



Scope

Outline description of the sequence and procedures to be used for the Cold Short Functional Tests (SFT) of the SPIRE instrument after integration with the Herschel EQM Payload Module at EADS Astrium in Ottobrun. The pre-requisites for the test are briefly described followed by a table setting out the steps in the test sequence; the names of the procedures to be executed from CCS and the references to any manual procedures required; and the estimated duration of each part of the test.

Change notes

Applicable Documents

AD1 SPIRE Functional Test Specification - SPIRE-RAL-DOC-001652, Issue 1.3D, 16/02/2005

Reference Documents

RD1 SPIRE Functional Check Out Procedure after Electrical SIH Integration, Issue 0.1, 05/04/2005

Prerequisites for the Cold Short Functional Test

- The SPIRE WU, consisting of the SPIRE Warm Electronics, integrated with the CCS
- The SPIRE FPU is at ~4K

Instrument EGSE (I-EGSE) set up

- SPIRE MIB installed on SCOS machine.
- SPIRE build of the HCSS and QLA installed
- CCS is up and running
- Scripts for the tests are available to the CCS

Prerequisites for data analysis

- SCOS is running on I-EGSE
- QLA scripts ready for display of data and FITS output on I-EGSE
- DPU is already on and generating HK
- DRCU is already on following completion of SPIRE Functional Check Out Procedure (RD1)
- SCU DC and AC thermometry on (RD1)
- IDL present on local machine (laptop if necessary) with access to I-EGSE FITS filestore via FTP or other method

Outline Test sequence:

Step	Description	Procedure Name	Estimated Duration/minutes
1	SCU Science Packet Generation Check	CCS-FUNC-SCU-01	5
2	SCU Test pattern test	CCS-FUNC-SCU-08	5
3	SCU PCAL check	CCS-FUNC-SCU-04	5
4	PCAL characterisation test	CCS-FUNC-PCAL-01	10
5	SCU SCAL check	CCS-FUNC-SCU-05	10



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SPIRE SFT Cold Procedure
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Step	Description	Procedure Name	Estimated Duration/minutes
6	SCAL characterisation test	CCS-FUNC-SCAL-01	20
7	SCU cooler heaters check	CCS-FUNC-SCU-07	10
8	DCU Science Packet generation check	CCS-FUNC-DCU-01	5
9	DCU Science data check	CCS-FUNC-DCU-02	5
10	DCU Test pattern test	CCS-FUNC-DCU-03	5
11	DCU Photometer and Spectrometer LIAs switch on. (Only one procedure as the QM1 DRCU switches on both sets of LIAs)	CCS-FUNC-DCU-04-PS May require manual intervention to reset the over current limiter on the SPIRE DRCU Power Bench	10