SPIRE-AST-REP-002626

Title:

SPIRE SFT PRIOR TO COOLDOWN

CI-No:

153200

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Data

22/08/2005

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See Distribution List (last page)

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Annex 5: SPIRE Nominal Bus Profile (SPIRE_prime_inst.PST) 36

Annex 6: HP-112000-ASED-NC-1375: Source Sequence Counter Errors on CCS 40

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1 Scope

This test report describes the results of the first SFT warm (EQM) performed for the Herschel SPIRE Instrument. The SPIRE instrument consists of the following configuration for this test:

- DPU
- DRCU (DCU + SCU)
- FPU + JFET's

This test is done prior to cooldown to make sure the instrument is OK for the cooldown.

The following Test Procedures are used:

- HP-2-ASED-PR-0051, issue 1.1
- HP-2-ASED-PR-0035, Issue 4 from 03.08.2005 (EGSE configuration procedure)
- SPIRE-RAL-PRC-002494, Issue 1.0 (19/08/2005)

The test will also serve as a validation of the SFT procedure, which –in principle- is executable by the CCS operator without any instrument personel present.

The test was performed at ASED in Ottobrunn on 22.08.2005

The following people were present during the test:

- Test Director: C. Schlosser/S. Idler
- CCS Operator: S. Ilsen
- SPIRE IEGSE operator: A. Aramburu
- SPIRE Engineering: S. Sidher
- PA: D. Hendry
- ESA / Alcatel representative: C. Scharmberg, A. Knight

1.1 Summary

Detailed results are given in the as-run-procedure in chapter 3.

Two new NCR's have been raised:

 HP-112000-ASED-NC-1375: Source Sequence Counter Errors on CCS (see Annex 6:)

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• HP-112000-ASED-NC-1376: Initial Value of TM5N is wrong in procedure (see Annex 7:)

Both NCR's are minor and do not block to the cooldown.

The first SFT was successful. Some changes will be made to the procedure to clearify, because the SFT should be executable by CCS operators without the help of SPIRE personel.

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2 Results of HP-2-ASED-PR-0035 - Chapter 3: Order of Execution (steps 1 to 10)

Note: The SVM has been moved to the cleanroom class 100.000 since the last test. For this the data bus and power cables have been disconnected and reconnected again. This is also valid for the grounding. No check is done prior to test to check if all cables are reconnected correctly.

Step #	Action	Comments	Check
1	Note Testsession	2005_08_22_12_42_ilsens_hpws42_REALTIME_S_S FT_W1	ОК
2	Power on CDMU DFE platform		ок
3	Power on PLM SCOE platform		ОК
4	Power on the CDMU DFE workstation and wait for the BIST to finish.	Check: BIST successful?	ок
5	Power on the PLM SCOE workstation and wait for the BIST to finish.	Check: BIST successful?	ок
6	Execute	Check: PLM SCOE HK packets arriving	OK
	"EGSE_CONFIG_AUTO.t	Check: CDMU DFE HK packets arriving	ок
	cl" (see Annex 1:)	Check: Check name of bus profile (PST) in CDMU DFE HK or on CDMU DFE workstation Result: SPIRE_prime_inst.pst	ОК
7	Execute "SubscribeParams.tcl"	Check: Wait until status of TCL file has changed to WAITING. This can take up to 10 minutes. This step is not executed since the IEGSE will not be used during this test.	N/A
8	Execute "Connect HIEGSE"	Check with IEGSE operators if IEGSE is connected.	ок
9	Execute "WARNING_LAMP_POW ER_ON.tcl"	Check if lamp is ON Not Applicable since the lamp is not connected at the moment	N/A
10	Execute "INSTR_POWER_ON.tcl"	This step is integrated in the SFT (see below)	ок

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3 Short Functional Test Results

3.1 SFT-SPIRE-CCS-DPU-ON

Purpose: To switch on the SPIRE DPU and start generating housekeeping

Preconditions:

- CCS 28V Power Supply to the DPU is available
- SPIRE MIB is imported in the CCS database.
- CCS is up and running (SCOS, TOPE and the CDMU Simulator)
- DPU AND OBS PARAMETERS display is selected on the CCS

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

Step #	Action	Comments	Check
1	Power on the SPIRE DPU using the CCS 28V Power Supply	This action is performed from INST_POWER_ON.tcl (see Annex 2:)	ОК
		Result: • Voltage: 27.85 V • Current: 0.48 A	
		(5,2) packet received	
extra	Send command SDC09505 manually	This is needed because of NCR 0251 (first command send twice). The command should not have any effect.	ОК
2	Execute TCL script SFT- SPIRE-CCS-DPU-ON.tcl		ОК
3	Check that THSK parameter on the DPU AND OBS PARAMETERS display on SCOS is refreshing every second	THSK incrementing every second	ОК
4	Check that TM2N parameter on the DPU AND OBS PARAMETERS display on SCOS is incrementing every second	TM2N incrementing every second	ок

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

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3.2 SFT-SPIRE-CCS-DRCU-ON

Purpose: To switch on the SPIRE DRCU and start generating housekeeping

Preconditions:

Initial Configuration:

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

Step #	Action	Comments	Check
1	Execute TCL script SFT- SPIRE-CCS-DRCU-ON- STEP1.tcl	HK stopped as expected	ок
2	Check that THSK parameter is not refreshing anymore		ок
3	Check that TM2N parameter is not incrementing anymore		ок
4	Manual Switch on of the DRCU by the CCS staff step 1: • Ensure all 5 remote DCU switches are in the off position • Switch on the SPIRE Power Bench (Primary & Secondary)	This action was performed by C. Schlosser, D. Hendry and C. Scharmberg	ок
5	Execute TCL script SFT- SPIRE-CCS-DRCU-ON- STEP2.tcl	During the execution of this TCL script, a SSC error was detected. This will be covered by NCR 1375 (see Annex 6:) The SSC error does not affect the test. All packets arrived on the CCS and IEGSE.	ОК
6	Manual Switch on of the DRCU by the CCS staff step 2: Switch on all 5 remote DCU switches		ок
7	Check that THSK	THSK incrementing every second	ок

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	parameter is again		
	refreshing every second		
8	Check that TM2N	TM2N incrementing every second	ок
	parameter is again		
	incrementing every		
	second		

Final Configuration:

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

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3.3 SFT-SPIRE-CCS-FUNC-SCU-01

Purpose: SCU science packet generation check

Preconditions:

Initial Configuration:

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

Step #	Action	Comments			Check
1	Execute TCL script SFT-	Check if the followin	Check if the following parameters change value:		
	SPIRE-CCS-FUNC- SCU-01.tcl	Parameter	Original Value	End Value	
		SCUFRAMECNT ¹	0	31	ОК
		Observed values	0		
		TM5N ²	0	1	NOK
		Observed values	00003FFF	1	

The initial value of parameter TM5N is not 0 as expected but 00003FFF. This problem was not yet recognised before, although this test has been run for several times. A replay of previous tests showed that also then, the initial value was 00003FFF instead of 0. An NCR is raised to cover this (NCR 1376, see Annex 7:).

The expected end value is correct. SPIRE indicates that the test was successful. SPIRE will change the procedure to have an expected initial value of 00003FFF.

Final Configuration: Unchanged

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¹ AND SA_4_559 (SCU Parameters)

² AND SA_1_559 (DCU and OBS parameters)

3.4 SFT-SPIRE-CCS-FUNC-DCU-01

Purpose: DCU science packet generation check for all Photometer and Spectrometer packet types (PF, PSW, PMW, PLW, SF, SSW and SLW)

Preconditions:

Initial Configuration:

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

Step #	Action	Comments			Check
1	Execute TCL script SFT-	Check if the following parameters change value:			
	SPIRE-CCS-FUNC-DCU-01.tcl	Parameter	Original Value	End Value	
		DCUFRAMECNT	0	700	ОК

Final Configuration: Unchanged

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3.5 SFT-SPIRE-CCS-FUNC-DCU-04-PS-ON

Purpose: Spectrometer and Photometer LIAs switch on

Preconditions: The Photometer and Spectrometer LIAs are switched off

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step #	Action		Check		
1	Execute TCL script SFT-	Check if the followin	g parameters change	e value:	
	SPIRE-CCS-FUNC- DCU-04-PS-ON.tcl	Parameter	Original Value	End Value	
		SCUDCDCSTAT ³	0	1	ОК
2	Manual step for the CCS staff: Check if the Over Current Limiter for the LIAs has triggered on the SPIRE Warm Electronics Power Bench. If it has, it will have to manually reset.	This action was performed and C. Scharmberg	ormed by C. Schlosse	r, D. Hendry	ОК

Final Configuration: The Photometer and Spectrometer LIAs are on.

