1. INTRODUCTION

This document contains the SPIRE Warm Functional Test Procedures to be executed during IST before and after electrical integration with the Herschel satellite. The procedures are listed here in the order in which they are expected to be performed. These procedures give step-by-step instructions on how to perform each test. Some procedures can only be run after integration – where appropriate this is clearly indicated in the preconditions section of each procedure.

1.1 Change Record

Issue 1.0, 27/04/2005 – First version.

Issue 1.1, 08/07/2005 – Procedure and TCL script names changed to have the common prefix SPIRE-CCS instead of CCS-SPIRE or CCS.

Issue 1.2, 11/07/2005
- Added procedures SPIRE-CCS-DRCU-OFF and SPIRE-CCS-DPU-OFF to switch off the DRCU and DPU respectively.
- Changed the expected values of the TM5N parameter in procedures SPIRE-CCS-FUNC-SCU-01, -02 and -03. Version numbers of procedures changed from 1.0 to 1.1.
- Corrected the units of parameter SPHTRV in procedure SPIRE-CCS-FUNC-SCU-07 from mV to V. Version number for procedure changed from 1.0 to 1.1.
- Removed the obsolete applicable documents.

Issue 1.3, 12/07/2005
- Procedure name SPIRE-CCS-FUNC-SCU-THO and the corresponding TCL script name SPIRE-CCS-FUNC-SCU-THO.tcl corrected to SPIRE-CCS-FUNC-THO and SPIRE-CCS-FUNC-THO.tcl respectively.

Issue 1.4, 15/07/2005
- Procedure SPIRE-CCS-FUNC-DCU-04-PS updated to leave the Photometer and Spectrometer LIAs on.
- Three new procedures added:
  1. Procedure SPIRE-CCS-SPT-PDET-ON-STEP2 for switching on the Photometer detectors
  2. Procedure SPIRE-CCS-SPT-LC-P for performing a Load Curve
  3. Procedure SPIRE-CCS-SPT-PDET-OFF for switching off the Photometer detectors and all the LIAs

Issue 2.0, 13/06/2006
- IST version

1.2 Applicable Documents

AD01 SPIRE Functional Test Specification, Issue 1.4, SPIRE-RAL-DOC-001652, 22/07/2005
AD02 SPIRE ILT Warm Functional Test Procedure, Issue 1.2, SPIRE-RAL-PRC-002322, 27/01/2006

1.3 Applicable Documents

RD01 SPIRE Instrument User Manual, Issue 1.0, SPIRE-RAL-PRJ-002395, 08/04/2005

1.4 General instructions for executing test procedures

- Before executing any of the procedures please always check with the I-EGSE staff
- Any text in **boldface** in the procedural steps generally indicates an action which has to be performed manually by the Instrument EGSE (I-EGSE) staff.
- The procedure tables include blank boxes where the actual values of parameters can be noted. Based on the comparison with the expected values the success or failure of a step should be recorded in the final column of the table.
- The last row in a procedure table should be used to record the overall Pass/Fail result of each test.

1.5 Assumptions

- The CCS are only required to check changes in instrument configuration related HK parameters.
- For these functional tests the instrument will not always be in a pre-defined mode as listed in the IUM (**RD01**).
- For the SPIRE spectrometer mechanism (SMECm) tests it is assumed that the Herschel cryostat will be tilted (TBD).
- These procedures should be suitable for operation of both the Prime and Redundant side of the instrument (TBD).
- **The converted TM parameter values are extracted from the MIB in use for PFM ILT. These values are subject to change for both prime and redundant operations.**

1.6 Open Issues

- Procedures for dealing with instrument contingencies will be addressed in the next version of this document.
- Names of the Herschel Satellite procedures for powering on/off the SPIRE DPU and DRCU are to be filled in the next version. In this version they are marked as procedure XXXXXX.

