

PACS\_Switch\_On\_Redundant  
File: H\_FCP\_PAC\_RSON.xls  
Author: R. Biggins



## Procedure Summary

### Objectives

The objective of this procedure is to switch on the redundant PACS units

- Switch to PACS bus profile
- Disable SDB FDIR for PACS RTA
- Enable RT interrogations for the PACS RTA
- Power on and boot redundant DPU
- Enable SDB FDIR for PACS RTA
- Switch on and connect DMC
- Switch on and connect BOLC
- Switch on and connect SPU
- Activate FPU temperature sensors
- Start autonomy functions

Based on procedure:  
PACS\_Switch\_On\_Redundant\_28\_07\_2007\_01.xls

### Summary of Constraints

PACS has been switched off for at least 4 minutes

ANY bus profile can be used

This procedure is valid for the DPU software version 9.03  
This procedure is valid for the DPU software version 9.04

This procedure is valid for the SPU software version 13.96

### Spacecraft Configuration

#### Start of Procedure

PACS is OFF

#### End of Procedure

PACS is in NO\_PRIME (SAFE) mode

- DPU is on
- DMC is on and connected
- BOLC is on and connected
- SPU is on and connected

### Reference File(s)

#### Input Command Sequences

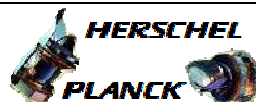
#### Output Command Sequences

HFPRSON

### Referenced Displays

ANDs	GRDs	SLDs
ZAZ8U999		
ZAZ97999		
ZAZA0999		

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



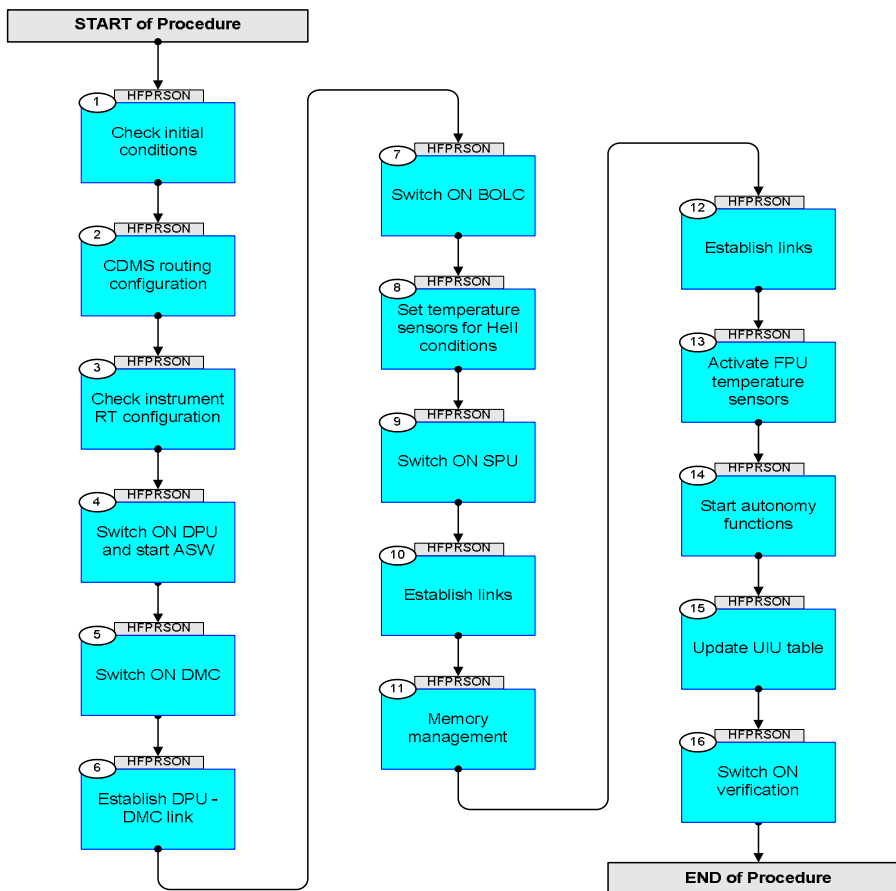
### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
20/09/2007		1	Created	R. Biggins	
22/11/2007		1.01	Validation : - Time tags added to SVM commands - Editorial updates	R. Biggins	
03/12/2007		1.02	Validation : Checksums updated for DPU UM v2.7	R. Biggins	
18/01/2008		2	Update due to initial testing against the simulator: - TCs updated due to new DB - Checksums updated for DPU UM v2.8 - Execution times removed	R. Biggins	
03/03/2008		3	Update due to testing against MOC Simulator and comments by S. Pezzuto: - Telecommand flags updated - Telemetry checks in step 16 updated	R. Biggins	
27/05/2008	1	4	Updates due to SVT-1 testing: - TC to start RT interrogations updated (step 4.3) - TC to enable FDIR moved from step 4.7 to step 4.5 - Expected LCL currents updated - Comments added/updated - Flags updated - AND updated for all TM parameters	R. Biggins	
23/10/2008	2	5	Updates due to new procedures from industry - Step 4.2 and 4.3 combined - TC DC005161 database definition updated - New step (15) added to update UIU table	R. Biggins	
12/03/2009	2.2	6	Final updates before flight - Summary updated - TC flags updated - Procedure description/title updated - Memory checks updated to reflect current software versions	R. Biggins	
17/04/2009	2.3	7	Updates due to new DPU and SPU software versions: - DPU updated to version 9.03 - SPU updated to version 13.96	R. Biggins	
26/05/2009		8	Step 4.6 - Update to expected checksum and Memory Check TC parameters	R. Biggins	
24/07/2009	2.5	9	Updates due to new DPU software version: - DPU updated to version 9.04	R. Biggins	
11/08/2011	3.1	10	Update to allow procedure to be executed without PACS bus profile	R. Biggins	