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 $^{^{3}}$ AND SA_4_559 SCU PARAMETERS

3.6 SFT-SPIRE-CCS-FUNC-SCU-04

Purpose: SCU Photometer PCAL check

Preconditions: SPIRE CQM is electrically integrated with the Herschel EQM

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step #	Action	Comments			Check	
1	SPIRE-CCS-FUNC- SCU-04.tcl	Check if the followin	g parame	ters change	e value:	
		Parameter	Start	During	End	
		PCALCURR – mA Observed	0.0 0.0	0.1 0.1	0.0 0.0	ОК
	during the test should be monitored when parameter BBFULLTYPE in the SCU PARAMETERS display is set to PCAL_Check This usually happens about 30 seconds from the start of test execution.	PCALV – V Observed	0.0 0.0	0.026 0.025	0.0 0.0	ОК

Final Configuration: Unchanged

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3.7 SFT-SPIRE-CCS-FUNC-SCU-05

Purpose: SCU Photometer SCAL4 and SCAL2 check

Preconditions: SPIRE CQM is electrically integrated with the Herschel EQM

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step #	Action		Comm	ents		Check
1	Execute TCL script SFT- SPIRE-CCS-FUNC- SCU-05.tcl					ок
2	Wait for the parameter BBFULLTYPE to get set to SCAL4_Check					ок
3	A few seconds later record the value of	Check if the follow	ing parame	eters change	e value:	
	parameters	Parameter	Start	During	End	
-	SCAL4CURR and SCAL4V These parameters are set back to 0 after ~60	SCAL4CURR – mA Observed	0.0	0.1 0.1	0.0	ок
	seconds	SCAL4V – V Observed	0.0 0.0	0.05 0.05	0.0 0.0	ОК
4	Wait for the parameter BBFULLTYPE to get set to SCAL2_Check					ок
5	A few seconds later	Check if the following parameters change value:				
	record the value of parameters	Parameter	Start	During	End	
	SCAL4CURR and SCAL4V These parameters are	SCAL2CURR – mA Observed	0.0	0.1 0.1	0.0	ок
	set back to 0 after ~60 seconds	SCAL2V – V Observed	0.0 0.0	0.05 0.05	0.0 0.0	ок

Final Configuration: Unchanged

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3.8 SFT-SPIRE-CCS-FUNC-SCU-07

Purpose: SCU cooler heaters check

Preconditions: SPIRE CQM is electrically integrated with the Herschel EQM

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step #	Action		Comme	ents		Check
1	Execute TCL script SFT- SPIRE-CCS-FUNC- SCU-07.tcl					ок
2	Wait for the parameter BBFULLTYPE to get set to Cooler_Htr_Chk					ОК
3	A few seconds later record the value of	Check if the followin	g paramet	ers change	e value:	
	parameter	Parameter	Start	During	End	
	EVHSV – the Evaporator Heat Switch Voltage. This voltage stays on for ~45 seconds.	EVHSV – mV Observed	0 0	~323 323	0 0	ок
4	4 A few seconds after the EVHSV parameter has	Check if the following parameters change value:				
	been set back to 0,	Parameter	Start	During	End	
record the value of parameter SPHSV – the Sorption Pump Heat Switch Voltage. This voltage stays on for ~45 seconds.	SPHSV – mV Observed	0 0	~323 323	0	ок	
5	A few seconds after the SPHSV parameter has	Check if the following	g paramet	ers change	e value:	
	been set back to 0,	Parameter	Start	During	End	
record the value of parameter SPHTRV – the Sorption Pump Heater Voltage. This voltage stays on for ~45 seconds.	SPHTRV – V Observed	0 0	~8.8 8.77	0	ок	

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Final Configuration: Unchanged

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3.9 SFT-SPIRE-CCS-FUNC-SCU-03

Purpose: SCU DC thermometry check

Preconditions: SPIRE CQM is electrically integrated with the Herschel EQM

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step #	Action		Com	ments				Check
1	Execute TCL script SFT- SPIRE-CCS-FUNC- SCU-03.tcl							ок
2	Wait for the parameter BBFULLTYPE to get set to SCU_DC_Therm							ок
3	A few seconds later	Check if the following parameters change value:						
	record the value of parameter	Parameter	Start		During	J	End	
	SCUTEMPSTAT	SCUTEMPSTAT Observed	0	0	FFFF 0000FI FF	F	FFFF 0000FF FF	ок
4	Record the RAW values of SCU temperatures	PUMPHTRTEM PUMPHSTEMP EVAPHSTEMP SHUNTTEMP SOBTEMP SLOTEMP PLOTEMP OPTTEMP BAFTEMP BSMIFTEMP SCAL2TEMP SCAL4TEMP SCALTEMP SMECIFTEMP SMECTEMP BSMTEMP	P	//-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32' //-32'	768 768 768 768 768 768 768 768	-3. -3. -3. -3. -3. -3. -3. -3. -3. -2. -7	2768 2768 2768 2768 2768 0178 2768 2768 2768 2768 2768 2768 2768 27	ОК

Final Configuration: Unchanged

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3.10 SFT-SPIRE-CCS-FUNC-SCU-06

Purpose: SCU AC thermometry check

Preconditions: SPIRE CQM is electrically integrated with the Herschel EQM

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step#	Action	Comments				
1	Execute TCL script SFT- SPIRE-CCS-FUNC- SCU-06.tcl					ок
2	Wait for the parameter BBFULLTYPE to get set to SCU_AC_Therm					ОК
3	A few seconds later	Check if the following parameters change value:				
	record the value of parameter	Parameter	Start	During	End	
	SUBKSTAT	SUBKSTAT	0	1	1	ОК
		Observed values	0	1	1	
4	Record the RAW value of	Check if the following parameters change value:				
	SUBKTEMP	Parameter	Start	During	End	
		SUBKTEMP	~31915	_	~31904	ок
		Observed values	31907		31904	

Final Configuration: Unchanged

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3.11 SFT-SPIRE-CCS-FUNC-THO

Purpose: Switch off SCU DC and AC thermometry – if necessary

Preconditions: SPIRE CQM is electrically integrated with the Herschel EQM

Initial Configuration:

• SPIRE DPU is on and generating HK

• DRCU is switched ON

• SCU PARAMETERS display is selected on the CCS

Step #	Action	Comments				
1	Execute TCL script SFT- SPIRE-CCS-FUNC- THO.tcl					ок
2 A few seconds later		Check if the following parameters change value:				
	record the value of parameter	Parameter	Start	During	End	
	SCUTEMPSTAT	SCUTEMPSTAT	FFFF	-	0	ок
3	A few seconds later	Check if the following	g paramet	ers change	value:	
	record the value of parameter	Parameter	Start	During	End	
	SUBKSTAT	SUBKSTAT	1	-	0	ок

Final Configuration: Unchanged

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3.12 SFT-SPIRE-CCS-FUNC-DCU-04-PS-OFF

Purpose: Spectrometer and Photometer LIAs switch on

Preconditions: The Photometer and Spectrometer LIAs are switched on, i.e. Procedure SFT-CCS-FUNC-DCU-04-PS-ON has been executed.

Initial Configuration:

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

Step #	Action		Check		
1	Execute TCL script SFT-	Check if the following parameters change value:			
	SPIRE-CCS-FUNC-DCU-04-PS-OFF.tcl	Parameter	Original Value	End Value	
		SCUDCDCSTAT ⁴	1	0	ОК

Final Configuration: The Photometer and Spectrometer LIAs are on.

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 $^{^{4}}$ AND SA_4_559 SCU PARAMETERS

3.13 SFT-SPIRE-CCS-DRCU-OFF

Purpose: Switch off the DRCU

Preconditions: Procedure SFT-SPIRE-CCS-FUNC-THO has been successfully executed if SPIRE CQM is electrically integrated with the Herschel EQM.

Initial Configuration:

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

Step #	Action	Comments	Check
1	Execute TCL script SFT- SPIRE-CCS-DRCU-ON- STEP1.tcl		ок
2	Check that THSK parameter is not refreshing anymore		ок
3	Check that TM2N parameter is not incrementing anymore		ОК
4	Manual Switch off of the DRCU by the I-EGSE staff: Switch off all 5 remote DCU switches Switch off the SPIRE Power Bench (Primary & Secondary)	Clarification needed: Switched are on SVM and not on power bench First switch off secondary power (front of power bench) Then switch off primary power (back of power bench) bench)	ок

Final Configuration:

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

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3.14 SFT-SPIRE-CCS-DPU-OFF

Purpose: Switch off the DPU

Preconditions: SFT-SPIRE-CCS-DRCU-OFF has been successfully executed.

