight during cold testing." NCR Closed
2	EC	14/05/04	HR-SP-RAL-NCR-026 Add Note "Modifications have been implemented Problem resolved" NCR Closed.
3	EC	14/05/04	HR-SP-RAL-NCR-030 Was already closed Update Database. NCR Closed
4	JD	14/05/04	HR-SP-RAL-NCR-034.1 Open check with John NCR OPEN
5	DG		HR-SP-RAL-NCR-036 Doug to Chase up if SPIRE-ATC-PRJ-001054 ATC ICD up issued from 1.2 NCR OPEN
6	DG	14/05/04	HR-SP-RAL-NCR-038.2. Item 1-Doug to issue a check list to cover Key integration Point including this one. Items 2 & 3 no longer valid Delete. NCR Closed
7	EC	14/05/04	HR-SP-RAL-NCR-041.1 No further re occurrence. NCR Closed
8	EC	14/05/04	HR-SP-RAL-NCR-043 All Actions completed Cold Black Body Modified NCR Closed

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9	EC	14/05/04	HR-SP-RAL-NCR-048 SCAL-ICD-000 issue C Flight Model Shows correct orientation NCR Closed
10	EC	14/05/04	HR-SP-RAL-NCR-049 Items returned to supplier 27 Nov 03. Eventually remade and re-inspected by Taylor Embrex, when attempted to be used at RAL some still required re work by RAL. No formal reply to NCR from Manufacturer. Send copies to Richard Day & Sally Gill with Explanation of events. NCR Closed
11	EC	14/05/04	HR-SP-RAL-NCR-050 Flight Model drawing updated NCR Closed
12	EC	14/05/04	HR-SP-RAL-NCR-051 Returned to Manufacturer for correction. Ok when returned to RAL NCR Closed
13	EC	14/05/04	HR-SP-RAL-NCR-052 Harness returned to Manufacturer for modification (hardware now consistent with Documentation that was correct) NCR Closed.
14	EC	14/05/04	HR-SP-RAL-NCR-056 Raised in error all OK no further Action Required. NCR Closed
15	EC	14/05/04	HR-SP-RAL-NCR-057 Known feature before delivery see EIDP. NCR Closed
16	EC	14/05/04	HR-SP-RAL-NCR-058 This unit not built to Flight design QM1 et seq will be ok. NCR Closed

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17	EC	14/05/04	HR-SP-RAL-NCR-059 Note Added at meeting to NCR "Short is in Cryoharness C1 P28" NCR OPEN
18			HR-SP-RAL-NCR-060 NCR OPEN
19	Sunil	14/05/04	HR-SP-RAL-NCR-061 Reclassify as SPR. NCR Closed
20			HR-SP-RAL-NCR-062.1 NCR OPEN
21			HR-SP-RAL-NCR-063 NCR OPEN
22	EC	14/05/04	HR-SP-RAL-NCR-064.1 Items 1 & 2 ok add notes to NCR 3. Check Subsystem Harness 4. If required check the Cryoharness NCR OPEN
23	EC	14/05/04	HR-SP-RAL-NCR-065 Add note to Cause section:- On rechecking the DATA Loading is as expected Add Note to Action section:- Action 1 done, Action 2 N/A NCR Closed
24	EC	14/05/04	HR-SP-RAL-NCR-066 Check NCR sent to Cardiff & MSSSL requires up date to IF Drawing NCR OPEN

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25	EC	14/05/04	HR-SP-RAL-NCR-067 Check NCR sent to MSSSL NCR OPEN
26	EC	14/05/04	HR-SP-JPL-NCR-001 Use as Delivered re-allocated Mass budget. NCR Closed
27	EC	14/05/04	HR-SP-JPL-NCR-002 Use as is does not affect detector performance. Talk to Pete Hargrave Friday 14/05/04 Regarding this NCR. NCR Closed
28	EC	14/05/04	HR-SP-JPL-NCR-003 Recommend 'Use as is' for the P/LW on CQM only S/LW use on PFM 1 build - NOT SUITABLE FOR FLIGHT – review situation for flight spare NCR OPEN
29			HR-SP-JPL-NCR-004-Performance Criteria not met This is a Blank form Awaiting completion by JPL NCR OPEN
30	EC	14/05/04	Talk to MSSSL on Friday Re NCR's :- HR-SP-RAL-NCR-030, HR-SP-RAL-NCR-050, HR-SP-RAL-NCR-066, & HR-SP-RAL-NCR-067.