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



### Procedure Flowchart Overview



PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
TC Seq. Name :HFPRSON (Switch ON PACS (Red))  TimeTag Type: N Sub Schedule ID:  <input type="checkbox"/>				
1		Check initial conditions		Next Step: 2
		Verify: PACS has been switched off for at least 4 minutes		
		Verify: Check whether the PACS MTL needs to be disabled (if so, procedure H_FCP_DHS_1017 can be used to disable it)		
1.1		PACS input		<input type="checkbox"/>
		Verify that the PACS ICC has indicated whether the DPU is to be booted from the primary or secondary partition (step 4.6)  DPU_PRTN = 1 or 2		
		Verify that the correct information has been supplied by the ICC:  DPU Software Version/Subversion number SPU Software Version/Subversion number		
1.2		Spacecraft mode		<input type="checkbox"/>
		Verify Telemetry  CurrentMode DEL34170 = Nominal		AND=ZAZ8U999
		Verify Telemetry  ACC_A_MODE AEE8G050 = Nominal		AND=ZAZ8U999
1.3		Bus status		<input type="checkbox"/>
		Verify Bus configuration		
		Verify: Active 1553 bus Active_Bus_A_B DEFJ1160 = BUS_A		AND=ZAZ97999
		Verify: 1553 bus FDIR status SDB_FDIR DEFJ4160 = ENABLED		AND=ZAZ97999
		Verify: SDB handling status BSW_SDB_ENAB DEF60160 = ENABLED		AND=ZAZ97999

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify bus health status		
		Verify: Bus (side A) health status <b>BusA_HealthySts</b> <b>DEFJ2160</b>	<b>= Healthy</b>	AND=ZAZ97999
		Verify: Bus (side B) health status <b>BusB_HealthySts</b> <b>DEFJ3160</b>	<b>= Healthy</b>	AND=ZAZ97999
1.4		Redundant instrument LCLs		<input type="checkbox"/>
		Verify: DPU LCL status <b>PacsD_R_L42_S</b> <b>WM42B565</b>	<b>= OFF</b>	AND=ZAZ97999
		Verify: SPU LCL status <b>PacsS_R_L36_S</b> <b>WM62A565</b>	<b>= OFF</b>	AND=ZAZ97999
		Verify: BOLC LCL status <b>PacsB_R_L28_1S</b> <b>WM32D565</b>	<b>= OFF</b>	AND=ZAZ97999
		Verify: Dec/Mec2 LCL status <b>PacsMec2_L69_1S</b> <b>WM62E565</b>	<b>= OFF</b>	AND=ZAZ97999
1.5		Nominal instrument LCLs		<input type="checkbox"/>
		Verify: DPU LCL status <b>PacsD_N_L41_S</b> <b>WM72B565</b>	<b>= OFF</b>	AND=ZAZ97999
		Verify: SPU LCL status <b>PacsS_N_L35_S</b> <b>WM52A565</b>	<b>= OFF</b>	AND=ZAZ97999
		Verify: BOLC LCL status <b>PacsB_N_L27_1S</b> <b>WM82D565</b>	<b>= OFF</b>	AND=ZAZ97999
		Verify: Dec/Mec1 LCL status <b>PacsMec1_L65_1S</b> <b>WM52E565</b>	<b>= OFF</b>	AND=ZAZ97999
2		CDMS routing configuration		Next Step: 3
	ET=+ UT=+00.00.00	Execute Telecommand <b>RepDownlinkTMStorage</b>  TC Control Flags :  Subsch. ID : 10 Det. descr. : Report Telemetry Packets Down-linking/ Storage Status	<b>DC141160</b>	
		<b>GBM IL DSE</b> <b>--Y -- --</b>		

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		It should be verified that telemetry packets for ALL PACS APIDs should be transmitted to ground (Transmit_Flag = ENABLED) EXCEPT for TM(21,x) which should be stored in the SSMM (Storage_Flag = ENABLED, Transmit_Flag = DISABLED).  This should be verified on the VPD		
		Verify Packet Reception <b>Telemetry Packets DownLinking-Storage Status Report</b> (14,7)-1400 Packet Details: APID: 16 Type: 14 Subtype: 7 PI1: PI2:		
3		Check instrument RT configuration		Next Step: 4
3.1		Remote Terminal configuration		<input type="checkbox"/>
		Verify Telemetry <b>PACS_VitalNonV</b> <b>DED5G161</b> = NonVital		AND=ZAZ97999
		Verify Telemetry <b>PACS_TmRetry</b> <b>DED5Z161</b> = ON		AND=ZAZ97999
3.2		Remote Terminal Status		<input type="checkbox"/>
		Redundant units		
		Verify Telemetry <b>PACSB_OnOff</b> <b>DED31161</b> = OFF		AND=ZAZ8U999
		Verify Telemetry <b>PACSB_DeadAliv</b> <b>DED32161</b> = Alive		AND=ZAZ8U999
		Verify Telemetry <b>PACSB_WellsiTC</b> <b>DED33161</b> = Well		AND=ZAZ8U999
		Verify Telemetry <b>PACSB_WellsiTM</b> <b>DED34161</b> = Well		AND=ZAZ8U999
		Verify Telemetry <b>PACSB_ValidInv</b> <b>DED35161</b> = Invalid		AND=ZAZ8U999
		Nominal units		
		Verify Telemetry <b>PACSA_OnOff</b> <b>DED2G161</b> = OFF		AND=ZAZ8U999
		Verify Telemetry <b>PACSA_DeadAliv</b> <b>DED2H161</b> = Alive		AND=ZAZ8U999



PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		F9 DH027161 F10 DH028161 F11 DH029161  TC Control Flags :  Subsch. ID : 10 Det. descr. : Configure SDB FDIR	Healthy Healthy DISABLED	
		Wait up to 1 minute for the generation of the D_Hk_P64 packet from the CDMU (APID = 18)		
		Verify: 1553 bus FDIR status SDB_FDIR DEFJ4160	= DISABLED	AND=ZAZ97999
		Verify Telemetry PACS_NomRed DED5H161	= REDUNDANT	AND=ZAZ97999
		Verify Telemetry PACSB_OnOff DED31161	= ON	AND=ZAZ97999
		Verify Telemetry PACSB_ValidInv DED35161	= Valid	AND=ZAZ97999
4.2		Switch on DPU LCL		<input type="checkbox"/>
		Switching ON the DPU LCL will initialise BSW. This will initially execute memory checks (failures will generate <b>TM(5,4)</b> packets) and then generate <b>TM(5,1)</b> [EVENT_REPORT_3_32776] packets every 10 seconds.		
	ET=+ UT=+00.00.00	Execute Telecommand SwOn_PacsD_R_L42  TC Control Flags :  Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) PACS DPU Red - switch LCL_42 on	DC42D170	
		Verify: DPU LCL status PacsD_R_L42_S WM42B565	= ON	AND=ZAZ97999
		Verify: DPU LCL current (+/- 0.1A) PacsD_R_L42_I WM407565	= 0.49 A	AND=ZAZ97999
4.3		DPU Force Boot		<input type="checkbox"/>
		Sending the FORCE_BOOT TC will generate a <b>TM(5,1)</b> [EVENT_REPORT_3_33041] packet from the BSW.		



PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



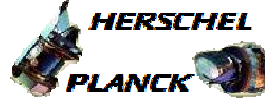
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.15	DPU_LLSW_FORCE_BOOT  DPU_LLSW_FORCE_BOOT  Command Parameter(s) : DPU_STRUCTURE_ID PP002380 DPU_PARTITION PP267380  Subsch. ID : 90 Det. descr. : FORCE THE BOOT OF THE DPU LLSW FROM EEPROM	PC032380  1 <dec> (Def) DPU_PRTN	
		Verify: The following TM(3,25) packets should be produced:  PACS_essential_HK (APID 1153) PACS_NO_PRIME_HK (APID 1155)		
		The following version check should ensure that the expected software version is running.		
		Verify Telemetry DP_SW_VERS_ID PM050380	Version	AND=ZAZ97999
		Verify Telemetry DP_SW_SUBVERS_ID PM051380	Subversion	AND=ZAZ97999
4.4		Re-enable SDB FDIR		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand  ConfigureSDBFDIR  Command Parameter(s) :  RTA DH011161 PACS B M0 DH030161 Ignore Flag M1 DH031161 Ignore Flag M2 DH032161 Ignore Flag M3 DH033161 Ignore Flag M4 DH034161 Ignore Flag M5 DH035161 Ignore Flag M6 DH036161 Ignore Flag M7 DH037161 Ignore Flag F0 DH018161 ON F1 DH019161 Alive  F2 DH020161 Well TC F3 DH021161 Well TM F4 DH022161 Valid F5 DH023161 Non-vital F6 DH024161 NOMINAL F7 DH025161 ON M12 DH051161 Ignore Flag M_C DH043161 Ignore CNT M8 DH038161 Ignore Flag M9 DH039161 Ignore Flag M10 DH040161 Ignore Flag M11 DH041161 Update status F12 DH050161 ENABLED CNT DH042161 LoopCnt1 F8 DH026161 Bus A	DC005161	

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		F9 DH027161 F10 DH028161 F11 DH029161  TC Control Flags :  Subsch. ID : 10 Det. descr. : Configure SDB FDIR  GBM IL DSE --Y -- ---	Healthy Healthy ENABLED	
		Wait up to 1 minute for the generation of the D_Hk_P64 packet from the CDMU (APID = 18)		
		Verify: 1553 bus FDIR status SDB_FDIR DEFJ4160	= ENABLED	AND=ZAZ97999
4.5		Self check of the DPU		<input type="checkbox"/>
		The following checks will verify the contents of the DPU Program Memory (RAM)		
		For PACS DPU OBSW v9.03:  CHECKSUM1 = 26D3 CHECKSUM2 = 23A2		
		For PACS DPU OBSW v9.04:  CHECKSUM1 = 302C CHECKSUM2 = 69E1		
	ET=+ UT=+00.00.03	DPU_MEMORY_CHECK DPU_MEMORY_CHECK  Command Parameter(s) : DPU_MEMORY_BLOCK_ID PP009380 DPU_MEMORY_ADDR PP003380 DPU_DATA_LENGTH PP008380  TC Control Flags :  Subsch. ID : 90 Det. descr. : REQUEST FOR A CHECKSUM OF A SPECIFIED MEMORY AREA  GBM IL DSE --Y -- ---	PC029380  100 <hex> 4000 <hex> 1551 <hex>	
		Verify: DPU memory checksum CHECKSUM PM132380	CHECKSUM1	AND=ZAZ97999