Initial Configuration:

• SPIRE DPU is on but not generating any HK

• DRCU is switched OFF

Step#	Action	Comments	Check
1	Request the CCS staff to power off the SPIRE DPU using the CCS 28V Power Supply	This action is performed from INST_POWER_OFF.tcl (see Annex 3:)	ок

Final Configuration: SPIRE DPU is switched off

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Step #	Action	Comments	Check
12	Execute "INSTR_POWER_OFF" or an instrument specific power off sequence.	This step is already executed in chapter 3.14	ок
13	Execute "WARNING_LAMP_PO WER_OFF.tcl"	Check if lamp is OFF Not Applicable since the lamp is not connected at the moment	N/A
14	Execute	Check: PLM SCOE HK packets stopped	ок
	"EGSE_OFFLINE_AUTO .tcl" (see Annex 4:)	Check: CDMU DFE HK packets stopped	ок
15	Shut down PLM EGSE		ОК

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Annex 1: Log of EGSE_CONFIG_AUTO.tcl

```
2005.234.12.46.10.796903 EGSE CONFIG Sequence
2005.234.12.46.10.797372
************************
2005.234.12.46.10.797946 Check of CDMU DFE and PLM SCOE
2005.234.12.46.10.798249
2005.234.12.46.10.798486
2005.234.12.46.10.798710 Connecting to CDMU DFE
2005.234.12.46.12.804019 Attaching to CMDU DFE
2005.234.12.46.13.811496
2005.234.12.46.13.812011 Checking if CDMU DFE BIST was OK
2005.234.12.46.15.814758
2005.234.12.46.16.040182 >>> RESULT : CDMU DFE BIST OK, continuing EGSE_CONFIG.
2005.234.12.46.18.042560
2005.234.12.46.18.043063 Connecting to PLM SCOE
2005.234.12.46.20.045832 Attaching to PLM SCOE
2005.234.12.46.21.049400
2005.234.12.46.21.049933 Checking if PLM SCOE BIST was OK
2005.234.12.46.23.052642
2005.234.12.46.23.227857 >>> RESULT : PLM SCOE BIST OK, continuing EGSE_CONFIG.
    *********************
2005.234.12.46.25.230343 Configuring CDMU DFE
                              ***********
2005.234.12.46.25.230743
2005.234.12.46.25.231274 Switching CDMUDFE to ONLINE mode
2005.234.12.46.26.346527
2005.234.12.46.26.346927
2005.234.12.46.26.347511
2005.234.12.46.26.348045 Available PST tables:
2005.234.12.46.26.348584 1. HIFI_prime_inst.PST
2005.234.12.46.26.349191 2. SPIRE_prime_inst.PST
2005.234.12.46.26.349762 3. PACS_prime_inst.PST
2005.234.12.46.26.350340 4. PACS_burst_mode.PST
2005.234.12.46.26.350906 5. PACS_SPIRE_par.PST
2005.234.12.46.26.351467
2005.234.12.46.26.379780 >>> Please enter the number of the required PST table. Enter 0 for an
unlisted.
2005.234.12.47.18.881975
2005.234.12.47.18.882329 You have selected 2 : SPIRE_prime_inst.PST
2005.234.12.47.18.882921
2005.234.12.47.18.883703 Loading SPIRE prime inst.PST file on CDMU DFE
2005.234.12.47.18.884306
2005.234.12.47.23.954900 The PST table is loaded on the CDMU DFE.
2005.234.12.47.23.955332
2005.234.12.47.23.955969 Enabling PST file execution.
2005.234.12.47.25.024960
2005.234.12.47.25.025396 Enabling TM Queue.
2005.234.12.47.26.126095
2005.234.12.47.26.126484 Enabling TM Polling.
2005.234.12.47.27.160934
2005.234.12.47.27.161319 Enabling TC Queue.
2005.234.12.47.28.195857
2005.234.12.47.28.196260 Enabling SA Queue.
2005.234.12.47.29.232508
2005.234.12.47.29.232896 Enabling SA Reading.
2005.234.12.47.30.272816
2005.234.12.47.30.273428 Enabling Low Level Time Synchronisation.
2005.234.12.47.31.317794
2005.234.12.47.31.339618 User Info>: >>> Please Enable the Busmonitor (Set Online Mode and Start
New Acquisition) and press OK.
2005.234.12.48.40.102890 >>>>>> Reading out CDMUDFE Settings
2005.234.12.48.40.104051
```