1.7 Duration

The estimated duration for executing the entire CFT sequence of procedures, including switch off of the SPIRE instrument afterwards is estimated to be about **4-5 hours.**

2. WARM FUNCTIONAL TEST PROCEDURES

2.1 Procedure: SPIRE-IST-DPU-ON

Version: 1.0
Date: 12th June 2006
Purpose: To switch on the SPIRE DPU and start generating housekeeping
Duration: 2 minutes

Preconditions:

- Procedure to supply 28V Power Supply from the satellite to the SPIRE DPU is available
- SPIRE MIB is imported in the CCS database.
- CCS is up and running (SCOS, TOPE and the CDMU)
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS
- The I-EGSE is up and running

Initial Configuration: SPIRE Warm Electronics (DPU and DRCU) are switched off

Procedure Steps:

Step	Description	Parameter	Expected Values Before/After	Actual Values Before/After	Pass/ Fail
1	**Using CCS procedure XXXXX Power on the SPIRE DPU 28V Power Supply**	—	—	—	
2	**Wait for instruction from I-EGSE staff to continue with the procedure**	—	—	—	
3	Execute TCL script SPIRE-IST-DPU-ON.tcl	—	—	—	
4	Check that THSK parameter is refreshing every second	—	—	—	
5	Check that TM2N parameter is incrementing every second	—	—	—	

Test Result (Pass/Fail):

Final Configuration: SPIRE DPU is on but the DRCU is still off

2.2 Procedure: SPIRE-IST-DRCU-ON

Version: 1.0
Date: 12th June 2006
Purpose: To switch on the SPIRE DRCU and start generating housekeeping
Duration: 4 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched off
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Procedure Steps:

Step	Description	Parameter	Expected Values Before/After	Actual Values Before/After	Success/ Failure
1	Execute TCL script SPIRE-IST-DRCU-ON-STEP1.tcl	—	—	—	
2	Check that THSK parameter is not refreshing anymore	—	—	—	
3	Check that TM2N parameter is not incrementing anymore	—	—	—	
4	**When instructed by the I-EGSE staff Power on the SPIRE DRCU using the CCS procedure XXXXXX**	—	—	—	
5	Execute TCL script SPIRE-IST-DRCU-ON-STEP2.tcl	—	—	—	
6	Check that THSK parameter is again refreshing every 4 seconds	—	—	—	
7	Check that TM2N parameter is again incrementing every 4 seconds	—	—	—	
Test Result (Pass/Fail):					

Final Configuration:

- SPIRE DPU and DRCU are both on
- HK generation is on

2.3 Procedure: SPIRE-IST-FUNC-SCU-01

Version: 1.0
Date: 12th June 2006
Purpose: SCU science packet generation check
Duration: 2 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Procedure Steps:

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-01.tcl	SCUFRAMECNT TM5N	0/31 3FFF/1		
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.4 Procedure: SPIRE-IST-FUNC-SCU-02

Version: 1.0
Date: 12th June 2006
Purpose: SCU science data check by the I-EGSE
Duration: 5 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Procedure Steps:

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-02.tcl	SCUFRAMECNT TM5N	31/62 1/3		
2	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.5 Procedure: SPIRE-IST-FUNC-SCU-08

Version: 1.0
Date: 12th June 2006
Purpose: SCU test pattern test for check by the I-EGSE
Duration: 5 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-08.tcl	SCUFRAMECNT TM5N	62/93 3/5		
2	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.6 Procedure: SPIRE-IST-FUNC-SCU-03

Version: 1.0
Date: 21st June 2006
Purpose: SCU DC thermometry check
Duration: 6 minutes

Preconditions: SPIRE FM is electrically integrated with the Herschel Satellite
Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-03.tcl	—	—	—	—
2	**Wait for the parameter BBFULLTYPE to get set to SCU_DC_Therm**				
3	A few seconds later record the value of parameter SCUTEMPSTAT	SCUTEMPSTAT	0/FFFF/FFFF		
4	Record the values of SCU DC thermometry channels. **Open Circuit Criterion: RAW reading in the range [0, -100]** **Short Circuit Criterion: RAW reading of -32768**	PUMPHTRTEMP PUMPHSTEMP EVAPHSTEMP SHUNTTEMP EMCFILTEMP SL0TEMP PL0TEMP OPTTEMP BAFTEMP BSMIFTEMP SCAL2TEMP SCAL4TEMP SCALTEMP SMECIFTEMP SMECTEMP BSMTEMP	For all channels operating normally the raw values should read -32768 (indicating minimum resistance)		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: SCU DC thermometry is switched on.