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	DPU_MEMORY_CHECK  DPU_MEMORY_CHECK  Command Parameter(s) : DPU_MEMORY_BLOCK_ID            PP009380 DPU_MEMORY_ADDR                PP003380 DPU_DATA_LENGTH                 PP008380  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 90 Det. descr. : REQUEST FOR A CHECKSUM OF A SPECIFIED MEMORY AREA	PC029380  100 <hex> 5551 <hex> FFFF <hex>	
		Verify: DPU memory checksum  CHECKSUM                            PM132380	CHECKSUM2	AND=ZAZ97999
5		Switch ON DMC		Next Step: 6
5.1		Switch on DMC LCL		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand  SwOn_PacsDecMec2_L69  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) PACS DEC/MEC2 - switch LCL_69 on	DC69D170	
		Verify: DMC LCL status  PacsMec2_L69_1S                    WM62E565	= ON	AND=ZAZ97999
		Verify: DMC LCL current (+/- 0.1A)  PacsMec2_L69_I                    WM610565	= 0.6 A	AND=ZAZ97999
5.2		DPU reset of 1355		<input type="checkbox"/>
	ET=+ UT=+00.00.19	DPU_RESET_1355  DPU_RESET_1355  Subsch. ID : 90 Det. descr. : DPU RESET THE 1355 CHIP	PC025380	
5.3		Establish DPU --> DMC connection		<input type="checkbox"/>
		Sending the following TC will establish the link between the DPU and the DMC. This will then generate a <b>TM(5,1)</b> [EVENT_REPORT_0_20 - DEC DEAD] packet as no data has been received in the previous 10 seconds.		

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.02	DPU_START_OBCP_RAW  DPU_START_OBCP  Command Parameter(s) : PROCEDURE_ID           PP012380 NUMBER_OF_TIMES       PP010380 PAR_ID        PP011380 PAR_VALUE     PP017380 PAR_ID        PP011380 PAR_VALUE     PP017380  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380  19 <dec> 2 <dec> (Def) 1 <dec> 0 <dec> 2 <dec> 1 <dec>	
5.4		Execute Memory self test check		<input type="checkbox"/>
		The following checks will verify the contents of the DMC Data Memory (RAM)		
	ET=+ UT=+00.00.04	DPU_MEMORY_DUMP  DPU_MEMORY_DUMP  Command Parameter(s) : DPU_MEMORY_BLOCK_ID    PP009380 DPU_MEMORY_ADDR       PP003380 DPU_DATA_LENGTH       PP008380  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 90 Det. descr. : DUMP OF A DPU MEMORY AREA	PC028380  3100 <hex> 0 <hex> 17 <dec>	
		Verify: The following <b>TM(6,6)</b> packet should be produced:  PACS_MEMORY_DUMP (APID 1153)		
		Verify that the contests are as follows:  0x 0000 0001 0x 0007 FFFF 0x 0000 55D0 0x 0000 55D0  Although the rest of the dump should be 0x0000 0000, it is not unexpected if it is not. This should be analysed by PACS offline.		
5.5		Copy DMC SW from EEPROM to RAM		<input type="checkbox"/>

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	DMC_LLSW_LOAD_EEPROM  DMC_LLSW_LOAD_EEPROM  <i>Command Parameter(s) :</i> DMC_EEPROM_MEMORY_ID           PP087420 DMC_EEPROM_START_ADDR        PP089420 DMC_RAM_MEMORY_ID            PP088420 DMC_RAM_START_ADDR           PP090420 DMC_DATA_LENGTH_HLSW        PP091420  <i>TC Control Flags :</i>  GBM IL DSE --Y -- ---  <i>Subsch. ID : 90</i> Det. descr. : LOAD THE DMC HLSW FROM EEPROM	PC198420   3 <hex> 0 <hex> 1 <hex> 6EE00 <hex> 4000 <hex>	
	ET=+ UT=+00.00.02	DMC_LLSW_LOAD_EEPROM  DMC_LLSW_LOAD_EEPROM  <i>Command Parameter(s) :</i> DMC_EEPROM_MEMORY_ID           PP087420 DMC_EEPROM_START_ADDR        PP089420 DMC_RAM_MEMORY_ID            PP088420 DMC_RAM_START_ADDR            PP090420 DMC_DATA_LENGTH_HLSW        PP091420  <i>Subsch. ID : 90</i> Det. descr. : LOAD THE DMC HLSW FROM EEPROM	PC198420   3 <hex> 8000 <hex> 1 <hex> 8000 <hex> 8000 <hex>	
5.6		Start DMC HLSW		<input type="checkbox"/>
	ET=+ UT=+00.00.06	DPU_START_OBCP_RAW  DPU_START_OBCP  <i>Command Parameter(s) :</i> PROCEDURE_ID            PP012380 NUMBER_OF_TIMES        PP010380 PAR_ID                   PP011380 PAR_VALUE                PP017380 PAR_ID                   PP011380 PAR_VALUE                PP017380 PAR_ID                   PP011380 PAR_VALUE                PP017380 PAR_ID                   PP011380 PAR_VALUE                PP017380  <i>Subsch. ID : 90</i> Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380   START_HLSW 3 <dec> 1 <dec> 0 <dec> 2 <dec> 1 <dec> 3 <dec> 32818 <dec>	
6		Establish DPU - DMC link		Next Step: 7