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```
2005.234.12.48.40.106523 Status_CDMU_OnLine is 1 (extracted from TLM YM777944)
2005.234.12.48.40.108796 Status_CDMU_TMpolling is 1 (extracted from TLM YM780944)
2005.234.12.48.40.110987 Status_CDMU_SAreadActive is 1 (extracted from TLM YM781944)
2005.234.12.48.40.113137 Status_CDMU_SAqueueActive is 1 (extracted from TLM YM782944)
2005.234.12.48.40.115257 Status_CDMU_TMqueueActive is 1 (extracted from TLM YM783944)
2005.234.12.48.40.117432 Status_CDMU_TCqueueActive is 1 (extracted from TLM YM784944)
2005.234.12.48.40.118542 Status_CDMU_PSTfileName is SPIRE_prime_inst... (extracted from TLM
2005.234.12.48.40.120755 Status CDMU PSTrunning is 1 (extracted from TLM YM829944)
2005.234.12.48.43.123479 Configuring PLM SCOE
******************
2005.234.12.48.43.123947
2005.234.12.48.43.124543 Switching PLM SCOE to ONLINE mode
2005.234.12.48.44.204706
2005.234.12.48.49.207371 >>>>>> Reading out PLM SCOE Settings
2005.234.12.48.49.208573
2005.234.12.48.49.210963 Status_PLM_OnLine is 1 (extracted from TLM YM018942)
2005.234.12.48.49.213204 Status_PLM_PSU1_Master is currently 0 (extracted from TLM YM129942)
2005.234.12.48.49.215395 Status_PLM_PSU1_Slave is currently 0 (extracted from TLM YM145942)
2005.234.12.48.49.217629 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.12.48.49.219838 Status_PLM_PSU2_Slave is currently 0 (extracted from TLM YM193942)
2005.234.12.48.49.224770 Status_PLM_LCL1_V is currently (extracted from TLM YM228942)
2005.234.12.48.49.228627 Status_PLM_LCL1_I is currently (extracted from TLM YM232942) 2005.234.12.48.49.233032 Status_PLM_LCL2_V is currently (extracted from TLM YM244942)
2005.234.12.48.49.236882 Status_PLM_LCL2_I is currently (extracted from TLM YM248942)
2005.234.12.48.49.241237 Status_PLM_LCL3_V is currently (extracted from TLM YM260942)
2005.234.12.48.49.245141 Status PLM_LCL3_I is currently (extracted from TLM YM264942)
2005.234.12.48.49.249572 Status_PLM_LCL4_V is currently (extracted from TLM YM276942) 2005.234.12.48.49.253441 Status_PLM_LCL4_I is currently (extracted from TLM YM280942)
2005.234.12.48.49.258041 Status_PLM_LCL5_V is currently (extracted from TLM YM292942)
2005.234.12.48.49.261942 Status_PLM_LCL5_I is currently (extracted from TLM YM296942)
2005.234.12.48.49.267217 Status PLM LCL6 V is currently (extracted from TLM YM308942)
2005.234.12.48.49.271940 Status_PLM_LCL6_I is currently (extracted from TLM YM312942) 2005.234.12.48.49.276895 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.12.48.49.281453 Status_PLM_LCL7_I is currently (extracted from TLM YM328942)
2005.234.12.48.49.286414 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.12.48.49.290884 Status_PLM_LCL8_I is currently (extracted from TLM YM344942)
2005.234.12.48.49.295807 Status_PLM_LCL9_V is currently (extracted from TLM YM356942)
2005.234.12.48.49.300267 Status_PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.12.48.49.304769 Status_PLM_LCL10_V is currently (extracted from TLM YM372942)
2005.234.12.48.49.308468 Status_PLM_LCL10_I is currently (extracted from TLM YM376942)
2005.234.12.48.49.311044 Status_PLM_LCL11_V is currently
                                                             (extracted from TLM YM388942)
2005.234.12.48.49.313518 Status_PLM_LCL11_I is currently (extracted from TLM YM392942)
2005.234.12.48.49.316104 Status_PLM_LCL12_V is currently (extracted from TLM YM404942) 2005.234.12.48.49.318560 Status_PLM_LCL12_I is currently (extracted from TLM YM408942)
2005.234.12.48.49.321151 Status_PLM_LCL13_V is currently (extracted from TLM YM420942)
2005.234.12.48.49.323602 Status_PLM_LCL13_I is currently (extracted from TLM YM424942) 2005.234.12.48.49.326212 Status_PLM_LCL14_V is currently (extracted from TLM YM436942)
2005.234.12.48.49.328667 Status_PLM_LCL14_I is currently (extracted from TLM YM440942)
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Annex 2: Log of INSTR_POWER_ON.tcl

```
2005.234.13.23.31.889797
                          2005.234.13.23.31.890707 Start of Instrument POWER ON sequence.
****************
2005.234.13.23.31.891020
2005.234.13.23.31.891240 To run this script, the CDMU DFE and PLM SCOE should be
2005.234.13.23.31.891478 powered and configured.
2005.234.13.23.31.891742 To initiate, this script will connect and attach to the CDMUDFE
2005.234.13.23.31.891981 and PLM SCOE.
2005.234.13.23.31.892202
2005.234.13.23.31.892420 Connecting to CDMU DFE
2005.234.13.23.33.899274 Attaching to CMDU DFE
2005.234.13.23.34.906711
2005.234.13.23.34.907089 Connecting to PLM SCOE
2005.234.13.23.36.911965 Attaching to PLM SCOE
2005.234.13.23.37.915967 >>>>>> Reading out CDMUDFE Settings
2005.234.13.23.37.916815
2005.234.13.23.38.048341 Status_CDMU_OnLine is 1 (extracted from TLM YM777944)
2005.234.13.23.38.050739 Status_CDMU_TMpolling is 1 (extracted from TLM YM780944)
2005.234.13.23.38.052574 Status_CDMU_SAreadActive is 1 (extracted from TLM YM781944)
2005.234.13.23.38.054242 Status_CDMU_SAqueueActive is 1 (extracted from TLM YM782944)
2005.234.13.23.38.055901 Status_CDMU_TMqueueActive is 1 (extracted from TLM YM783944)
2005.234.13.23.38.057513 Status_CDMU_TCqueueActive is 1 (extracted from TLM YM784944)
2005.234.13.23.38.059041 Status_CDMU_PSTfileName is SPIRE_prime_inst... (extracted from TLM
2005.234.13.23.38.060723 Status CDMU PSTrunning is 1 (extracted from TLM YM829944)
2005.234.13.23.38.061288
2005.234.13.23.38.062353 >>>>>> Reading out PLM SCOE Settings
2005 . 234 . 13 . 23 . 38 . 063412
2005.234.13.23.38.242742 Status_PLM_OnLine is 1 (extracted from TLM YM018942)
2005.234.13.23.38.244655 Status_PLM_PSU1_Master is currently 0 (extracted from TLM YM129942)
2005.234.13.23.38.246398 Status_PLM_PSU1_Slave is currently 0 (extracted from TLM YM145942)
2005.234.13.23.38.248114 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.13.23.38.249873 Status_PLM_PSU2_Slave is currently 0 (extracted from TLM YM193942)
2005.234.13.23.38.253029 Status_PLM_LCL1_V is currently (extracted from TLM YM228942) 2005.234.13.23.38.256192 Status_PLM_LCL1_I is currently (extracted from TLM YM232942)
2005.234.13.23.38.259371 Status_PLM_LCL2_V is currently (extracted from TLM YM244942)
2005.234.13.23.38.262489 Status_PLM_LCL2_I is currently (extracted from TLM YM248942) 2005.234.13.23.38.265646 Status_PLM_LCL3_V is currently (extracted from TLM YM260942)
2005.234.13.23.38.268849 Status_PLM_LCL3_I is currently (extracted from TLM YM264942)
2005.234.13.23.38.272097 Status_PLM_LCL4_V is currently (extracted from TLM YM276942) 2005.234.13.23.38.275601 Status_PLM_LCL4_I is currently (extracted from TLM YM280942)
2005.234.13.23.38.278867 Status_PLM_LCL5_V is currently (extracted from TLM YM292942) 2005.234.13.23.38.282076 Status_PLM_LCL5_I is currently (extracted from TLM YM296942)
2005.234.13.23.38.285295 Status_PLM_LCL6_V is currently (extracted from TLM YM308942)
2005.234.13.23.38.288500 Status_PLM_LCL6_I is currently (extracted from TLM YM312942) 2005.234.13.23.38.291744 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.13.23.38.295124 Status_PLM_LCL7_I is currently (extracted from TLM YM328942)
2005.234.13.23.38.298445 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.13.23.38.301720 Status_PLM_LCL8_I is currently (extracted from TLM YM344942)
2005.234.13.23.38.305052 Status_PLM_LCL9_V is currently (extracted from TLM YM356942) 2005.234.13.23.38.308373 Status_PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.13.23.38.311191 Status_PLM_LCL10_V is currently (extracted from TLM YM372942)
2005.234.13.23.38.313900 Status_PLM_LCL10_I is currently (extracted from TLM YM376942) 2005.234.13.23.38.315638 Status_PLM_LCL11_V is currently (extracted from TLM YM388942)
2005.234.13.23.38.317350 Status_PLM_LCL11_I is currently (extracted from TLM YM392942)
2005.234.13.23.38.319080 Status_PLM_LCL12_V is currently 2005.234.13.23.38.320794 Status_PLM_LCL12_I is currently
                                                               (extracted from TLM YM404942)
                                                               (extracted from TLM YM408942)
2005.234.13.23.38.322504 Status_PLM_LCL13_V is currently (extracted from TLM YM420942) 2005.234.13.23.38.324206 Status_PLM_LCL13_I is currently (extracted from TLM YM424942)
2005.234.13.23.38.325921 Status_PLM_LCL14_V is currently (extracted from TLM YM436942) 2005.234.13.23.38.327810 Status_PLM_LCL14_I is currently (extracted from TLM YM440942)
2005.234.13.23.38.328488
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2005.234.13.23.38.329331
                  ****************
2005.234.13.23.38.330362 Power On Instruments
2005 . 234 . 13 . 23 . 38 . 331180
2005.234.13.23.38.331804
2005.234.13.23.38.332400
2005.234.13.23.38.333628 >>>>>> Start Up Instruments
2005.234.13.23.38.334852
2005.234.13.23.38.364104 Which instrument needs to be Powered? PACS, SPIRE, HIFI, CCU?
2005.234.13.23.43.225152 You have selected to power SPIRE.
2005.234.13.23.43.225742
2005.234.13.23.43.226471 The current power on order is:
2005.234.13.23.43.227145
2005.234.13.23.43.228826 1. LCL 1 SPIRE HSDPU Primary Voltage: V
                                                              Current: A
2005.234.13.23.43.229749 2. LCL 0
                            N/A Primary Voltage: N/A V
                                                          Current: N/A A
2005.234.13.23.43.230526
2005.234.13.23.43.254896 Do you want to change this order? : Choose Yes or No
2005.234.13.23.48.943922
                    User has chosen NO
2005.234.13.23.50.948596
2005.234.13.23.50.976695
                    Do you want to enable the PSU(s)? : Choose Yes or No
2005.234.13.23.52.805367
                    User has chosen YES
2005.234.13.23.54.808687
2005.234.13.23.54.863816 Sending Telecommand YC036942
                    Synchronizing on SEV...
2005.234.13.23.54.864187
2005.234.13.24.05.779336 Synchronised on SEV for TC(s): YC036942
2005.234.13.24.05.780085
2005.234.13.24.05.781303 >>> Checking
2005.234.13.24.11.786665 PSU 1 Master status is currently 1 (from YM129942)
2005.234.13.24.11.787052
                    PSU 1 Slave status is currently 1 (from YM145942)
2005.234.13.24.11.787734
2005.234.13.24.11.816063 User Info>: Check Successful! PSU 1 has been enabled.
2005.234.13.24.15.075410
2005.234.13.24.15.075820 >>> Start Enabling LCL's
2005.234.13.24.15.076492
2005.234.13.24.15.117876 Do you want to enable LCL 1? : Choose Yes or No
2005.234.14.05.50.216809 User has chosen YES
2005.234.14.05.52.221786
2005.234.14.05.52.282728 Sending Telecommand YC040942 to Enable Limiter
                    Synchronizing on SEV...
2005.234.14.05.52.283117
2005.234.14.05.52.307925 Synchronised on SEV for TC(s): YC040942
2005.234.14.05.52.308395
2005.234.14.05.52.349842
                    Sending Telecommand YC043942 to Set Limiter
2005.234.14.05.52.350348 Synchronizing on SEV...
2005.234.14.05.52.386578 Synchronised on SEV for TC(s): YC043942
2005.234.14.05.52.387059
2005.234.14.05.52.387764 >>> Checking
2005.234.14.05.58.393587
                    LCL 1 has currently a voltage of 27.858165741.(from YM228942)
2005.234.14.05.58.393993 LCL 1 has currently a current of 0.462049901485.(from YM232942)
2005.234.14.05.58.394649
2005.234.14.05.58.426393 User Info>: Check Successful! LCL 1 has been enabled.
2005.234.14.05.58.426982 **********
2005.234.14.07.21.149226
2005.234.14.07.21.199118 User Info>: No LCL is selected to be switched on as second
2005.234.14.07.22.058240
2005.234.14.07.22.058727
2005.234.14.07.22.059388 All selected LCL's for SPIRE are powered.
2005.234.14.07.22.060028
2005.234.14.07.22.150734 Do you want to power on another instrument? : Choose Yes or No
2005.234.14.07.26.965371 User has chosen NO
2005.234.14.07.28.970124
2005.234.14.07.28.971460 >>>>>> Reading out PLM SCOE Settings
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2005.234.14.07.28.972612
2005.234.14.07.28.973831 Status_PLM_OnLine is 1 (extracted from TLM YM018942)
2005.234.14.07.28.974879 Status_PLM_PSU1_Master is currently 1 (extracted from TLM YM129942)
2005.234.14.07.28.975984 Status_PLM_PSU1_Slave is currently 1 (extracted from TLM YM145942)
2005.234.14.07.28.977215 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.14.07.28.978478 Status_PLM_PSU2_Slave is currently 0 (extracted from TLM YM193942)
2005.234.14.07.28.979648 Status_PLM_LCL1_V is currently 27.8604888916 (extracted from TLM
2005.234.14.07.28.980736 Status_PLM_LCL1_I is currently 0.428005158901 (extracted from TLM
YM232942)
2005.234.14.07.28.981784 Status_PLM_LCL2_V is currently (extracted from TLM YM244942)
2005.234.14.07.28.982828 Status_PLM_LCL2_I is currently (extracted from TLM YM248942)
2005.234.14.07.28.983868 Status_PLM_LCL3_V is currently (extracted from TLM YM260942) 2005.234.14.07.28.984892 Status_PLM_LCL3_I is currently (extracted from TLM YM264942)
2005.234.14.07.28.985981 Status_PLM_LCL4_V is currently (extracted from TLM YM276942)
2005.234.14.07.28.987014 Status_PLM_LCL4_I is currently (extracted from TLM YM280942)
2005.234.14.07.28.988054 Status_PLM_LCL5_V is currently (extracted from TLM YM292942)
2005.234.14.07.28.989087 Status_PLM_LCL5_I is currently (extracted from TLM YM296942) 2005.234.14.07.28.990127 Status_PLM_LCL6_V is currently (extracted from TLM YM308942)
2005.234.14.07.28.991241 Status_PLM_LCL6_I is currently (extracted from TLM YM312942)
2005.234.14.07.28.992315 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.14.07.28.993379 Status_PLM_LCL7_I is currently (extracted from TLM YM328942)
2005.234.14.07.28.994426 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.14.07.28.995743 Status_PLM_LCL8_I is currently (extracted from TLM YM344942)
2005.234.14.07.28.996839 Status_PLM_LCL9_V is currently (extracted from TLM YM356942)
2005.234.14.07.28.997894 Status_PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.14.07.28.998963 Status_PLM_LCL10_V is currently (extracted from TLM YM372942)
2005.234.14.07.29.000059 Status_PLM_LCL10_I is currently (extracted from TLM YM376942)
2005.234.14.07.29.001891 Status_PLM_LCL11_V is currently
                                                          (extracted from TLM YM388942)
2005.234.14.07.29.003109 Status_PLM_LCL11_I is currently (extracted from TLM YM392942)
2005.234.14.07.29.004186 Status_PLM_LCL12_V is currently (extracted from TLM YM404942)
2005.234.14.07.29.005255 Status_PLM_LCL12_I is currently
                                                          (extracted from TLM YM408942)
2005.234.14.07.29.006311 Status_PLM_LCL13_V is currently (extracted from TLM YM420942)
2005.234.14.07.29.007735 Status_PLM_LCL13_I is currently (extracted from TLM YM424942) 2005.234.14.07.29.008844 Status_PLM_LCL14_V is currently (extracted from TLM YM436942)
2005.234.14.07.29.009951 Status_PLM_LCL14_I is currently (extracted from TLM YM440942)
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Annex 3: Log of INSTR_POWER_OFF.tcl

