

PACS_Spec_SPU_Buffer_Setup_OBS
 File: H_COP_PAC_X006.xls
 Author: R. Biggins



Procedure Summary

Objectives

The objective of this procedure is to start the buffer transmission

Based on procedure:
 PACS_Spec_SPU_Buffer_Setup_OBS (v1)

Summary of Constraints

The procedure H_FCP_PAC_CSBN must have been successfully completed.

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

Herschel is transmitting with HIGH data rate (1.5Mbps)

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

HCPX006

Referenced Displays

ANDs	GRDs	SLDs
ZAZ98999		
PA019420		
ZAZ7J999		

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	

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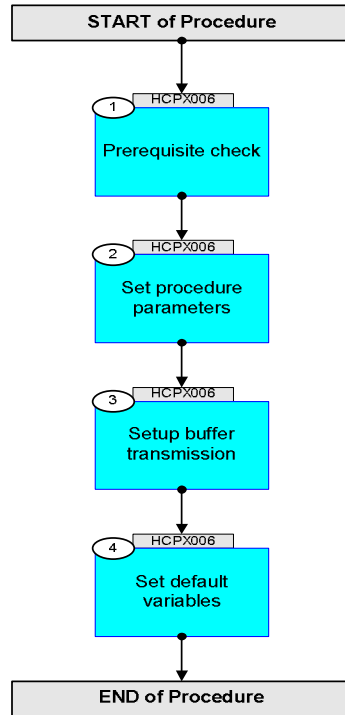


15/04/09	2.3	2.01	Validation : Final updates before flight <input type="checkbox"/> - Summary updated <input type="checkbox"/> - TC flags updated <input type="checkbox"/> - Addition of Herschel status checks (step 1.2)	R. Biggins	
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Procedure Flowchart Overview

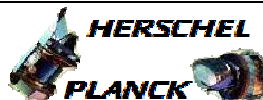


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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name :HCPX006 (Start Buffer Tx)				
TimeTag Type: B Sub Schedule ID: □				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		□
		Verify that the HSC/ICC has supplied a valid OBSID value: OBS_ID = 0xnnnn nnnn		
1.2		Herschel status		□
		Verify: Bus profile is set to PACS (7) BSW_SDB_ActProf DEF5F160 = 7 <dec>		AND=ZAZ98999
		Verify: HIGH TM bitrate TME_BITRATE DEMRF160 = 1.5 Mbps		AND=ZAZ7J999
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 -- ---	PC078420 OBS_ID	
		Verify Telemetry DM_OBSID PM028420	OBS_ID	AND=ZAZ98999
3		Setup buffer transmission		Next Step: 4
		The following commands interrupt the SPU application SW		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+00.00.01 UT=+00.00.01	Send TC SPUS_STOP_REDUCT_COMPR TC Control Flags : GBM IL DSE --Y -- -- Subsch. ID : 90 Det. descr. : STOP THE APPLICATION PROGRAM IN SPU_SWL	PC037400	
	ET=+00.00.01 UT=+00.00.01	Send TC SPUL_STOP_REDUCT_COMPR Subsch. ID : 90 Det. descr. : STOP THE APPLICATION PROGRAM IN SPU_LWL	PC038390	
		The following TC defines the SPU Transmission Mode (verified at end of step)		
	ET=+00.00.01 UT=+00.00.01	Send TC DMC_WRT_SPU_TRAN_MODE Command Parameter(s) : DMC_4_BYTES_WORDS_DATA PP067420 DMC_4_BYTES_WORDS_DATA PP067420 DMC_CHECKSUM PP066420 Subsch. ID : 90 Det. descr. : WRITE THE SPU TRASMISSION MODE	PC175420 19 <hex> 19 <hex> 1E00 <hex>	
		The following commands select the number and end index of detectors from which data is collected		
	ET=+00.00.01 UT=+00.00.01	Send TC SPUS_RAW_CHAN_TRAN_MODE Command Parameter(s) : SPUS_OBS_MODE PP050400 SPUS_RCXNB PP051400 SPUS_RCX PP052400 Subsch. ID : 90 Det. descr. : RAW CHANNEL TRANSMISSION MODE FOR SPUS	PC035400 SPEC 3 <dec> 1 <dec>	
	ET=+00.00.01 UT=+00.00.01	Send TC SPUL_RAW_CHAN_TRAN_MODE Command Parameter(s) : SPUL_OBS_MODE PP032390 SPUL_RCXNB PP033390 SPUL_RCX PP034390 Subsch. ID : 90 Det. descr. : RAW CHANNEL TRANSMISSION MODE FOR SPUL	PC036390 SPEC 3 <dec> 1 <dec>	
		The following commands write the table of the photoconductors constants		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_4_BYTES_WORDS_DATA PP037390 SPUL_CHECKSUM PP036390	0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 0 <hex> 1285 <hex>	
		Subsch. ID : 90 Det. descr. : WRITE DETECTOR CONSTANTS FOR THE RED SPECTROMETER ARRAY		
		The following commands will copy the DPU time into the DMC		
	ET=+00.00.01 UT=+00.00.01	Send TC DPU_SEND_TIME Subsch. ID : 90 Det. descr. : DPU SENDS THE TIME TO DEC/MEC	PC007380	
	ET=+00.00.01 UT=+00.00.01	Send TC DMC_SET_TIME Subsch. ID : 90 Det. descr. : SET THE TIME PREVIOUSLY WRITTEN BY THE WRITE TIME COMMAND	PC077420	
		The following commands will run the application SW		
	ET=+00.00.01 UT=+00.00.01	Send TC SPUS_START_REDUCT_COMPR Subsch. ID : 90 Det. descr. : START THE APPLICATION PROGRAM IN SPU_SWL	PC039400	
	ET=+00.00.01 UT=+00.00.01	Send TC SPUL_START_REDUCT_COMPR Subsch. ID : 90 Det. descr. : START THE APPLICATION PROGRAM IN SPU_LWL	PC040390	
		Verify Telemetry DM_BSPU_TR_MODE PM254420	= BUFFER TRAN SP	AND=PA019420
		Verify Telemetry DM_RSPU_TR_MODE PM255420	= BUFFER TRAN SP	AND=PA019420
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				