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.10	DPU_START_OBCP_RAW  DPU_START_OBCP  Command Parameter(s) : PROCEDURE_ID PP012380 NUMBER_OF_TIMES PP010380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380  START_1355_LINK 2 <dec> (Def) 1 <dec> 0 <dec> 2 <dec> 2 <dec>	
7		Switch ON BOLC		Next Step: 8
7.1		Switch on BOLC LCL		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand  SwOn_PacsB_R_L28  TC Control Flags :  GBM IL DSE --Y -- --  Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) PACS BOLC Red - switch LCL_28 on	DC28D170	
		Verify: BOLC LCL status PacsB_R_L28_1S WM32D565	= ON	AND=ZAZ97999
		Verify: BOLC LCL current (+/- 0.1A) PacsB_R_L28_I WM309565	= 0.2 A	AND=ZAZ97999
7.2		Reset DMC SMCS chip		<input type="checkbox"/>
	ET=+ UT=+00.00.16	DMC_RESET_SMCS_CHIP_2  DMC_RESET_SMCS_CHIP_2  Subsch. ID : 90 Det. descr. : RESET THE 1355 SMCS CHIP 2	PC202420	
8		Set temperature sensors for HeII conditions		Next Step: 9
	ET=+ UT=+00.00.04	DMC_SEND_COMMAND_BOLC  DMC_SEND_COMMAND_BOLC  Command Parameter(s) : BOLOMETER_COMMAND PP071420  Subsch. ID : 90 Det. descr. : SEND COMMAND TO BOL CONTROLLER	PC103420  70000ff <hex>	

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
9		Switch ON SPU		Next Step: 10
9.1		Switch on SPU LCL		<input type="checkbox"/>
	ET=+ UT=+00.00.00	Execute Telecommand  TC Control Flags :  Subsch. ID : 10 Det. descr. : PCDU: TC(8,4,112,5) PACS SPU Red - switch LCL_36 on	SwOn_PacsS_R_L36  GBM IL DSE --Y -- ---  DC36D170	
		Verify: SPU LCL status PacsS_R_L36_S WM62A565	= ON	AND=ZAZ97999
		Verify: SPU LCL current (+/- 0.1A) PacsS_R_L36_I WM606565	= 0.4 A	AND=ZAZ97999
9.2		DPU reset of 1355		<input type="checkbox"/>
	ET=+ UT=+00.00.24	DPU_RESET_1355  Subsch. ID : 90 Det. descr. : DPU RESET THE 1355 CHIP	DPU_RESET_1355  PC025380	
10		Establish links		Next Step: 11
10.1		DPU - DMC links with DPU as slave		<input type="checkbox"/>
	ET=+ UT=+00.00.04	DPU_START_OBCP_RAW  Command Parameter(s) : PROCEDURE_ID PP012380 NUMBER_OF_TIMES PP010380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	DPU_START_OBCP  START_1355_LINK 2 <dec> (Def) 1 <dec> 0 <dec> 2 <dec> 2 <dec>	
10.2		DPU - SPU links		<input type="checkbox"/>