2.7 Procedure: SPIRE-IST-FUNC-SCU-06

Version: 1.0
Date: 12th June 2006
Purpose: SCU AC thermometry check
Duration: 2 minutes

Preconditions: SPIRE FM is electrically integrated with the Herschel Satellite

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-06.tcl	—	—	—	—
2	**Wait for the parameter BBFULLTYPE to get set to SCU_AC_Therm**				
3	A few seconds later record the value of parameter SUBKSTAT	SUBKSTAT	0/1/1		
4	Record the value of the SCU AC thermometry channel **Open Circuit Criterion:** **RAW reading in the range 0 -100** **Short Circuit Criterion:** **RAW reading of -32768**	SUBKTEMP	-32768 if operating normally		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: SCU AC thermometry is switched on.

2.8 Procedure: SPIRE-IST-FUNC-SCU-07

Version: 1.0
Date: 11th June 2005
Purpose: SCU cooler heaters check
Duration: 3 minutes

Preconditions: SPIRE FM is electrically integrated with the Herschel Satellite

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-07.tcl	—	—	—	—
2	**Wait for the parameter BBFULLTYPE to get set to Cooler_Htr_Chk**	BBFULLTYPE	Cooler_Htr_Chk		
3	A few seconds later record the value of parameter EVHSV – the Evaporator Heat Switch Voltage. *This voltage stays on for ~20 seconds.*	EVHSV - mV	0/~323/0		
4	A few seconds after the EVHSV parameter has been set back to 0, record the value of parameter SPHSV – the Sorption Pump Heat Switch Voltage. *This voltage stays on for ~20 seconds.*	SPHSV - mV	0/~323/0		
5	A few seconds after the SPHSV parameter has been set back to 0, record the value of parameter SPHTRV – the Sorption Pump Heater Voltage. *This voltage stays on for ~20 seconds.*	SPHTRV - V	0/~8.8/0		
6	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.9 Procedure: SPIRE-IST-FUNC-SCU-04

Version: 1.0
Date: 12th June 2006
Purpose: SCU Photometer PCAL check
Duration: 2 minutes

Preconditions: SPIRE FM is electrically integrated with the Herschel Satellite

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter Name - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-04.tcl	PCALCURR - mA PCALV – V	0.0/0.1/0.0 0.0/0.026/0.0		
	The expected values during the test should be monitored when parameter BBFULLTYPE in the FUNCTIONAL TEST PARAMETERS display is set to PCAL_Check This usually happens about 30 seconds from the start of test execution.	BBFULLTYPE	PCAL_Check		
2	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.10 Procedure: SPIRE-IST-FUNC-SCU-05

Version: 1.0
Date: 21st June 2006
Purpose: SCU Spectrometer SCAL4 and SCAL2 check
Duration: 4 minutes

Preconditions: SPIRE FM is electrically integrated with the Herschel Satellite

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-SCU-05.tcl	—	—	—	
2	**Wait for the parameter BBFULLTYPE to get set to SCAL4_Check**	BBFULLTYPE	SCAL4_Check		
3	A few seconds later record the value of parameters	SCAL4CURR – mA	0.0/0.10/0.0		
	SCAL4CURR and SCAL4V *These parameters are set back to 0 after ~30 seconds*	SCAL4V – V	0.0/0.05/0.0		
4	**Wait for the parameter BBFULLTYPE to get set to SCAL2_Check**	—	BBFULLTYPE	SCAL2_Check	
5	A few seconds later record the values of parameters	SCAL2CURR – mA	0.0/0.10/0.0		
	SCAL2CURR and SCAL2V *These parameters are set back to 0 after ~30 seconds*	SCAL2V – V	0.0/0.05/0.0		
6	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.11 Procedure: SPIRE-IST-FUNC-MCU-01

Version: 1.0
Date: 12th June 2006
Purpose: To boot up the MCU
Duration: 5 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is DRCU_ON	MODE	DRCU_ON	DRCU_ON	
2	Execute TCL script SPIRE-IST-FUNC-MCU-01.tcl	—	—	—	—
3	Check that the mode parameter is REDY	MODE	DRCU_ON	REDY	
4	Check that the MCU is booted up successfully	MCUBITSTAT	0/1/1		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: MCU is switched on and booted up.

