PACS_CS_SFT_Cold_OBS
File: H_COP_PAC_L001.xls
Author: R. Biggins

Procedure Summary

Objectives

The objective of this procedure is to execute a short functional test on the Calibration Source (CS)

Based on procedure:
PACS_CS_SFT_Cold_OBS (v1)

Summary of Constraints

This procedure should be executed as part of the Short Functional Test (HeII conditions)

RT Science must be enabled to receive the Diagnostic HK packets

Spacecraft Configuration

Start of Procedure

PACS in NO_PRIME (SAFE) mode
- PACS is generating Spectroscopy HK

End of Procedure

PACS in NO_PRIME (SAFE) mode
- PACS is generating Spectroscopy HK

Reference File(s)

Input Command Sequences

Output Command Sequences

HCPL001

Referenced Displays

ANDs	GRDs	SLDs
ZAZ98999	PG007420	
PA019420		
PA032420		

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
12/08/08		1	Created	R. Biggins	
13/11/08	2	2	Updates due to initial testing - New step (1) added for prerequisite check - Initial OBSID value changed to FP - Time tags added to commands in step 3	R. Biggins	
15/04/09	2.3	3	Final updates before flight - Summary updated - TC flags updated	R. Biggins	

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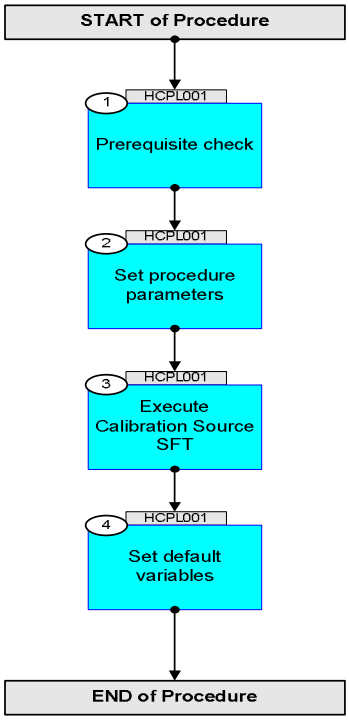
Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
		TC Seq. Name :HCPL001 (CS SFT) *TimeTag Type: B* *Sub Schedule ID:*		
1		*Prerequisite check*		Next Step: 2
1.1		*HSC/ICC input*		
		Verify that the HSC/ICC has supplied a valid OBSID value: **OBS_ID =** 0xnnnn nnnn		
2		*Set procedure parameters*		Next Step: 3
	ET=+00.00.00 UT=+00.00.00	DMC_SET_OBSID **DMC_SET_OBSID**	**PC078420**	
		Command Parameter(s) : **OBSERVATION_ID PP069420**	**OBS_ID**	
		TC Control Flags : **GBM IL DSE** **--Y -- ---**		
		Subsch. ID : 90 Det. descr. : SET OBSID IN DMC		
		Verify Telemetry **DM_OBSID PM028420**	**OBS_ID**	AND=ZAZ98999
3		*Execute Calibration Source SFT*		Next Step: 4
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_DIAG_HK_LIST **DMC_WRT_DIAG_HK_LIST**	**PC160420**	
		Command Parameter(s) : **DMC_DATA_LENGTH PP065420**	**16 <dec>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**D6 <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**1BD <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**1BE <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**1BF <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**1C0 <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**1CB <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**1CC <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**20E <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**20F <hex>**	
		DMC_4_BYTES_WORDS_DATA PP067420	**210 <hex>**	

