

PACS_Phot_DPU_DMC_Setup_OBS
 File: H_COP_PAC_D301.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to setup the DPU-DMC links for the bolometer detector chain tests

Based on procedure:
 PACS_Phot_DPU_DMC_Setup_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
 - PACS is generating Photometry HK

Reference File(s)

Input Command Sequences

Output Command Sequences

HCPD301

Referenced Displays

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

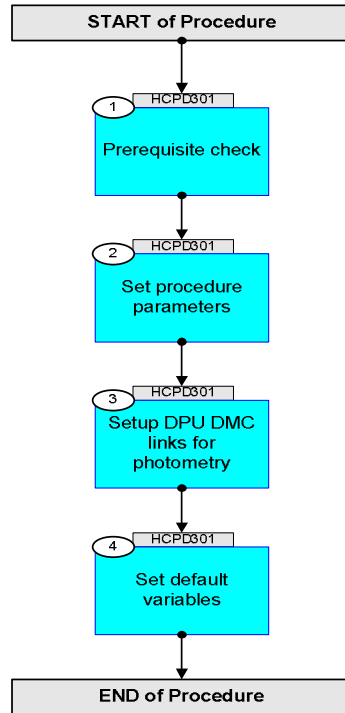
Configuration Control Information

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 - New step (1) added for prerequisite check - Initial OBSID value changed to FP	R. Biggins	
15/04/09	2.3	2.01	Validation : 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 :HCPD301 (Setup DPU DMC - Phot)				
TimeTag Type: B Sub Schedule ID: <input type="checkbox"/>				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		<input type="checkbox"/>
		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 : Subsch. ID : 90 Det. descr. : SET OBSID IN DMC GBM IL DSE --Y -- ---	DMC_SET_OBSID PC078420 OBS_ID	
		Verify Telemetry DM_OBSID PM028420	OBS_ID	AND=ZAZ98999
3		Setup DPU DMC links for photometry		Next Step: 4
	ET=+00.00.01 UT=+00.00.01	DPU_SET_HK_LIST Command Parameter(s) : HK_PACKET_ID PP005380 SPU_ARRAY PP025380 TC Control Flags : Subsch. ID : 90 Det. descr. : SET THE PREDIFINED LIST OF HK VALUES FOR THE HK PACKET GBM IL DSE --Y -- ---	DPU_SET_HK_LIST PC003380 PHOT BOTH Array	
		Verify Telemetry DP_TM_RATE PM049380	= PHOT	AND=ZAZ98999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The following TCs will command the BOLC, Blue DEC and Red DEC receivers to forward data to the SPU		
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_BOL_REC_OPT Command Parameter(s) : DMC_4_BYTES_WORDS_DATA PP067420 DMC_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE BOL RECEIVER OPTIONS	PC169420 4 <hex> C444 <hex>	
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_B_DEC_REC_OPT Command Parameter(s) : DMC_4_BYTES_WORDS_DATA PP067420 DMC_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE BLUE DEC RECEIVER OPTIONS	PC170420 4 <hex> c444 <hex>	
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_R_DEC_REC_OPT Command Parameter(s) : DMC_4_BYTES_WORDS_DATA PP067420 DMC_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE RED DEC RECEIVER OPTIONS	PC171420 4 <hex> C444 <hex>	
		The following TCs will write the timing FPGA parameters to the FPGA registers		
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_TIMING_FPGA_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_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE PARAMETERS TO CONFIGURE THE TIMING FPGA	PC176420 0 <hex> 0 <hex> 0 <hex> 1A <hex> 977DC04 <hex> 32 <hex> A780 <hex>	
	ET=+00.00.00 UT=+00.00.00	DMC_SET_TIMING_FPGA_PAR Subsch. ID : 90 Det. descr. : SET THE PARAMETERS OF THE FPGA REGISTER	PC081420	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The following TC will set the synchronization source for the Sequencer (set to synchronise on BOL readouts)		
	ET=+00.00.01 UT=+00.00.01	DMC_SYNCHRONIZE_ON_DET_RAW DMC_SYNCHRONIZE_ON_DET Command Parameter(s) : DET_ID PP074420 Subsch. ID : 90 Det. descr. : SET THE SYNCHRONIZATION SOURCE FOR SEQUENCER AND TIMING FPGA	PC080420 4 <hex>	
		The following TCs will write the timing FPGA parameters to the FPGA registers		
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_TIMING_FPGA_PAR DMC_WRT_TIMING_FPGA_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 TIMING FPGA	PC176420 0 <hex> 0 <hex> 0 <hex> 1A <hex> 977DC04 <hex> 22 <hex> B5B1 <hex>	
	ET=+00.00.00 UT=+00.00.00	DMC_SET_TIMING_FPGA_PAR DMC_SET_TIMING_FPGA_PAR Subsch. ID : 90 Det. descr. : SET THE PARAMETERS OF THE FPGA REGISTER	PC081420	
		The following TCs will command the BOLC to stop forwarding data to the SPU		
	ET=+00.00.01 UT=+00.00.01	DMC_WRT_BOL_REC_OPT DMC_WRT_BOL_REC_OPT Command Parameter(s) : DMC_4_BYTES_WORDS_DATA PP067420 DMC_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE BOL RECEIVER OPTIONS	PC169420 0 <hex> 84c0 <hex>	
		The following TC is sent to set the Blue and Red science data (from DEC and/or BOLC) to valid		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	DMC_VAL_SCI_DATA_BOTH DMC_VAL_SCI_DATA_BOTH Subsch. ID : 90 Det. descr. : VALIDATE SCIENCE DATA FROM BOTH CHANNELS	PC097420	
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>	
	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				