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch																		
		<b>WARNING:</b> the following TCs must be sent with the exact time delay as defined																				
		Sending this TC will generate the following <b>TM(5,1)</b> packets: EVENT_REPORT_5_28 - Unexp 1355 ACK EVENT_REPORT_0_14 - SPUS DEAD																				
	ET=+ UT=+00.00.10	Initialise DPU - blue SPU links <p style="text-align: right;">DPU_START_OBCP</p> Command Parameter(s) : <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">PROCEDURE_ID</td> <td>PP012380</td> <td>START_1355_LINK</td> </tr> <tr> <td style="text-align: right;">NUMBER_OF_TIMES</td> <td>PP010380</td> <td>2 &lt;dec&gt; (Def)</td> </tr> <tr> <td style="text-align: right;">PAR_ID</td> <td>PP011380</td> <td>1 &lt;dec&gt;</td> </tr> <tr> <td style="text-align: right;">PAR_VALUE</td> <td>PP017380</td> <td>1 &lt;dec&gt;</td> </tr> <tr> <td style="text-align: right;">PAR_ID</td> <td>PP011380</td> <td>2 &lt;dec&gt;</td> </tr> <tr> <td style="text-align: right;">PAR_VALUE</td> <td>PP017380</td> <td>1 &lt;dec&gt;</td> </tr> </table> TC Control Flags : <p style="text-align: right;">GBM IL DSE --Y -- --</p> Subsch. ID : 90  Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PROCEDURE_ID	PP012380	START_1355_LINK	NUMBER_OF_TIMES	PP010380	2 <dec> (Def)	PAR_ID	PP011380	1 <dec>	PAR_VALUE	PP017380	1 <dec>	PAR_ID	PP011380	2 <dec>	PAR_VALUE	PP017380	1 <dec>	PC012380	
PROCEDURE_ID	PP012380	START_1355_LINK																				
NUMBER_OF_TIMES	PP010380	2 <dec> (Def)																				
PAR_ID	PP011380	1 <dec>																				
PAR_VALUE	PP017380	1 <dec>																				
PAR_ID	PP011380	2 <dec>																				
PAR_VALUE	PP017380	1 <dec>																				
		Sending this TC will generate the following <b>TM(5,1)</b> packets: EVENT_REPORT_5_28 - Unexp 1355 ACK EVENT_REPORT_0_10 - SPUL DEAD																				
	ET=+ UT=+00.00.04	Initialise DPU - red SPU links <p style="text-align: right;">DPU_START_OBCP</p> Command Parameter(s) : <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">PROCEDURE_ID</td> <td>PP012380</td> <td>START_1355_LINK</td> </tr> <tr> <td style="text-align: right;">NUMBER_OF_TIMES</td> <td>PP010380</td> <td>2 &lt;dec&gt; (Def)</td> </tr> <tr> <td style="text-align: right;">PAR_ID</td> <td>PP011380</td> <td>1 &lt;dec&gt;</td> </tr> <tr> <td style="text-align: right;">PAR_VALUE</td> <td>PP017380</td> <td>2 &lt;dec&gt;</td> </tr> <tr> <td style="text-align: right;">PAR_ID</td> <td>PP011380</td> <td>2 &lt;dec&gt;</td> </tr> <tr> <td style="text-align: right;">PAR_VALUE</td> <td>PP017380</td> <td>1 &lt;dec&gt;</td> </tr> </table> Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PROCEDURE_ID	PP012380	START_1355_LINK	NUMBER_OF_TIMES	PP010380	2 <dec> (Def)	PAR_ID	PP011380	1 <dec>	PAR_VALUE	PP017380	2 <dec>	PAR_ID	PP011380	2 <dec>	PAR_VALUE	PP017380	1 <dec>	PC012380	
PROCEDURE_ID	PP012380	START_1355_LINK																				
NUMBER_OF_TIMES	PP010380	2 <dec> (Def)																				
PAR_ID	PP011380	1 <dec>																				
PAR_VALUE	PP017380	2 <dec>																				
PAR_ID	PP011380	2 <dec>																				
PAR_VALUE	PP017380	1 <dec>																				
11		Memory management		Next Step: 12																		
11.1		SPU Memory self test: dump blue		<input type="checkbox"/>																		
		The following checks will verify the contents of the SPU (blue) Data Memory (RAM)																				





PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		For PACS SPU OBSW v13.96:  0x 0000 0001 0x 0007 FFFF 0x 0000 6823 0x 0000 6823  Although the rest of the dump should be 0x0000 0000, it is not unexpected if it is not. This should be analysed by PACS offline		
11.3		Load SPU red HLSW		<input type="checkbox"/>
		Load SPU red high-level software from EEPROM to RAM		
	ET=+ UT=+00.00.01	SPUL_LLSW_LOAD_EEPROM SPUL_LLSW_LOAD_EEPROM  Command Parameter(s) : SPUL_EEPROM_MEMORY_ID PP040390 SPUL_EEPROM_START_ADDR PP042390 SPUL_RAM_MEMORY_ID PP041390 SPUL_RAM_START_ADDR PP043390 SPUL_DATA_LENGTH_HLSW PP038390  TC Control Flags : GBM IL DSE --Y -- ---  Subsch. ID : 90 Det. descr. : LOAD SPU HLSW FROM EEPROM FOR RED SPU	PC070390  3 <hex> 100 <hex> 1 <hex> 100 <hex> 1E0 <hex>	
	ET=+ UT=+00.00.02	SPUL_LLSW_LOAD_EEPROM SPUL_LLSW_LOAD_EEPROM  Command Parameter(s) : SPUL_EEPROM_MEMORY_ID PP040390 SPUL_EEPROM_START_ADDR PP042390 SPUL_RAM_MEMORY_ID PP041390 SPUL_RAM_START_ADDR PP043390 SPUL_DATA_LENGTH_HLSW PP038390  Subsch. ID : 90 Det. descr. : LOAD SPU HLSW FROM EEPROM FOR RED SPU	PC070390  3 <hex> 300 <hex> 1 <hex> 300 <hex> 700 <hex>	
	ET=+ UT=+00.00.02	SPUL_LLSW_LOAD_EEPROM SPUL_LLSW_LOAD_EEPROM  Command Parameter(s) : SPUL_EEPROM_MEMORY_ID PP040390 SPUL_EEPROM_START_ADDR PP042390 SPUL_RAM_MEMORY_ID PP041390 SPUL_RAM_START_ADDR PP043390 SPUL_DATA_LENGTH_HLSW PP038390  Subsch. ID : 90 Det. descr. : LOAD SPU HLSW FROM EEPROM FOR RED SPU	PC070390  3 <hex> a00 <hex> 1 <hex> a00 <hex> a600 <hex>	
11.4		Load SPU blue HLSW		<input type="checkbox"/>