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		DMC_4_BYTES_WORDS_DATA PP067420 **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_CHECKSUM PP066420** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 90* Det. descr. : WRITE THE LIST OF DIAGNOSTIC HK INTO DMC MEMORY	**211 <hex>** **21E <hex>** **21F <hex>** **220 <hex>** **221 <hex>** **FFFF <hex>** **F109 <hex>**	
	ET=+00.00.01 UT=+00.00.01	DMC_START_DIAG_HK **DMC_START_DIAG_HK** *Command Parameter(s) :* **DIAG_HK_PERIOD PP076420** *Subsch. ID : 90* Det. descr. : START THE ACQUISITION OF THE DIAGNOSTIC HK	**PC146420** **300 <dec>**	
		NOTE: The verification of the generation of the **TM(21,3)** diagnostic packets cannot be done on the MCS, but can be seen on the NCTRS (VC7)		
	ET=+00.00.01 UT=+00.00.01	Execute Telecommand **DMC_WRT_CS1_CONF_PAR** *Command Parameter(s) :* **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_CHECKSUM PP066420** *TC Control Flags :* **GBM IL DSE**	**PC166420** **F4240 <hex>** **1388 <hex>** **CCD <hex>** **741 <hex>** **147 <hex>** **7FFF <hex>** **0 <hex>** **5C9F <hex>**	
		--Y -- --- *Subsch. ID : 90* Det. descr. : WRITE THE PARAMETERS TO CONFIGURE THE CS1 TEMP REGULATOR		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	Execute Telecommand **DMC_WRT_CS2_CONF_PAR** *Command Parameter(s) :* **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_4_BYTES_WORDS_DATA PP067420** **DMC_CHECKSUM PP066420** *Subsch. ID : 90* Det. descr. : WRITE THE PARAMETERS TO CONFIGURE THE CS2 TEMP REGULATOR	**PC167420** **F4240 <hex>** **1388 <hex>** **CCD <hex>** **741 <hex>** **147 <hex>** **7FFF <hex>** **0 <hex>** **5C9F <hex>**	
	ET=+00.00.01 UT=+00.00.01	DMC_SWON_BB_1_CONT **DMC_SWON_BB_1_CONT** *Subsch. ID : 90* Det. descr. : SWITCH ON BLACK BODY 1 CONTROLLER	**PC138420**	
	ET=+00.00.01 UT=+00.00.01	DMC_ENABLE_BB_1_CONT **DMC_ENABLE_BB_1_CONT** *Subsch. ID : 90* Det. descr. : ENABLE BB1 CONTROLLER	**PC206420**	
	ET=+00.00.00 UT=+00.00.00	DMC_SET_TEMP_BB_1 **DMC_SET_TEMP_BB_1** *Command Parameter(s) :* **DMC_BB_TEMP PP094420** *Subsch. ID : 90* Det. descr. : SET THE TEMPERATURE OF THE BLACK BODY 1	**PC140420** **80.0 Ohm**	
	ET=+00.00.01 UT=+00.00.01	DMC_SWON_BB_2_CONT **DMC_SWON_BB_2_CONT** *Subsch. ID : 90* Det. descr. : SWITCH ON BLACK BODY 2 CONTROLLER	**PC142420**	
	ET=+00.00.01 UT=+00.00.01	DMC_ENABLE_BB_2_CONT **DMC_ENABLE_BB_2_CONT** *Subsch. ID : 90* Det. descr. : ENABLE BB2 CONTROLLER	**PC208420**	
	ET=+00.00.01 UT=+00.00.01	DMC_SET_TEMP_BB_2 **DMC_SET_TEMP_BB_2** *Command Parameter(s) :* **DMC_BB_TEMP PP094420** *Subsch. ID : 90* Det. descr. : SET THE TEMPERATURE OF THE BLACK BODY 2	**PC144420** **92.0 Ohm**	

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **DM_CS1_TARGET** **PM263420**	**= 80.0 Ohm**	AND=PA019420
		Verify Telemetry **DM_CS2_TARGET** **PM264420**	**= 92.0 Ohm**	AND=PA019420
		Verify Telemetry **DM_CS1C_POWER** **PM544420**	**= POWER ON**	AND=PA032420
		Verify Telemetry **DM_CS2C_POWER** **PM558420**	**= POWER ON**	AND=PA032420
		During the time until the last TC is sent (10 minutes), the following resistor vaules should increase from Liquid Helium values towards the defined set points. Note that the CS will not settle on the target values as it would take too long for the SFT.		
		Verify Telemetry **DM_CS1_RES_VAL** **PM249420**	**= 80.0 Ohm**	GRD=PG007420
		Verify Telemetry **DM_CS2_RES_VAL** **PM251420**	**= 92.0 Ohm**	GRD=PG007420
	ET=+00.10.00 UT=+00.10.00	DMC_STOP_DIAG_HK **DMC_STOP_DIAG_HK** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 90* Det. descr. : STOP THE ACQUISITION OF THE DIAGNOSTIC HK	**PC147420**	
		NOTE: The verification of the end of generation of the **TM(21,3)** diagnostic packets cannot be done on the MCS, but can be seen on the NCTRS (VC7)		
4		*Set default variables*		Next Step: END
	ET=+00.00.01 UT=+00.00.01	DMC_SET_OBSID **DMC_SET_OBSID** *Command Parameter(s) :* **OBSERVATION_ID** **PP069420** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 90* Det. descr. : SET OBSID IN DMC	**PC078420** **00000000 <hex>**	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.00 UT=+00.00.00	DMC_SET_BBID **DMC_SET_BBID** *Command Parameter(s) :* **BUILDING_BLOCK_ID** **PP070420** *Subsch. ID : 90* Det. descr. : SET BBID IN DMC	**PC079420** **40000000 <hex>**	
		Verify Telemetry **DM_OBSID** **PM028420**	**= 00000000 <hex>**	AND=ZAZ98999
		Verify Telemetry **DM_BBID** **PM029420**	**= 40000000 <hex>**	AND=ZAZ98999

End of Procedure