List of RAL Non-Conformances

PRODUCT ASSURANCE
SPACE SCIENCE DEPARTMENT
Rutherford Appleton Laboratory

Spacecraft/Project: Herschel	Originator: RAL/SSTD/PA
Instrument: SPIRE	Document No PIRE-RAL-PRJ-0001079
Model: All	Issue : i-SPIRE-RAL-MoM-002013
Subsystems:	Date: 13-May-04

NCR Serial No.	Level	Subsystem Assembly/ Part	Model	NCR Title	Issue Date	Disposition/Corrective Actions	References	Close Out Date
HR-SP-IFSI-NCR-1	Minor	IFSI DPU	AVM	RANDOM ERRORS IN FAST SERIAL DATA LINKS RECEPTION	12-Nov-03	See NCR Introduction of integrating capacitances on the READ pins of the receiving FIFOs has highly mitigated the error rate, but still not completely removed the source of		
HR-SP-JPL-NCR-5	Minor	JFET's	CQM	JFET Incoming inspection	08-Oct-03	See NCR JPL to complet cause of NCR section ref SPIRE-RAL-REP-001829 incoming inspection report.		
HR-SP-JPL-NCR-NCR-1	Minor	JPL RF Filter Mod	CQM	RF Filters over Max Mass Limit	14-Aug-03	See NCR Action 1 JPL Note Should be added to the EIDP Regarding the increased Mass allowance as of 3/2/2003 Possible raise a change request to correct drawing if		
HR-SP-JPL-NCR-NCR-2	Minor	JPL PLWBDA PLW Filter	CQM	PLW FILTER BOWING	03-Sep-03	Awaiting completion UWC to comment and complete Cause & Action sections of NCR form		
HR-SP-JPL-NCR-NCR-3	Minor	JPL PLW BD. SL	CQM	Chlorine contamination	06-Oct-03	See NCR		
HR-SP-JPL-NCR-NCR-4	Minor	JPL	CQM	Performance criteria not met		Awaiting completion		
HR-SP-RAL-NCR-13	Minor	HDPE Windo	GSE	Surface finish	30-Sep-02			

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<i>NCR Serial No.</i>	<i>Level</i>	<i>Subsystem Assembly/ Part</i>	<i>Model</i>	<i>NCR Title</i>	<i>Issue Date</i>	<i>Disposition/Corrective Actions</i>	<i>References</i>	<i>Close Out Date</i>
HR-SP-RAL-NCR-26	Minor	J-FET Rack fe	All	Not Thermally Isolated enough.	11-Apr-03	See NCR		
HR-SP-RAL-NCR-30	Minor	LAM FPU CM3	AM	CM3 interferes with the sub optics bench at its lower edge.	30-Apr-03	Investigate cause. STM mirror may need to be removed and the mount modified accordingly		
HR-SP-RAL-NCR-34.1	Major	DPU HSDPU	AM	DPU Power interface discrepancy	14-Apr-04	Reclassified as Major at in depth PA meeting 13/14th April Reclassified as Major at in depth PA meeting 13/14th April 2004 at Ral		
HR-SP-RAL-NCR-36	Major	Structure	SM	SPIRE Optical Bench BSM I/F Location	02-May-03	See NCR Can be Closed ref NCR MRB Number SPIRE-RAL-MoM-001863; When ATC ICD is reissued.		
HR-SP-RAL-NCR-38.2	Minor	Structure 300mK Strap Photometer S	SM	300-mK Thermal Short during STM Programme	21-May-03	See NCR See note in blue on NCR		
HR-SP-RAL-NCR-41.1	Minor	MGSE Pumping Syst	Cryostat	Cryostat Pumping system shutdown	30-Sep-03	Mains Filter fitted(in place for sutdown 25/09/04 Under investigatiog Suspected Glitch on Mains supply Mains Filter will be used in future.Mains Filter fitted(in place for sutdown 25/09/04)		
HR-SP-RAL-NCR-43	Minor	MGSE Cold Blackbod	Cryostat	Cold-BlackBody Dimensions	02-Sep-03	See NCR Design of Cold Black Body does not match the cryostat ICD		
HR-SP-RAL-NCR-48	Minor	S-Cal Connectors	CQM	CQM S-Cal Connector Orientation	20-Nov-03	See NCR		

