

Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Procedure Summary

Objectives

The purpose of this procedure is an SCU AC Thermometry check on PRIME.
 Based on Procedure:
 Mode_ScuFunc06 (v3)

Summary of Constraints

Ensure DRCU_ON and SCU-02 have been run.

Spacecraft Configuration

Start of Procedure

Mode = SPECSTBY or REDY

End of Procedure

Mode = SPECSTBY or REDY

Reference File(s)

Input Command Sequences

Output Command Sequences

HCSSCAT

Referenced Displays

ANDs	GRDs	SLDs
SA_6_559		
ZAZ90999		
SA_1_559		

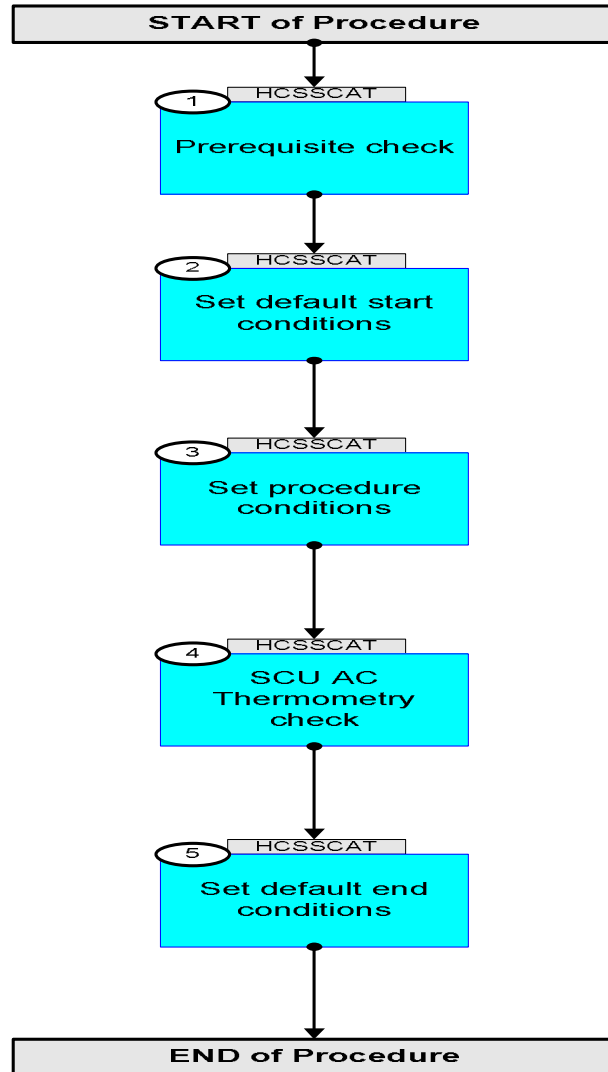
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
22/12/08		1	Created	L.Lucas-hp	
27/01/09	2	2	Remove ETs for ease of Loading to manual stack	L.Lucas-hp	
24/03/09	2.2	2.01	Validation : Title Update	L.Lucas-hp	
21/04/09	2.3	2.02	Validation : Text Update	L.Lucas-hp	
05/05/09	2.4	2.03	Validation : Text updates to s/c start and end config	L.Lucas-hp	

Mode_ScuFunc06 SCU AC Thermometry Check
File: H_COP_SPI_SCAT.xls
Author: L.Lucas-hp



Procedure Flowchart Overview



Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
<i>TC Seq. Name : HCSSCAT (SC ACThermomChk)</i> <i>TimeTag Type: Y</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		<input type="checkbox"/>
		Verify that the HSC has supplied a valid OBSID value: OBS_ID = 0xnnnn nnnn		
		Verify Telemetry SUBKSTAT SMK0F520	= 0 <hex>	AND=SA_6_559
2		Set default start conditions		Next Step: 3
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80010001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= ClearObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 1 <hex>	

Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID SP00N500 00000000 <hex>	SC000500	
		Verify Telemetry OBSID SM10N500	= 00000000 <hex>	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SP03N500 0 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SP01N500 80000000 <hex>	SC001500	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SP03N500 0 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SP01N500 80020001 <hex>	SC001500	
		Verify Telemetry BBFULLTYPE SM2LN500	= StartObs	AND=ZAZ90999	
3		Set procedure conditions		Next Step: 4	

Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS Subsch. ID : 370 Det. descr. : RESET DRCU COUNTERS	SCD00505	
		Verify that the TRESET parameter has the same value as the THSK parameter TRESET SM01T500	same as THSK	AND=SA_1_559
		THSK SM00T500	any	AND=SA_1_559
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID SP00N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SC000500 OBS_ID	
		Verify Telemetry OBSID SM10N500	OBS_ID	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500 80000000 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999

Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500 8A050001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= SCU_AC_Therm	AND=SA_6_559
4		SCU AC Thermometry check		Next Step: 5
	ET=+ UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 1 <hex>	
	ET=+ UT=+00.00.01	SEND_DRCU_COMMAND SEND_DRCU_COMMAND Command Parameter(s) : DRCUCOMMAND SPD4N505 OVERRIDE SPD9N505 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 370 Det. descr. : SEND A SINGLE COMMAND TO THE DRCU	SCD06505 A0860001 <hex> 0 <hex> (Def)	
	ET=+ UT=+00.00.01	SET_OBS_STEP SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 TC Control Flags : GBM IL DSE --- -- --- Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500 0 <hex>	

Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
5		Set default end conditions		Next Step: END
		Note that a TM(5,1) packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80000000 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID SP01N500 Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SC001500 80030001 <hex>	
		Verify Telemetry BBFULLTYPE SM2LN500	= EndObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP SP03N500 Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SC003500 1 <hex>	

Mode_ScuFunc06 SCU AC Thermometry Check
 File: H_COP_SPI_SCAT.xls
 Author: L.Lucas-hp



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	
	ET=+ UT=+00.00.01	SET_OBSID Command Parameter(s) : OBSERVATION_ID Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID SP00N500 00000000 <hex>	SC000500	
		Verify Telemetry OBSID SM10N500	= 00000000 <hex>	AND=ZAZ90999	
	ET=+ UT=+00.00.00	SET_OBS_STEP Command Parameter(s) : OBSERVATION_STEP Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP SP03N500 0 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_BBID Command Parameter(s) : BUILDING_BLOCK_ID Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID SP01N500 80000000 <hex>	SC001500	
		Verify Telemetry BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999	
		TMCHECK Wait for the parameter BBFULLTYPE to be set to SCU_AC_Therm			
		Verify Telemetry BBFULLTYPE SM2LN500	= SCU_AC_Therm	AND=SA_6_559	
		Verify Telemetry SUBKSTAT SMK0F520	= 1 <hex>	AND=SA_6_559	
		TMCHECK If the instrument is at He I temperatures check the value of the SCU AC thermometry channel. SUBKTEMP should be ~4K			
		Verify Telemetry SUBKTEMP SMK0K520		AND=SA_6_559	
		TMCHECK If the instrument is at He II temperatures check the value of the SCU AC thermometry channel. SUBKTEMP should be ~1.7K			
		Verify Telemetry SUBKTEMP SMK0K520		AND=SA_6_559	
End of Procedure					