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Load SPU blue high-level software from EEPROM to RAM		
	ET=+ UT=+00.00.02	SPUS_LLSW_LOAD_EEPROM SPUS_LLSW_LOAD_EEPROM Command Parameter(s) : SPUS_EEPROM_MEMORY_ID           PP058400 SPUS_EEPROM_START_ADDR        PP060400 SPUS_RAM_MEMORY_ID            PP059400 SPUS_RAM_START_ADDR           PP061400 SPUS_DATA_LENGTH_HLSW        PP056400 Subsch. ID : 90 Det. descr. : LOAD SPU HLSW FROM EEPROM FOR BLUE SPU	PC069400	
	ET=+ UT=+00.00.02	SPUS_LLSW_LOAD_EEPROM SPUS_LLSW_LOAD_EEPROM Command Parameter(s) : SPUS_EEPROM_MEMORY_ID           PP058400 SPUS_EEPROM_START_ADDR        PP060400 SPUS_RAM_MEMORY_ID            PP059400 SPUS_RAM_START_ADDR            PP061400 SPUS_DATA_LENGTH_HLSW        PP056400 Subsch. ID : 90 Det. descr. : LOAD SPU HLSW FROM EEPROM FOR BLUE SPU	PC069400	
	ET=+ UT=+00.00.02	SPUS_LLSW_LOAD_EEPROM SPUS_LLSW_LOAD_EEPROM Command Parameter(s) : SPUS_EEPROM_MEMORY_ID           PP058400 SPUS_EEPROM_START_ADDR        PP060400 SPUS_RAM_MEMORY_ID            PP059400 SPUS_RAM_START_ADDR            PP061400 SPUS_DATA_LENGTH_HLSW        PP056400 Subsch. ID : 90 Det. descr. : LOAD SPU HLSW FROM EEPROM FOR BLUE SPU	PC069400	
12		Establish links		Next Step: 13
12.1		Start SPU-S HLSW		<input type="checkbox"/>

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.04	DPU_START_OBCP_RAW  DPU_START_OBCP  Command Parameter(s) : PROCEDURE_ID PP012380 NUMBER_OF_TIMES PP010380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380  TC Control Flags :  GBM IL DSE  --Y -- ---  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380  START_HLSW 3 <dec> 1 <dec> 1 <dec> 2 <dec> 1 <dec> 3 <dec> 2562 <dec>	
12.2		DPU - blue SPU links		<input type="checkbox"/>
		Sending this TC will generate a <b>TM(5,1)</b> [EVENT_REPORT_5_28 - Unexp 1355 ACK] packet.		
	ET=+ UT=+00.00.04	DPU_START_OBCP_RAW  DPU_START_OBCP  Command Parameter(s) : PROCEDURE_ID PP012380 NUMBER_OF_TIMES PP010380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380  START_1355_LINK 2 <dec> (Def) 1 <dec> 1 <dec> 2 <dec> 2 <dec>	
12.3		Start SPU-L HLSW		<input type="checkbox"/>

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.04	DPU_START_OBCP_RAW  DPU_START_OBCP  Command Parameter(s) : PROCEDURE_ID PP012380 NUMBER_OF_TIMES PP010380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380  START_HLSW 3 <dec> 1 <dec> 2 <dec> 2 <dec> 1 <dec> 3 <dec> 2562 <dec>	
12.4		DPU - red SPU links		<input type="checkbox"/>
		Sending this TC will generate a TM(5,1) [EVENT_REPORT_5_28 - Unexp 1355 ACK] packet.		
	ET=+ UT=+00.00.03	DPU_START_OBCP_RAW  DPU_START_OBCP  Command Parameter(s) : PROCEDURE_ID PP012380 NUMBER_OF_TIMES PP010380 PAR_ID PP011380 PAR_VALUE PP017380 PAR_ID PP011380 PAR_VALUE PP017380  Subsch. ID : 90 Det. descr. : START AN OBCP WITH THE COMMANDED PARAMETERS	PC012380  START_1355_LINK 2 <dec> (Def) 1 <dec> 2 <dec> 2 <dec> 2 <dec>	
12.5		SPU-L - DMC links with DMC as master		<input type="checkbox"/>
	ET=+ UT=+00.00.05	SPUL_CONNECT_DMC  SPUL_CONNECT_DMC  Command Parameter(s) : SPUL_MASTER_OR_SLAVE PP084390  Subsch. ID : 90 Det. descr. : START THE SPUL LINK TO DMC AS SLAVE OR MASTER	PC195390  SLAVE	
12.6		SPU-S - DMC links with DMC as master		<input type="checkbox"/>



PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	Function 1: monitor SPU temperatures and voltages DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  TC Control Flags : GBM IL DSE --Y -- ---  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_SPU ENABLE	
	ET=+ UT=+00.00.01	Function 2: monitor DMC temperatures DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_DEC ENABLE	
	ET=+ UT=+00.00.00	Function 3: monitor DMC counters on Last_Err and memory DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  STABLE_DEC ENABLE	
	ET=+ UT=+00.00.01	Function 6: Monitor DMC-BOLC comms (BOL_REC_PAC) DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  COUNTER_PHOT ENABLE	
	ET=+ UT=+00.00.00	Function 7: monitor SPU-S alive counter CIB DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  COUNTER_SPS ENABLE	