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HR-SP-RAL-NCR-49	Minor	Structure FPU Connector Jac	CQM	RF Filter Connector Jack post thread length	20-Nov-03	Half returned for rework when done some still had to be reworked Half the Items returned to Taylor Embex for rework the remainder will be reworked at RAL		
HR-SP-RAL-NCR-50	Minor	Structure spectrometer C	All	Harnes slot missing on Spectrometer cover baffle.	05-Dec-03	See NCR		
HR-SP-RAL-NCR-51	Minor	GSE. Cold Harness	GSE	Pins Bent on GSE Harness	22-Dec-03	See NCR A pin straightening jig could be made. If the pin does not maintain the hermetic seal, the pins can be cut off or removed as they are both redundant ground pins. To be		
HR-SP-RAL-NCR-52	Minor	GSE Warm Test Ha		Grounding Problems Warm test Harness	22-Dec-03	Harness will need modification		
HR-SP-RAL-NCR-56	Minor		CQM	Detector Channels do not follow ICD	12-Jan-04	TBD Awaiting completion of NCR		
HR-SP-RAL-NCR-57	Minor		CQM	Anomalous warm behavior of Detector System	12-Jan-04	TBD Awaiting completion of NCR		
HR-SP-RAL-NCR-58	Major	DRCU	CQM	MCU switch on over current	16-Jan-04	See NCR LAM to investigate why 14 V is applied continuously to Launch Latch coils – there is a fault in the MCU QM0 unit. Use as is for CQM testing with harness connector		
HR-SP-RAL-NCR-59	Minor	Cryostat FPU DCU J28	GSE	Ground Short on DCU J28 LIA-5 connector	21-Jan-04	See NCR		

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HR-SP-RAL-NCR-60	Minor	Cryoharnesses FPU Faraday socket S5	GSE	Open circuit on FPU Faraday Shield Link Jumper on S5	22-Jan-04	See NCR Further investigation when Cryostat is opened at end of CQM testing		
HR-SP-RAL-NCR-61	Minor	DRCU	CQM	DRCU accepting an unknown command	17-Feb-04	TBI		
HR-SP-RAL-NCR-62.1	Minor	Cooler SCO Evaporator H	CQM	Response time of SPIRE CQM Evaporator Heat Switch	19-Feb-04	See NCR The NCR has been raised to report and track the issue. A slow switch would be troublesome in flight. The performance of the switch will be monitored during the		
HR-SP-RAL-NCR-63	Minor	Cooler, FPU	CQM	Evaporator HS & Pump HS commands reversed.	19-Feb-04	See NCR When the instrument is removed from the cryostat after the end of the initial CQM cool down, the EGSE, DPU, SCU and cryoharness will be tested to see if there		
HR-SP-RAL-NCR-64	Minor	SCAL Prime 4% sou	CQM	Apparent failure of CQM S-Cal 4% source	19-Feb-04	TBD		
HR-SP-RAL-NCR-64.1	Minor	SCAL Prime 4% sou	CQM	Apparent failure of CQM S-Cal 4% source	09-Mar-04	See NCR Review instrument commanding and telemetry streams to check if there had been any commanding errors. (Completed – See Attachment One)		
HR-SP-RAL-NCR-65	Minor		GSE	FIR optical loading of detectors from room background	19-Feb-04	See NCR 1. Modify cold-bb feet to improve isolation from HOB simulator. 2. Reduce area of ND filters to cover only the SPIRE optical beam		
HR-SP-RAL-NCR-66	Minor	SCAL	CQM	SCAL Interface Mismatch	16-Mar-04	See NCR 1. For CQM only, use 0.5mm washers to space SCAL from box. 2. For PFM and FS chamfer mounting ring of SCAL box to ensure flush mounting		