```
2005.234.15.22.47.858764
      2005.234.15.22.47.859673 Start of Instrument POWER OFF sequence.
***********
2005.234.15.22.47.859980
2005.234.15.22.47.860197 To run this script, the CDMU DFE and PLM SCOE should be
2005.234.15.22.47.860426 powered and configured.
2005.234.15.22.47.860647 To initiate, this script will connect and attach to the CDMUDFE
2005.234.15.22.47.860871 and PLM SCOE.
2005.234.15.22.47.861088
2005.234.15.22.47.861303 Connecting to CDMU DFE
2005.234.15.22.49.866535 Attaching to CMDU DFE
2005.234.15.22.50.874013
2005.234.15.22.50.874387 Connecting to PLM SCOE
2005.234.15.22.52.877284 Attaching to PLM SCOE
2005.234.15.22.53.881224 >>>>>> Reading out CDMUDFE Settings
2005.234.15.22.53.882053
2005.234.15.22.54.013463 Status_CDMU_OnLine is 1 (extracted from TLM YM777944)
2005.234.15.22.54.015189 Status_CDMU_TMpolling is 1 (extracted from TLM YM780944)
2005.234.15.22.54.016781 Status_CDMU_SAreadActive is 1 (extracted from TLM YM781944)
2005.234.15.22.54.018373 Status_CDMU_SAqueueActive is 1 (extracted from TLM YM782944)
2005.234.15.22.54.020034 Status_CDMU_TMqueueActive is 1 (extracted from TLM YM783944)
2005.234.15.22.54.021661 Status_CDMU_TCqueueActive is 1 (extracted from TLM YM784944)
2005.234.15.22.54.023169 Status_CDMU_PSTfileName is SPIRE_prime_inst... (extracted from TLM
YM809944)
2005.234.15.22.54.024841 Status_CDMU_PSTrunning is 1 (extracted from TLM YM829944)
2005.234.15.22.54.025393
2005.234.15.22.54.026401 >>>>>> Reading out PLM SCOE Settings
2005.234.15.22.54.027451
2005.234.15.22.54.277520 Status_PLM_OnLine is 1 (extracted from TLM YM018942)
2005.234.15.22.54.279484 Status_PLM_PSU1_Master is currently 1 (extracted from TLM YM129942)
2005.234.15.22.54.281226 Status_PLM_PSU1_Slave is currently 1 (extracted from TLM YM145942)
2005.234.15.22.54.282965 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.15.22.54.284738 Status_PLM_PSU2_Slave is currently 0 (extracted from TLM YM193942)
2005.234.15.22.54.288158 Status_PLM_LCL1_V is currently 27.8604888916 (extracted from TLM
YM228942)
2005.234.15.22.54.291424 Status_PLM_LCL1_I is currently 0.436261534691 (extracted from TLM
YM232942)
2005.234.15.22.54.301050 Status_PLM_LCL3_V is currently (extracted from TLM YM260942)
2005.234.15.22.54.304238 Status_PLM_LCL3_I is currently (extracted from TLM YM264942) 2005.234.15.22.54.307566 Status_PLM_LCL4_V is currently (extracted from TLM YM276942)
2005.234.15.22.54.310738 Status_PLM_LCL4_I is currently (extracted from TLM YM280942) 2005.234.15.22.54.313991 Status_PLM_LCL5_V is currently (extracted from TLM YM292942)
2005.234.15.22.54.317214 Status_PLM_LCL5_I is currently (extracted from TLM YM296942)
2005.234.15.22.54.320491 Status_PLM_LCL6_V is currently (extracted from TLM YM308942) 2005.234.15.22.54.323762 Status_PLM_LCL6_I is currently (extracted from TLM YM312942)
2005.234.15.22.54.327082 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.15.22.54.330380 Status_PLM_LCL7_I is currently (extracted from TLM YM328942)
2005.234.15.22.54.333729 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.15.22.54.336993 Status_PLM_LCL8_I is currently (extracted from TLM YM344942) 2005.234.15.22.54.340314 Status_PLM_LCL9_V is currently (extracted from TLM YM356942)
2005.234.15.22.54.343649 Status_PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.15.22.54.346553 Status_PLM_LCL10_V is currently (extracted from TLM YM372942) 2005.234.15.22.54.349288 Status_PLM_LCL10_I is currently (extracted from TLM YM376942)
2005.234.15.22.54.351044 Status_PLM_LCL11_V is currently (extracted from TLM YM388942)
2005.234.15.22.54.352721 Status_PLM_LCL11_I is currently
                                                           (extracted from TLM YM392942)
2005.234.15.22.54.354471 Status_PLM_LCL12_V is currently
                                                           (extracted from TLM YM404942)
2005.234.15.22.54.356157 Status_PLM_LCL12_I is currently (extracted from TLM YM408942) 2005.234.15.22.54.357882 Status_PLM_LCL13_V is currently (extracted from TLM YM420942)
2005.234.15.22.54.359603 \ Status\_PLM\_LCL13\_I \ is \ currently \ \ (extracted from TLM \ YM424942)
2005.234.15.22.54.361363 Status_PLM_LCL14_V is currently (extracted from TLM YM436942) 2005.234.15.22.54.363071 Status_PLM_LCL14_I is currently (extracted from TLM YM440942)
```

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```
2005.234.15.22.54.363744
2005.234.15.22.54.364348
******************
2005.234.15.22.54.365339 Power On Instruments
              ******************
2005.234.15.22.54.366038
2005.234.15.22.54.366649
2005.234.15.22.54.367243
2005.234.15.22.54.368457 >>>>> Start Up Instruments
2005.234.15.22.54.370022
2005.234.15.22.54.416083 Which instrument needs to be Powered down? PACS, SPIRE, HIFI, CCU?
2005.234.15.22.59.316090 You have selected to power down SPIRE.
2005.234.15.22.59.316655
2005.234.15.22.59.317276 The current power down order is:
2005.234.15.22.59.317883
2005.234.15.22.59.319566 1. LCL 1 SPIRE HSDPU Voltage: 27.8604888916 V
                                                                  Current:
0.435038357973 A
2005.234.15.22.59.320320 2. LCL 0 N/A
                                    Voltage: N/A V
                                                    Current: N/A A
2005.234.15.22.59.320965
                    Do you want to change this order? : Choose Yes or No
2005.234.15.22.59.366171
2005.234.15.23.01.654896 User has chosen NO
2005.234.15.23.03.659036
2005.234.15.23.03.659442 >>> Disable LCL's
2005.234.15.23.03.660053
2005.234.15.23.03.704417 Do you want to disable LCL 1? : Choose Yes or No
2005.234.15.23.04.874068 User has chosen YES
2005.234.15.23.06.878686
2005.234.15.23.06.976717 Sending Telecommand YC041942 to Disable Limiter
2005.234.15.23.06.977098 Synchronizing on SEV...
2005.234.15.23.06.978214 Synchronised on SEV for TC(s): YC041942
2005.234.15.23.06.978884
2005.234.15.23.06.979448
                    >>> Checking
2005.234.15.23.12.985052
                    LCL 1 has currently a voltage of .(from YM228942)
2005.234.15.23.12.985438 LCL 1 has currently a current of .(from YM232942)
2005.234.15.23.12.986048
2005.234.15.23.13.025164 User Info>: Check Successful! LCL 1 has been disabled.
2005.234.15.23.13.025776 **********
2005.234.15.23.14.610242
2005.234.15.23.14.666750 User Info>: No LCL is selected to be switched on as second
2005.234.15.23.15.393091
2005.234.15.23.15.437299
                    Do you want to disable PSU(s)? : Choose Yes or No
2005.234.15.23.16.753228
                    User has chosen YES
2005.234.15.23.18.757694
2005.234.15.23.18.804327 Do you want to disable PSU 1? : Choose Yes or No
2005.234.15.23.20.279562 User has chosen YES
2005.234.15.23.22.283886
2005.234.15.23.22.395658 Sending Telecommand YC037942
2005.234.15.23.22.396028 Synchronizing on SEV...
2005.234.15.23.32.643255 Synchronised on SEV for TC(s): YC037942
2005.234.15.23.32.643960
2005.234.15.23.32.644585 >>> Checking
                    PSU 1 Master status is currently 0 (from YM129942)
2005.234.15.23.38.650661
2005.234.15.23.38.651043
                    PSU 1 Slave status is currently 0 (from YM145942)
2005.234.15.23.38.651685
2005.234.15.23.38.690525 User Info>: Check Successful! PSU 1 has been disabled.
2005.234.15.23.38.691235 ********************************
2005.234.15.23.41.850876
2005.234.15.23.41.851269
2005.234.15.23.41.851850 Power down of SPIRE is done.
2005.234.15.23.41.852417
2005.234.15.23.41.897129 Do you want to power down another instrument? : Choose Yes or No
2005.234.15.23.45.814057
                    User has chosen NO
2005.234.15.23.47.818668
2005.234.15.23.47.819973 >>>>>> Reading out PLM SCOE Settings
```