2.12 Procedure: SPIRE-IST-FUNC-MCU-02

Version: 1.0
Date: 12th June 2006
Purpose: MCU science data generation check
Duration: 5 minutes

Preconditions:

- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-MCU-02.tcl	—	—	—	—
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.13 Procedure: SPIRE-IST-FUNC-MCU-03

Version: 1.0
Date: 12th June 2006
Purpose: MCU science data contents check
Duration: 5 minutes

Preconditions:

- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-MCU-03.tcl	—	—	—	—
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.14 Procedure: SPIRE-IST-FUNC-MCU-04

Version: 1.0
Date: 12th June 2006
Purpose: MCU test pattern check
Duration: 5 minutes

Preconditions:

- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-MCU-04.tcl	—	—	—	—
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.15 Procedure: SPIRE-IST-FUNC-BSM-01

Version: 1.0
Date: 12th June 2006
Purpose: BSM switch on check
Duration: 3 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-BSM-01.tcl	—	—	—	—
3	Check that the Chop and Jiggle sensors have switched on	CHOPSENSPWR JIGGSENSPWR	0/1/1 0/1/1		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: BSM is switched on.

2.16 Procedure: SPIRE-IST-FUNC-BSM-02c

Version: 1.0
Date: 12th June 2006
Purpose: BSM Chop Sensor Polarity Check
Duration: 3 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-BSM-02c.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.17 Procedure: SPIRE-IST-FUNC-BSM-02j

Version: 1.0
Date: 12th June 2006
Purpose: BSM Jiggle Sensor Polarity Check
Duration: 3 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-BSM-02j.tcl	—	—	—	—
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.18 Procedure: SPIRE-IST-FUNC-BSM-03

Version: 1.0
Date: 12th June 2006
Purpose: BSM open loop dynamics check
Duration: 6 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY	REDY	
2	Execute TCL script SPIRE-IST-FUNC-BSM-03.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.19 Procedure: SPIRE-IST-FUNC-BSM-05a

Version: 1.0
Date: 12th June 2006
Purpose: BSM open loop chop test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-BSM-05a.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.20 Procedure: SPIRE-IST-FUNC-BSM-05b

Version: 1.0
Date: 12th June 2006
Purpose: BSM closed loop chop test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute SPIRE-IST-BSM-INIT.tcl				
3	Execute TCL script SPIRE-IST-FUNC-BSM-03.tcl	—	—	—	
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.21 Procedure: SPIRE-IST-FUNC-BSM-06

Version: 1.0
Date: 12th June 2006
Purpose: BSM operational mode chop test
Duration: 6 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute SPIRE-IST-BSM-INIT.tcl				
3	Execute TCL script SPIRE-IST-FUNC-BSM-06.tcl	—	—	—	
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.22 Procedure: SPIRE-IST-BSM-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off the BSM
Duration: 2 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute SPIRE-IST-BSM-OFF.tcl	—	—	—	
3	Check that the power to the BSM sensors is switched off	CHOPSENSPWR JIGGSENSPWR	1/-/0 1/-/0		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—			
Test Result (Pass/Fail):					

Final Configuration: BSM is switched off.

2.23 Procedure: SPIRE-IST-FUNC-SMEC-02a

Version: 1.0
Date: 12th June 2006
Purpose: Open the SMECm launch latch
Duration: 5 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-02a.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: SMECm is switched on.