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HR-SP-RAL-NCR-67		FPU	PFM	Hole Miss-alignment	07-Apr-04	As yet undetermined Awaiting more information MSSL informed		
NCR_DCU_109	Major	Warm DCU Backplane	QM1	DCU photometer and spectrometer supplies merged	27-Aug-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_110	Major	Warm DCU	QM1	DCU photometer and spectrometer noise allocation	27-Aug-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_121	Major	Warm DCU BIAS	QM1	Transients to FPU at power on	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_124	Major	Warm DCU BIAS	QM1	"Temperature Readout" Bias channel: Amplitude Non-conformance	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP: May be related to NCR 155		
NCR_DCU_125	Major	Warm DCU	QM1	Missing Supply voltage HK channels on all DCU Missing supply voltage HK channels on all DCU	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_126	Major	Warm DCU BIAS	QM1	Missing temperature probe on BIAS board	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_127	Major	Warm DCU BIAS	QM1	Vdd1 for bias spectro not found	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		

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NCR_DCU_129	Major	Warm DCU LIAS	QM1	6 DCU LIAS channels show none reproducible behaviour	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_132	Major	Warm DCU	QM1	DCU J03 Connector missing pin 13	16-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_134	Major	Warm DCU Bias	QM1	Heater PMW2 channel not functional	24-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_147	Major	Warm DCU LIAP	QM1	LIAP No 5 Shows bad gain on channel 30	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_148	Major	Warm DCU LIAP	QM1	LIAP No 6 Shows bad gain on channel 9	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_149	Major	Warm DCU LIAS	QM1	LIAS cut-off frequency non-conformance	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_150	Major	Warm DCU LIAP	QM1	LIAP cut-off frequency non-conformance	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_151	Major	Warm DCU BIAS	QM1	BIAS amplitude depends on frequency	28-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		

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NCR_DCU_152	Major	Warm DCU LIAS	QM1	LIAS no 1 shows bad gain on Channels 13, 19, 23	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_153	Major	Warm DCU LIAS	QM1	LIAS no 2 shows bad gain on Channels 1, 5, 9, 12, 20, 21, 24	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_154	Major	Warm DCU LIAS	QM1	LIAS no 3 shows bad gain on Channels 8, 9, 10, 11, 21, 24	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_DCU_155	Major	Warm DCU BIAS	QM1	Bolometer Bias Max. amplitude is 200mVpp instead of 200mVrms	29-Oct-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_MCU_104	Major	Warm FCU/MCU	QM1	MCU QM0 J01/J39 position swapped	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_MCU_105	Major	Warm FCU/MCU	QM1	MCU QM0 Board position and connector position not representative of flight model	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_MCU_122	Major	Warm FCU/MCU	QM1	MCU QM0 command to response timing exceeds specification	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_MCU_123	Major	Warm FCU/MCU	QM1	MCU QM0 drains excessive current on MCU_P15 at power on	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		

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NCR_SCU_ 118	Major	Warm FCU/SCU CCHK	QM1	J03 pin out not consistant with DRCU ICD	10-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_SCU_ 128	Major	Warm FCU/SCU TEMP	QM1	SCU QM1 "ScuTHTref"HK channel not functional	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_SCU_ 130	Major	Warm FCU/SCU CCHK-IF	QM1	Position of the parameters in the telemetry data frame	15-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		
NCR_SCU_ 138	Major	Warm FCU/SCU CCHK-IF	QM1	TC_heater voltage, inconsistency between Sap & SEDI measurements	24-Sep-03	See NCR Supplied as part of the Warm Electronics EIDP.		

END OF LIST