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```
2005.234.15.23.47.821118
2005.234.15.23.47.822365 Status_PLM_OnLine is 1 (extracted from TLM YM018942)
2005.234.15.23.47.823610 Status_PLM_PSU1_Master is currently 0 (extracted from TLM YM129942)
2005.234.15.23.47.824855 Status_PLM_PSU1_Slave is currently 0 (extracted from TLM YM145942)
2005.234.15.23.47.826104 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.15.23.47.827340 Status_PLM_PSU2_Slave is currently 0 (extracted from TLM YM193942)
2005.234.15.23.47.828600 Status_PLM_LCL1_V is currently (extracted from TLM YM228942)
2005.234.15.23.47.829839 Status_PLM_LCL1_I is currently (extracted from TLM YM232942)
2005.234.15.23.47.831072 Status_PLM_LCL2_V is currently (extracted from TLM YM244942)
2005.234.15.23.47.832317 Status_PLM_LCL2_I is currently (extracted from TLM YM248942)
2005.234.15.23.47.833536 Status_PLM_LCL3_V is currently (extracted from TLM YM260942)
2005.234.15.23.47.834767 Status_PLM_LCL3_I is currently (extracted from TLM YM264942) 2005.234.15.23.47.836011 Status_PLM_LCL4_V is currently (extracted from TLM YM276942)
2005.234.15.23.47.837242 Status_PLM_LCL4_I is currently (extracted from TLM YM280942)
2005.234.15.23.47.838465 Status_PLM_LCL5_V is currently (extracted from TLM YM292942)
2005.234.15.23.47.839696 Status_PLM_LCL5_I is currently (extracted from TLM YM296942)
2005.234.15.23.47.840920 Status_PLM_LCL6_V is currently (extracted from TLM YM308942)
2005.234.15.23.47.842177 Status_PLM_LCL6_I is currently (extracted from TLM YM312942)
2005.234.15.23.47.843480 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.15.23.47.844747 Status_PLM_LCL7_I is currently (extracted from TLM YM328942)
2005.234.15.23.47.845995 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.15.23.47.847231 Status_PLM_LCL8_I is currently (extracted from TLM YM344942)
2005.234.15.23.47.848466 Status_PLM_LCL9_V is currently (extracted from TLM YM356942)
2005.234.15.23.47.849726 Status_PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.15.23.47.850977 Status_PLM_LCL10_V is currently (extracted from TLM YM372942)
2005.234.15.23.47.852209 Status_PLM_LCL10_I is currently
                                                       (extracted from TLM YM376942)
2005.234.15.23.47.853473 Status_PLM_LCL11_V is currently (extracted from TLM YM388942)
2005.234.15.23.47.854732 Status_PLM_LCL11_I is currently
                                                       (extracted from TLM YM392942)
2005.234.15.23.47.856014 Status_PLM_LCL12_V is currently (extracted from TLM YM404942)
2005.234.15.23.47.857295 Status_PLM_LCL12_I is currently (extracted from TLM YM408942)
2005.234.15.23.47.858549 Status_PLM_LCL13_V is currently (extracted from TLM YM420942)
2005.234.15.23.47.859820 Status_PLM_LCL13_I is currently (extracted from TLM YM424942)
2005.234.15.23.47.861101 Status_PLM_LCL14_V is currently (extracted from TLM YM436942) 2005.234.15.23.47.862374 Status_PLM_LCL14_I is currently (extracted from TLM YM440942)
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Annex 4: Log of EGSE_OFFLINE_AUTO.tcl

```
2005.234.15.23.54.838161 EGSE OFFLINE Sequence
2005.234.15.23.54.838629
************************
2005.234.15.23.54.839212 Connect and attach to CDMU DFE and PLM SCOE
2005.234.15.23.54.839533
2005.234.15.23.54.839750
2005.234.15.23.54.839970 Connecting to CDMU DFE
2005.234.15.23.56.846953 Attaching to CMDU DFE
2005.234.15.23.57.852485
2005.234.15.23.57.852986 Connecting to PLM SCOE
2005.234.15.23.59.855747 Attaching to PLM SCOE
2005.234.15.24.00.859320
2005.234.15.24.00.859700
2005.234.15.24.00.860510 >>>>>> Reading out CDMUDFE Settings
2005.234.15.24.00.861394
2005.234.15.24.00.959608 Status_CDMU_OnLine is 1 (extracted from TLM YM777944)
2005.234.15.24.00.961407 Status_CDMU_TMpolling is 1 (extracted from TLM YM780944)
2005.234.15.24.00.963030 Status_CDMU_SAreadActive is 1 (extracted from TLM YM781944)
2005.234.15.24.00.964688 Status_CDMU_SAqueueActive is 1 (extracted from TLM YM782944)
2005.234.15.24.00.966338 Status_CDMU_TMqueueActive is 1 (extracted from TLM YM783944)
2005.234.15.24.00.968002 Status_CDMU_TCqueueActive is 1 (extracted from TLM YM784944)
2005.234.15.24.00.969647 Status_CDMU_PSTfileName is SPIRE_prime_inst... (extracted from TLM
YM809944)
2005.234.15.24.00.971335 Status CDMU PSTrunning is 1 (extracted from TLM YM829944)
2005.234.15.24.00.971911
2005.234.15.24.00.972955 >>>>>> Reading out PLM SCOE Settings
2005 . 234 . 15 . 24 . 00 . 974046
2005.234.15.24.01.158977 Status_PLM_OnLine is 1 (extracted from TLM YM018942)
2005.234.15.24.01.161107 Status_PLM_PSU1_Master is currently 0 (extracted from TLM YM129942)
2005.234.15.24.01.162944 Status_PLM_PSU1_Slave is currently 0 (extracted from TLM YM145942)
2005.234.15.24.01.164954 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.15.24.01.166819 Status_PLM_PSU2_Slave is currently 0 (extracted from TLM YM193942)
2005.234.15.24.01.170034 Status_PLM_LCL1_V is currently (extracted from TLM YM228942)
2005.234.15.24.01.173162 Status_PLM_LCL1_I is currently (extracted from TLM YM232942)
2005.234.15.24.01.176339 Status_PLM_LCL2_V is currently (extracted from TLM YM244942)
2005.234.15.24.01.179464 Status_PLM_LCL2_I is currently (extracted from TLM YM248942) 2005.234.15.24.01.182627 Status_PLM_LCL3_V is currently (extracted from TLM YM260942)
2005.234.15.24.01.185810 Status_PLM_LCL3_I is currently (extracted from TLM YM264942)
2005.234.15.24.01.189007 Status_PLM_LCL4_V is currently (extracted from TLM YM276942)
2005.234.15.24.01.192204 Status_PLM_LCL4_I is currently (extracted from TLM YM280942)
2005.234.15.24.01.195479 Status_PLM_LCL5_V is currently (extracted from TLM YM292942)
2005.234.15.24.01.199095 Status_PLM_LCL5_I is currently (extracted from TLM YM296942)
2005.234.15.24.01.202375 Status_PLM_LCL6_V is currently (extracted from TLM YM308942)
2005.234.15.24.01.205621 Status_PLM_LCL6_I is currently (extracted from TLM YM312942) 2005.234.15.24.01.208879 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.15.24.01.212111 Status_PLM_LCL7_I is currently (extracted from TLM YM328942)
2005.234.15.24.01.215408 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.15.24.01.218692 Status_PLM_LCL8_I is currently (extracted from TLM YM344942)
2005.234.15.24.01.222049 Status_PLM_LCL9_V is currently (extracted from TLM YM356942) 2005.234.15.24.01.225643 Status_PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.15.24.01.228495 Status_PLM_LCL10_V is currently (extracted from TLM YM372942)
2005.234.15.24.01.231183 Status_PLM_LCL10_I is currently (extracted from TLM YM376942)
2005.234.15.24.01.232914 Status_PLM_LCL11_V is currently (extracted from TLM YM388942)
2005.234.15.24.01.234595 Status_PLM_LCL11_I is currently (extracted from TLM YM392942)
2005.234.15.24.01.236405 Status_PLM_LCL12_V is currently
                                                        (extracted from TLM YM404942)
2005.234.15.24.01.238155 Status_PLM_LCL12_I is currently
                                                        (extracted from TLM YM408942)
2005.234.15.24.01.239877 Status_PLM_LCL13_V is currently (extracted from TLM YM420942)
2005.234.15.24.01.241621 Status_PLM_LCL13_I is currently
                                                        (extracted from TLM YM424942)
2005.234.15.24.01.243343 Status_PLM_LCL14_V is currently (extracted from TLM YM436942)
2005.234.15.24.01.245037 Status_PLM_LCL14_I is currently (extracted from TLM YM440942)
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```
2005.234.15.24.01.246097 Switch Off PLM SCOE
2005.234.15.24.01.246813
2005.234.15.24.01.248874 Checking current PLM SCOE status
2005 . 234 . 15 . 24 . 03 . 251137
2005 . 234 . 15 . 24 . 03 . 251619
2005.234.15.24.03.252281 Switching PLM SCOE to OFFLINE mode.
****************
2005.234.15.24.06.379488 Switch Off PLM SCOE
         **********************
2005.234.15.24.07.382621
2005.234.15.24.07.383013 Switching CDMU DFE to OFFLINE mode.
2005.234.15.24.10.481263
2005.234.15.24.10.482312 >>>>>> Reading out CDMUDFE Settings
2005.234.15.24.10.483556
2005.234.15.24.10.484805 Status_CDMU_OnLine is 0 (extracted from TLM YM777944)
2005.234.15.24.10.485897 Status_CDMU_TMpolling is 0 (extracted from TLM YM780944)
2005.234.15.24.10.487013 Status_CDMU_SAreadActive is 0 (extracted from TLM YM781944)
2005.234.15.24.10.488085 Status_CDMU_SAqueueActive is 0 (extracted from TLM YM782944)
2005.234.15.24.10.489209 Status_CDMU_TMqueueActive is 0 (extracted from TLM YM783944)
2005.234.15.24.10.490285 Status_CDMU_TCqueueActive is 0 (extracted from TLM YM784944)
2005.234.15.24.10.491422 Status_CDMU_PSTfileName is Empty.PST (extracted from TLM YM809944)
2005.234.15.24.10.492514 Status_CDMU_PSTrunning is 0 (extracted from TLM YM829944)
2005.234.15.24.10.493187
2005.234.15.24.10.494408 >>>>>> Reading out PLM SCOE Settings
2005.234.15.24.10.495622
2005.234.15.24.10.496721 Status_PLM_OnLine is 0 (extracted from TLM YM018942)
2005.234.15.24.10.497825 Status_PLM_PSU1_Master is currently 0 (extracted from TLM YM129942)
2005.234.15.24.10.498893 Status_PLM_PSU1_Slave is currently 0 (extracted from TLM YM145942)
2005.234.15.24.10.499947 Status_PLM_PSU2_Master is currently 0 (extracted from TLM YM177942)
2005.234.15.24.10.501015 Status PLM PSU2 Slave is currently 0 (extracted from TLM YM193942)
2005.234.15.24.10.502073 Status_PLM_LCL1_V is currently (extracted from TLM YM228942) 2005.234.15.24.10.503137 Status_PLM_LCL1_I is currently (extracted from TLM YM232942)
2005.234.15.24.10.504194 Status_PLM_LCL2_V is currently (extracted from TLM YM244942)
2005.234.15.24.10.505299 Status_PLM_LCL2_I is currently (extracted from TLM YM248942) 2005.234.15.24.10.506358 Status_PLM_LCL3_V is currently (extracted from TLM YM260942)
2005.234.15.24.10.507411 Status_PLM_LCL3_I is currently (extracted from TLM YM264942) 2005.234.15.24.10.508473 Status_PLM_LCL4_V is currently (extracted from TLM YM276942)
2005.234.15.24.10.509524 Status_PLM_LCL4_I is currently (extracted from TLM YM280942)
2005.234.15.24.10.510584 Status_PLM_LCL5_V is currently (extracted from TLM YM292942) 2005.234.15.24.10.511701 Status_PLM_LCL5_I is currently (extracted from TLM YM296942)
2005.234.15.24.10.512795 Status_PLM_LCL6_V is currently (extracted from TLM YM308942)
2005.234.15.24.10.513938 Status_PLM_LCL6_I is currently (extracted from TLM YM312942)
2005.234.15.24.10.515009 Status_PLM_LCL7_V is currently (extracted from TLM YM324942)
2005.234.15.24.10.516081 Status_PLM_LCL7_I is currently (extracted from TLM YM328942) 2005.234.15.24.10.517128 Status_PLM_LCL8_V is currently (extracted from TLM YM340942)
2005.234.15.24.10.518180 Status_PLM_LCL8_I is currently (extracted from TLM YM344942)
2005.234.15.24.10.519226 Status_PLM_LCL9_V is currently (extracted from TLM YM356942)
2005.234.15.24.10.520282 Status PLM_LCL9_I is currently (extracted from TLM YM360942)
2005.234.15.24.10.521327 Status_PLM_LCL10_V is currently (extracted from TLM YM372942)
2005.234.15.24.10.522379 Status_PLM_LCL10_I is currently (extracted from TLM YM376942) 2005.234.15.24.10.523449 Status_PLM_LCL11_V is currently (extracted from TLM YM388942)
2005.234.15.24.10.524504 Status_PLM_LCL11_I is currently (extracted from TLM YM392942) 2005.234.15.24.10.525561 Status_PLM_LCL12_V is currently (extracted from TLM YM404942)
2005.234.15.24.10.526615 Status_PLM_LCL12_I is currently (extracted from TLM YM408942)
2005.234.15.24.10.527667 Status_PLM_LCL13_V is currently (extracted from TLM YM420942)
2005.234.15.24.10.528790 Status_PLM_LCL13_I is currently (extracted from TLM YM424942)
2005.234.15.24.10.532042 Disconnect and detach from CDMU DFE and PLM SCOE
2005.234.15.24.10.532769
2005.234.15.24.10.533400
2005.234.15.24.10.534025 Disconnecting from CDMU DFE
2005.234.15.24.12.537229 Detaching from CMDU DFE
2005.234.15.24.13.540774
```