2.24 Procedure: SPIRE-IST-FUNC-SMEC-01

Version: 1.0
Date: 12th June 2006
Purpose: SMECm switch on check
Duration: 5 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-01.tcl	—	—	—	
3	Check that power to the SMEC LED and LVDT sensor is on	SMECENCPWR SMECLVDTPWR	0/-/6(TBC) 0/1/1		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: SMECm is switched on.

2.25 Procedure: SPIRE-IST-FUNC-SMEC-03

Version: 1.0
Date: 12th June 2006
Purpose: SMEC LED Optical Encoder LED Check
Duration: 5 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-03.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.26 Procedure: SPIRE-IST-FUNC-SMEC-04a

Version: 1.0
Date: 12th June 2006
Purpose: SMECm open loop position test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-04a.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.27 Procedure: SPIRE-IST-FUNC-SMEC-09

Version: 1.0
Date: 12th June 2006
Purpose: SMECm open loop scan test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Check the SMECm is in open loop	SMECLOOPMODE	6/6/6		
3	Execute TCL script SPIRE-IST-FUNC-SMEC-09 .tcl	—	—	—	
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.28 Procedure: SPIRE-IST-FUNC-SMEC-04b

Version: 1.0
Date: 12th June 2006
Purpose: SMECm closed loop position test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-INIT.tcl	SMECLOOPMODE	6/1/1		
3	Execute TCL script SPIRE-IST-FUNC-SMEC-04B .tcl	—	—	—	
4	Check that SMECm is still in closed loop	SMECLOOPMODE	1		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: The SMECm is in closed loop.

2.29 Procedure: SPIRE-IST-FUNC-SMEC-07

Version: 1.0
Date: 12th June 2006
Purpose: SMECm closed loop scan test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-INIT.tcl	SMECLOOPMODE	-/1/1		
3	Execute TCL script SPIRE-IST-FUNC-SMEC-07 .tcl	—	—	—	
4	Check that SMECm is still in closed loop	SMECLOOPMODE	1		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.30 Procedure: SPIRE-IST-FUNC-SMEC-06

Version: 1.0
Date: 12th June 2006
Purpose: SMECm saw-tooth test
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-INIT.tcl	SMECLOOPMODE	-/1/1		
3	Execute TCL script SPIRE-IST-FUNC-SMEC-06 .tcl	—	—	—	
4	Check that SMECm is still in closed loop	SMECLOOPMODE	1		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.31 Procedure: SPIRE-IST-SMEC-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off the SMEC
Duration: 2 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute SPIRE-IST-SMEC-OFF.tcl	—	—	—	
3	Check that the power to the SMEC sensors is switched off	SMECENCPWR SMECLVDTPWR	6(TBC)/-/0 1/-/0		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—			
Test Result (Pass/Fail):					

Final Configuration: SMECm is switched off.

2.32 Procedure: SPIRE-IST-FUNC-SMEC-02b

Version: 1.0
Date: 12th June 2006
Purpose: Close the SMECm launch latch
Duration: 2 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute TCL script SPIRE-IST-FUNC-SMEC-02b.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: SMECm is latched.

2.33 Procedure: SPIRE-IST-FUNC-DCU-01

Version: 1.0
Date: 12th June 2006
Purpose: DCU science packet generation check for all Photometer and Spectrometer packet types (PF, PSW, PMW, PLW, SF, SSW and SLW)
Duration: 5 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-DCU-01.tcl	DCUFRAMECNT	0/700		

Test Result (Pass/Fail):

Final Configuration: Unchanged

2.34 Procedure: SPIRE-IST-FUNC-DCU-03

Version: 1.0
Date: 12th June 2006
Purpose: DCU test pattern test for check by the I-EGSE (Full Photometer and Spectrometer)
Duration: 5 minutes

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-DCU-03.tcl	DCUFRAMECNT	1400/1600		
2	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.35 Procedure: SPIRE-IST-FUNC-DCU-11-P

Version: 1.0
Date: 12th June 2006
Purpose: Photometer detectors switch on
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that Photometer LIAs are switched on	PLIABITSTAT	1		
2	Execute TCL script SPIRE-IST-FUNC-DCU-13-P.tcl	—	—	—	—
3	Check that the Photometer detectors are switched on	PSWJFETSTAT PMLWJFETSTAT PSWJFET1V PSWJFET2V PSWJFET3V PSWJFET4V PSWJFET5V PSWJFET6V PMWJFET1V PMWJFET2V PMWJFET3V PMWJFET4V PLWJFET1V PLWJFET2V TCJFETV PHOTHTRV	0/0x3F/0x3F 0/-/0x7F -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V -1.49V 0.		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Photometer detectors are switched on.

