

PACS_Spec_CRE_01pF0bias_Setup_Warm_OBS
 File: H_COP_PAC_D203.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to set the CRE (cryogenic readout electronics) integrating capacitor to 0.1pF
 - Normally only the blue detector will be heated, only for eventual detector curing after radiation hits, the red detector has also a heater. It is correct that at this point only the blue heater is commanded.

Based on procedure:
 PACS_Spec_CRE_01pF0bias_Setup_Warm_OBS (v1)

Summary of Constraints

This procedure should be executed as part of the Short Functional Test (HeII conditions)
 This procedure may also be executed on PACS request

Spacecraft Configuration

Start of Procedure

PACS in NO_PRIME (SAFE) mode

End of Procedure

PACS in NO_PRIME (SAFE) mode

Reference File(s)

Input Command Sequences

Output Command Sequences

HCPD203

Referenced Displays

ANDs **GRDs** **SLDs**
 ZAZ98999
 PA022420

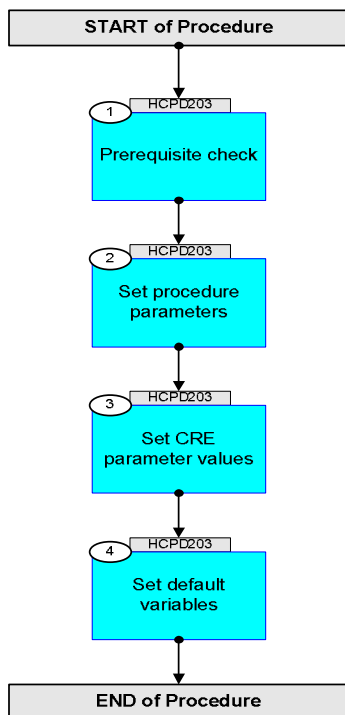
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
15/08/08		1	Created	R. Biggins	
14/11/08	2	2	Updates due to initial testing <input type="checkbox"/> - New step (1) added for prerequisite check <input type="checkbox"/> - Initial OBSID value changed to FP	R. Biggins	
15/04/09	2.3	2.01	Validation : Final updates before flight <input type="checkbox"/> - Summary updated <input type="checkbox"/> - 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 :HCPD203 (Setup CRE 0.1pF)				
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 Command Parameter(s) : OBSERVATION_ID PP069420 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 90 Det. descr. : SET OBSID IN DMC	DMC_SET_OBSID PC078420 OBS_ID	
		Verify Telemetry DM_OBSID PM028420	OBS_ID	AND=ZAZ98999
3		Set CRE parameter values		Next Step: 4
		The following TCs will write the defined parameters into the Spectrometer buffer		
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_B_SPEC_PAR_RAW Command Parameter(s) : DMC_CLOCKS PP095420 32 <dec> DMC_READOUTS PP096420 64 <dec> DMC_CRE_CTRL_REG PP097420 387 <dec> DMC_BIAS_R PP098420 0 <dec> DMC_BIAS_D PP099420 0 <dec> DMC_SIMUL_REG PP100420 0 <dec> DMC_CHECKSUM PP066420 9B51 <hex> TC Control Flags : GBM IL DSE --Y -- ---	DMC_WRT_B_SPEC_PAR PC174420	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Subsch. ID : 90 Det. descr. : WRITE THE BLUE SPECTROMETER PARAMETERS		
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_R_SPEC_PAR_RAW DMC_WRT_R_SPEC_PAR Command Parameter(s) : DMC_CLOCKS PP095420 DMC_READOUTS PP096420 DMC_CRE_CTRL_REG PP097420 DMC_BIAS_R PP098420 DMC_BIAS_D PP099420 DMC_SIMUL_REG PP100420 DMC_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE RED SPECTROMETER PARAMETERS	PC173420 32 <dec> 64 <dec> 387 <dec> 0 <dec> 0 <dec> 0 <dec> 9B51 <hex>	
		The following TCs will copy the parameters from the buffers into both the Red and Blue DEC		
	ET=+00.00.01 UT=+00.00.01	DMC_SET_PAR_BOTH_SPEC Subsch. ID : 90 Det. descr. : SEND COMPLETE PARAMETERS TABLE TO BOTH DECS	PC094420	
	ET=+00.00.01 UT=+00.00.01	DMC_SET_PAR_B_SPEC Subsch. ID : 90 Det. descr. : SEND COMPLETE PARAMETERS TABLE TO BLUE DEC	PC086420	
	ET=+00.00.01 UT=+00.00.01	DMC_SET_PAR_R_SPEC Subsch. ID : 90 Det. descr. : SEND COMPLETE PARAMETERS TABLE TO RED DEC	PC093420	
		The following TC will switch off the blue spectrometer heater		
	ET=+00.00.01 UT=+00.00.01	DMC_SET_B_SPEC_HEAT_C_RAW DMC_SET_B_SPEC_HEAT_C Command Parameter(s) : CURRENT PP073420 Subsch. ID : 90 Det. descr. : SET BLUE DEC HEATER CURRENT	PC087420 0 <dec>	
3.1		Verify Blue Spectrometer parameters		□
		Verify Telemetry DM_DECB_RO_RA_3 PM094420	= 64 <dec>	AND=PA022420

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry DM_DECB_RO_RA_4 PM128420	= 64 <dec>	AND=PA022420
		Verify Telemetry DM_DECB_BR_CM_3 PM096420	= 0.0 V	AND=PA022420
		Verify Telemetry DM_DECB_BR_CM_4 PM130420	= 0.0 V	AND=PA022420
		Verify Telemetry DM_DECB_ZB_CM_3 PM097420	= 0.0 V	AND=PA022420
		Verify Telemetry DM_DECB_ZB_CM_4 PM131420	= 0.0 V	AND=PA022420
		The following parameters indicate the capacitor setting readback (bit 2-3 = 00 = 0.1pF)		
		Verify Telemetry DM_DECB_CR_ST_3 PM095420	bit 2-3 = 00	AND=PA022420
		Verify Telemetry DM_DECB_CR_ST_4 PM129420	bit 2-3 = 00	AND=PA022420
3.2		Verify Red Spectrometer parameters		□
		Verify Telemetry DM_DECR_RO_RA_1 PM162420	= 64 <dec>	AND=PA022420
		Verify Telemetry DM_DECR_RO_RA_2 PM196420	= 64 <dec>	AND=PA022420
		Verify Telemetry DM_DECR_BR_CM_1 PM164420	= 0.0 V	AND=PA022420
		Verify Telemetry DM_DECR_BR_CM_2 PM198420	= 0.0 V	AND=PA022420
		Verify Telemetry DM_DECR_ZB_CM_1 PM165420	= 0.0 V	AND=PA022420
		Verify Telemetry DM_DECR_ZB_CM_2 PM199420	= 0.0 V	AND=PA022420
		The following parameters indicate the capacitor setting readback (bit 2-3 = 00 = 0.1pF)		
		Verify Telemetry DM_DECR_CR_ST_1 PM163420	bit 2-3 = 00	AND=PA022420
		Verify Telemetry DM_DECR_CR_ST_2 PM197420	bit 2-3 = 00	AND=PA022420
4		Set default variables		Next Step: END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	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>	
	ET=+00.00.00 UT=+00.00.00	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				