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EADS Astrium

SPIRE SFT PRIOR TO COOLDOWN

Herschel

2005.234.15.24.13.541167 Disconnecting from PLM SCOE 2005.234.15.24.15.544073 Detaching from PLM SCOE 2005.234.15.24.16.547630

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Annex 5: SPIRE Nominal Bus Profile (SPIRE_prime_inst.PST)

```
;Nominal HERSCHEL/PACS Prime bus profile
;SPIRE is RT 21: 25TM, 2TC
;PACS is RT 25: 2TM, 1TC
;HIFI is RT 16: 2TM, 1TC
[Config]
NumberOfSubFrames=64
[SubFrame1]
1=RTreadSA,21,1 ;RT status from: SPIRE
[SubFrame2]
1=RTreadSA, 25,1 ;RT status from: PACS
1=RTreadSA,16,1 ;RT status from: HIFI
[SubFrame4]
;1=RTreadSA,21,1 ;RT status from: SPIRE
1=TMpol1,25
              ;TM poll from: PACS
2=RTaccessSA
[SubFrame5]
1=TMpacket, 25 ; TM packet from: PACS
2=TMpoll,16
              ;TM poll from: HIFI
3=RTaccessSA
[SubFrame6]
1=TMpacket,16 ;TM packet from: HIFI
              ;TM poll from: SPIRE
2=TMpol1,21
3=RTaccessSA
[SubFrame7]
1=TMpacket,21 ;TM packet from: SPIRE
2=TMpol1,25
              ;TM poll from: PACS
3=RTaccessSA
[SubFrame8]
1=TMpacket,25 ;TM packet from: PACS
2=TMpoll,16
              ;TM poll from: HIFI
3=RTaccessSA
[SubFrame9]
1=TMpacket,16 ;TM packet from: HIFI
2=TMpol1,21
              ;TM poll from: SPIRE
3=RTaccessSA
[SubFrame10]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame11]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame12]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame13]
1=TMpol1,21
              ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame14]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame15]
```