2.36 Procedure: SPIRE-IST-FUNC-DCU-13-P

Version: 1.0
Date: 12th June 2006
Purpose: Perform a Photometer Load Curve
Duration: 20 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **Procedure SPIRE-IST-FUNC-DCU-11-P has been executed**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- The Photometer detectors and the LIAs are on
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that Photometer LIAs are switched on	PLIABITSTAT	1		
2	Execute TCL script SPIRE-IST-FUNC-DCU-13-P.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.37 Procedure: SPIRE-IST-FUNC-DCU-05-P

Version: 1.0
Date: 12th June 2006
Purpose: Photometer Manual Offsets Check
Duration: 10 minutes

Preconditions: The Photometer LIAs are switched on

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-DCU-05-P.tcl	—	—	—	
2	**Wait for instruction from the I-EGSE staff before proceeding with the next step**	—	—	—	
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.38 Procedure: SPIRE-IST-PDET-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off Photometer detectors
Duration: 2 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE-IST-FUNC-DCU-11-P has been executed**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- The Photometer detectors and the LIAs are on
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-PDET-OFF.tcl	—	—	—	
2	Check that the Photometer detectors are switched off	PSWJFETSTAT	0x3F/-/0		
		PMLWJFETSTAT	0x7F/-/0		
		PSWJFET1V	0.0V		
		PSWJFET2V	0.0V		
		PSWJFET3V	0.0V		
		PSWJFET4V	0.0V		
		PSWJFET5V	0.0V		
		PSWJFET6V	0.0V		
		PMWJFET1V	0.0V		
		PMWJFET2V	0.0V		
		PMWJFET3V	0.0V		
		PMWJFET4V	0.0V		
		PLWJFET1V	0.0V		
		PLWJFET2V	0.0V		
		TCJFETV	0.0V		
		PHOTHTRV	0.		
3	Check that the Photometer LIAs are switched off	PLIABITSTAT	1/-/0		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Photometer detectors are switched off.

2.39 Procedure: SPIRE-IST-FUNC-DCU-11-S

Version: 1.0
Date: 12th June 2006
Purpose: Spectrometer detectors switch on
Duration: 10 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that Spectrometer LIAs are switched on	SLIABITSTAT	1		
2	Execute TCL script SPIRE-IST-FUNC-DCU-11-S.tcl	—	—	—	
3	Check that the Spectrometer detectors are switched on	SPECJFETSTAT	0/7/7		
		SSWJFET1V	-1.49V		
		SSWJFET2V	-1.49V		
		SLWJFET1V	-1.49V		
		SPECHTRV	0.0V		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Spectrometer detectors switched on.

2.40 Procedure: SPIRE-IST-FUNC-DCU-13-S

Version: 1.0
Date: 15th June 2006
Purpose: Perform a Spectrometer Load Curve
Duration: 20 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **Procedure SPIRE-IST-FUNC-DCU-11-S has been executed**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- The Spectrometer detectors and the LIAs are on
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that Spectrometer LIAs are switched on	SLIABITSTAT	1		
2	Execute TCL script SPIRE-IST-FUNC-DCU-13-S.tcl	—	—	—	
3	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.41 Procedure: SPIRE-IST-FUNC-DCU-05-S

Version: 1.0
Date: 12th June 2006
Purpose: Spectrometer Manual Offsets Check
Duration: 10 minutes