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```
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame16]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame17]
1=TCpacket
               ;TC packet to: SPIRE
2=RTaccessSA
[SubFrame18]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame19]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame20]
1=TMpoll,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame21]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame22]
1=TMpoll,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame23]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame24]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame 25]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame26]
               ;TM poll from: SPIRE
1=TMpoll,21
2=RTaccessSA
[SubFrame27]
1=TMpacket,21 ;TM packet from: SPIRE
2=TMpol1,25
               ;TM poll from: PACS
3=RTaccessSA
[SubFrame28]
1=TMpacket,25 ;TM packet from: PACS
2=TMpol1,21
               ;TM poll from: SPIRE
3=RTaccessSA
[SubFrame29]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame30]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame31]
1=TMpacket,21 ;TM packet from: SPIRE
2=TMpoll,16
               ;TM poll from: HIFI
3=RTaccessSA
[SubFrame32]
```

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```
1=TMpacket,16 ;TM packet from: HIFI
2=RTaccessSA
[SubFrame33]
1=TimeSync
               ;Time distribution broadcast
2=TCpacket
               ;TC packet to: SPIRE
3=TMpoll,21
              ;TM poll from: SPIRE
4=RTaccessSA
[SubFrame34]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame35]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame36]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame37]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame38]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame39]
1=TMpoll,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame40]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame41]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame42]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame43]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame44]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame45]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame46]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame47]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame48]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame49]
1=TCpacket ;TC packet to: HIFI
```

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```
2=TMpol1,21
               ;TM poll from: SPIRE
3=RTaccessSA
[SubFrame50]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame51]
1=TMpol1,21
              ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame52]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame53]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame54]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame55]
1=TMpol1,21
              ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame56]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame57]
1=TMpoll,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame58]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame59]
1=TMpol1,21
              ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame60]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame61]
1=TMpol1,21
               ;TM poll from: SPIRE
2=RTaccessSA
[SubFrame62]
1=TMpacket,21 ;TM packet from: SPIRE
2=RTaccessSA
[SubFrame63]
1=RTaccessSA
```

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Annex 6: HP-112000-ASED-NC-1375: Source Sequence Counter Errors on CCS

	-11	Tuesday	August 23 2005 8:50 AM
Company ESTEC	Project Name HERSCHEL-PLANCK	NCR-No: HP-112000-ASED-NC-137: Related internal NCR-No: Critical Item: Yes No X Page 1 of 1	5 Revision 0
	Nonconfor	mance Report	
NCR Title Source Sequence Cour	nter Errors on CCS		
NC Item Identification SPIRE	31-11		
Next Higher Assembly HERSCHE	EL INSTRUMENTS AND TELESCO	PE (CFE)	
Drawing No		Sr No.	
Procedure No			
Supplier SPIRE		Purchase Order	
Subsystem		Model EQM	
NC Observation Date: 22-AUG-05 Location: ASEE	OTN	NC Detected During Test	
Description of Nonconformance During the SFT a SSC (Source Seqthe CCS in a different order as they were produ 2005.234.14.15.49.260 Packet API 2005.234.14.15.49.026 Packet API 2005.234.14.15.48.992 Packet API 2005.234.14.15.47.809 Packet API 2005.234.14.15.47.809 Packet API Eurther analysis needs to show whe might be related to this.	ced by the instrument. D/Type/Stype 1280/5/1 SSC 249: St D/Type/Stype 1280/3/25 SSC 225: \$ D/Type/Stype 1280/3/25 SSC 214: \$ D/Type/Stype 1280/1/1 SSC 26: St D/Type/Stype 1280/5/1 SSC 215: St	SC check failed, last SSC was 225 SSC check failed, last SSC was 214 SSC check failed, last SSC was 214 SSC check failed, last SSC was 248 SC check failed, last SSC was 224 SC check failed, last SSC was 213	ements Violated
Initiator, Date, Name and Signature	23-AUG-05 S. Ilsen		_
Date: Name: Signature			

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Annex 7: HP-112000-ASED-NC-1376: Initial Value of TM5N is wrong in procedure

Company ESTEC	Project Name HERSCHEL-PLANCK	NCR-No: HP-112000-ASED-NC-1376 Related internal NCR-No: Critical Item: Yes No X Page 1 of 1	Revision 0
	Nonconfor	mance Report	
NCR Title Initial Value of TM5N is	wrong in procedure	m.	
NC Item Identification SPIRE			
Next Higher Assembly HERSCHE	EL INSTRUMENTS AND TELESCO	PE (CFE)	
Drawing No.		Sr No.	
Procedure No			
Supplier SPIRE		Purchase Order	
Subsystem		Model EQM	
NC Observation Date: 22-AUG-05 Location: ASEI	OTN	NC Detected During Test	
Description of Nonconformance		Require	ements Violated
of parameter TM5N	002494, in test SFT-SPIRE-CCS-FU initial housekeeping shows however change procedure.		
Initiator: Date, Name and Signature	23-AUG-05 S. Ilsen		
Date: Name: Signature:			

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160,130,0	Name	Dep./Comp.	na na Chalagana	Name	Dep./Comp.
	Alberti von Mathias Dr.	AOE22		Sonn Nico	AOE51
	Barlage Bernhard	AED11		Steininger Eric	AED44
***********	Bayer Thomas	AOA52	$\perp X$	Stritter Rene	AED11
	Brune Holger	AOA55		Thörmer Klaus-Horst Dr.	OTN/AED65
********************	Fehringer Alexander	AOE13		Wagner Klaus	AOE22
メ	Fricke Wolfgang Dr.	AED 65	X	Wietbrock Walter	AET12
	Geiger Hermann	AOA52		Wöhler Hans	AOE22
	Gerner Willi	AED11		Wössner Ulrich	ASE442
	Grasl Andreas	OTN/AOA54		The state of the s	
	Grasshoff Brigitte	AET12			
	Hauser Armin	AOE22	***************************************		
X	Hendry David	Terma Resid.	***************************************		
	Hengstler Reinhold	AOA 5	***************************************		
	Hinger Jürgen	AOE22	X	Alcatel	ASP
***************************************	Hofmann Rolf	ASE442	ス	ESA/ESTEC	ESA
X	Hohn Rüdiger	AED65	***************************************	Instruments:	***************************************
	Huber Johann	AOA52		MPE (PACS)	MPE
elelololololo ga para provincia propor	Hund Walter	ASE442	又	RAL (SPIRE)	RAL
メ	Idler Siegmund	AED432	f	SRON (HIFI)	SRON
\sim	Ilsen Stijn	Terma Resid.	***************************************	Subcontractors:	***************************************
	Ivády von András	FAE22	Derrich des des des des des des des des des des	Air Liquide, Space Department	AIR
	Jahn Gerd Dr.	AOE22		Air Liquide, Space Department	AIRS
***************************************	Kalde Clemens	APE3	******************	Air Liquide, Orbital System	AIRT
	Kameter Rudolf	OTN/AOA54		Alcatel Bell Space	ABSP
	Kettner Bernhard	AET42	***************************************	Astrium Sub-Subsyst. & Equipmen	
	Knoblauch August	AET32	***************************************	Austrian Aerospace	AAE
	Koelle Markus	AOA53	tenininindi teninoinen saprosporprassopp	Austrian Aerospace	AAEM
X	Kroeker Jürgen	AED65	***************************************	APCO Technologies S. A.	APCO
	Kunz Oliver Dr.	AOE22	***************************************	Bieri Engineering B. V.	BIER
интоправную	Lamprecht Ernst	OTN/ASI21	**************************************	BOC Edwards	BOCE
***************************************	Lang Jürgen	ASE442	******************	Dutch Space Solar Arrays	DSSA
*************	Langenstein Rolf	AED15		EADS CASA Espacio	CASA
**********	Langfermann Michael	AOA51	******	EADS CASA Espacio	ECAS
************	Mack Paul	OTN/AOA54	enne en	EADS Space Transportation	ASIP
***********************	Müller Jörg	AOA52		Eurocopter	ECD
*****************	Müller Ralf	FAE22	· · · · · · · · · · · · · · · · · · ·	European Test Services	ETS
	Peltz Heinz-Willi	AOE13	****************	HTS AG Zürich	HTSZ
***************************************	Pietroboni Karin	AED65	************************	Linde	LIND
	Platzer Wilhelm	AED22	**************************************	Patria New Technologies Ov	PANT
***********	Reichle Konrad	AOA52	***********************	~~ *	-
************************	Reuß Friedhelm	AED62	****************	Phoenix, Volkmarsen Prototech AS	PHOE PROT
······································	Rühe Wolfgang	AED65		QMC Instruments Ltd.	
	Runge Axel	OTN/AOA54		***	QMC
	Sachsse Bernt	***************************************	***************************************	Rembe, Brilon	REMB
	***	AED21	**************************************	Rosemount Aerospace GmbH	ROSE
·····	Schink Dietmar	AED44		RYMSA, Radiación y Microondas	RYM
Х_	Schlosser Christian	OTN/AOA54	***************************************	SENER Ingenieria SA	SEN
	Schmidt Rudolf	FAE22		Stöhr, Königsbrunn	STOE

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