Preconditions: The Spectrometer LIAs are switched on

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter	Expected Values Before/ After	Actual Values Before /After	Success/ Failure
1	Execute TCL script SPIRE-IST-FUNC-DCU-05-S.tcl	—	—	—	
2	**Wait for instruction from the I-EGSE staff before proceeding with the next step**	—	—	—	
Test Result (Pass/Fail):					

Final Configuration: Unchanged

2.42 Procedure: SPIRE-IST-SDET-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off Spectrometer detectors
Duration: 2 minutes

Preconditions:

- **SPIRE FM is electrically integrated with the Herschel Satellite**
- **SPIRE-IST-FUNC-DCU-11-S has been executed**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- The Spectrometer detectors and the LIAs are on
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-SDET-OFF.tcl	—	—	—	
2	Check that the Spectrometer detectors are switched off	SPECJFETSTAT	7/-/0		
		SSWJFET1V	0.0V		
		SSWJFET2V	0.0V		
		SLWJFET1V	0.0V		
		SPECHTRV	0.0V		
3	Check that the Spectrometer LIAs are switched off	SLIABITSTAT	1/-/0		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: Spectrometer detectors are switched off.

2.43 Procedure: SPIRE-IST-MCU-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off the MCU – if necessary

Preconditions:

- **SPIRE is in REDY mode**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- SPIRE FUNCTIONAL PARAMETERS display is selected on the CCS

Step	Description	Parameter – Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Check that the mode parameter is REDY	MODE	REDY		
2	Execute SPIRE-IST-MCU-OFF.tcl	—	—	—	
3	Check that the MCU is switched off	MCUBITSTAT	1/-/0		
4	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—			
Test Result (Pass/Fail):					

Final Configuration: MCU switched off.

2.44 Procedure: SPIRE-IST-SCU-OFF

Version: 1.1
Date: 12th June 2006
Purpose: Switch off SCU DC and AC thermometry – if necessary

Preconditions:

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-SCU-OFF.tcl	—	—	—	
2	A few seconds later record the value of parameter SCUTEMPSTAT	SCUTEMPSTAT	FFFF/-/0		
3	A few seconds later record the value of parameter SUBKSTAT	SUBKSTAT	1/-/0		
4	Check that SPIRE is in DRCU_ON mode	MODE	REDY/-/DRCU_ON		
5	**Wait for the I-EGSE staff to confirm the success or failure of this test**	—	—	—	—

Test Result (Pass/Fail):

Final Configuration: SPIRE in DRCU_ON mode.

2.45 Procedure: SPIRE-IST-DRCU-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off the DRCU – if necessary

Preconditions:

- **Procedure SPIRE-IST-SCU-OFF has been successfully executed**
- **SPIRE is electrically integrated with the Herschel EQM.**

Initial Configuration:

- SPIRE DPU is on and generating HK
- DRCU is switched ON
- FUNCTIONAL TEST PARAMETERS display is selected on the CCS

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	Execute TCL script SPIRE-IST-DRCU-OFF.tcl	—	—	—	
2	Check that THSK parameter is not refreshing anymore	—	—	—	
3	Check that TM2N parameter is not incrementing anymore	—	—	—	
4	**When instructed by the I-EGSE staff Power off the SPIRE DRCU using CCS procedure XXXXXX**	—	—	—	

Test Result (Pass/Fail):

Final Configuration:

- DRCU is switched off
- SPIRE DPU is on but not generating HK

2.46 Procedure: SPIRE-IST-DPU-OFF

Version: 1.0
Date: 12th June 2006
Purpose: Switch off the DPU – if necessary

Preconditions: SPIRE-IST-DRCU-OFF has been successfully executed.

Initial Configuration:

- SPIRE DPU is on *but not* generating any HK
- DRCU is switched OFF

Step	Description	Parameter - Unit	Expected Values Before/ During/ After	Actual Values Before/ During/ After	Success/ Failure
1	**When instructed by the I-EGSE staff Power off the SPIRE DRCU using the CCS procedure XXXXXX**	—	—	—	

Test Result (Pass/Fail):

Final Configuration: SPIRE DPU is switched off and the SPIRE instrument is OFF.