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	Function 8: monitor SPU-S memory counter <p style="text-align: right;">DPU_SET_FUNCT</p> <i>Command Parameter(s) :</i> DPU_INT_FUNC_ID                    PP007380 ENABLE_DISABLE                    PP006380  <i>Subsch. ID : 90</i> Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  STABLE_SPS ENABLE	
	ET=+ UT=+00.00.00	Function 9: monitor SPU-L alive counter CIR <p style="text-align: right;">DPU_SET_FUNCT</p> <i>Command Parameter(s) :</i> DPU_INT_FUNC_ID                    PP007380 ENABLE_DISABLE                    PP006380  <i>Subsch. ID : 90</i> Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  COUNTER_SPL ENABLE	
	ET=+ UT=+00.00.01	Function 10: monitor SPU-L memory counter <p style="text-align: right;">DPU_SET_FUNCT</p> <i>Command Parameter(s) :</i> DPU_INT_FUNC_ID                    PP007380 ENABLE_DISABLE                    PP006380  <i>Subsch. ID : 90</i> Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  STABLE_SPL ENABLE	
	ET=+ UT=+00.00.00	Function 11: monitor DPU HK <p style="text-align: right;">DPU_SET_FUNCT</p> <i>Command Parameter(s) :</i> DPU_INT_FUNC_ID                    PP007380 ENABLE_DISABLE                    PP006380  <i>Subsch. ID : 90</i> Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_DPU ENABLE	
	ET=+ UT=+00.00.01	Function 13: monitor BOLC WE temperatures <p style="text-align: right;">DPU_SET_FUNCT</p> <i>Command Parameter(s) :</i> DPU_INT_FUNC_ID                    PP007380 ENABLE_DISABLE                    PP006380  <i>Subsch. ID : 90</i> Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_BOL_T_WE ENABLE	



PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	Function 16: monitor cooler heat switch temperatures DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_BOL_I_HEAT ENABLE	
	ET=+ UT=+00.00.01	Function 19: monitor BOL FPU heater DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_BOL_I_FPU ENABLE	
	ET=+ UT=+00.00.00	Function 21: monitor SP current DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  EVENT_BOL_I_SP1 ENABLE	
	ET=+ UT=+00.00.01	Function 23: monitor 1355 links DPU_SET_FUNCT  Command Parameter(s) : DPU_INT_FUNCT_ID                  PP007380 ENABLE_DISABLE                  PP006380  Subsch. ID : 90 Det. descr. : ENABLE OR DISABLE A DPU INTERNAL FUNCTION	PC005380  23 <dec> ENABLE	
15		Update UIU table		Next Step: 16
	ET=+ UT=+00.00.00	Execute Telecommand H_FdirMarkUnitOn_Templ  Command Parameter(s) : H_ConfStsUnitId                  DHZ00170  Subsch. ID : 10 Det. descr. : TEMPLATE FDIR: Mark Unit On, TC(8,4,116,26), Herschel Version	DC93H159  PacsBolc	

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.01	Execute Telecommand <b>H_FdirMarkUnitOn_Templ</b>  Command Parameter(s) : <b>H_ConfStsUnitId</b> <b>DHZ00170</b>  Subsch. ID : 10 Det. descr. : TEMPLATE FDIR: Mark Unit On, TC(8,4,116,26), Herschel Version	<b>DC93H159</b>  <b>PacsDec</b>	
	ET=+ UT=+00.00.01	Execute Telecommand <b>H_FdirMarkUnitOn_Templ</b>  Command Parameter(s) : <b>H_ConfStsUnitId</b> <b>DHZ00170</b>  Subsch. ID : 10 Det. descr. : TEMPLATE FDIR: Mark Unit On, TC(8,4,116,26), Herschel Version	<b>DC93H159</b>  <b>PacsDpu</b>	
		Verify Telemetry <b>PacsBolc1FuncSt</b> <b>DEL54171</b>	<b>= On</b>	AND=ZAZA0999
		Verify Telemetry <b>PacsDeclFuncSts</b> <b>DEL44171</b>	<b>= On</b>	AND=ZAZA0999
		Verify Telemetry <b>PacsDpuFuncSts</b> <b>DEL50171</b>	<b>= On</b>	AND=ZAZA0999
16		Switch ON verification		Next Step: END
16.1		Verify that all 1355 links are on and communicating		<input type="checkbox"/>
		Verify Telemetry <b>DP_SPS_LINK</b> <b>PM020380</b>	<b>= ON</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_SPL_LINK</b> <b>PM021380</b>	<b>= ON</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_DMC_LINK</b> <b>PM022380</b>	<b>= ON</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_SPUS_CMD</b> <b>PM023380</b>	<b>= SS ENABLED</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_SPUL_CMD</b> <b>PM024380</b>	<b>= SS ENABLED</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_SPUL_CMD</b> <b>PM024380</b>	<b>= SS ENABLED</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_SPUS_HK</b> <b>PM026380</b>	<b>= NEW HK</b>	AND=ZAZ97999
		Verify Telemetry <b>DP_SPUL_HK</b> <b>PM027380</b>	<b>= NEW HK</b>	AND=ZAZ97999

PACS\_Switch\_On\_Redundant  
 File: H\_FCP\_PAC\_RSON.xls  
 Author: R. Biggins



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry DP_DMC_HK PM028380	= NEW HK	AND=ZAZ97999
		Verify Telemetry SPL_DMC_LINK PM189390	= LINK ON	AND=ZAZ97999
		Verify Telemetry SPS_DMC_LINK PM206400	= LINK ON	AND=ZAZ97999
		Verify that this parameter increments on each packet DM_BOL_REC_PAC PM038420	Incrementing	AND=ZAZ97999
16.2		Verify that no command reception problem has occurred		☐
		Verify Telemetry DP_UNIT PM070380	= REDUNDANT DPU	AND=ZAZ97999
		Verify Telemetry DP_1_8_REJECTED PM071380	= 0 <dec>	AND=ZAZ97999
		Verify Telemetry DP_1_2_REJECTED PM072380	= 0 <dec>	AND=ZAZ97999
		Verify Telemetry DP_COM_DMC_NACK PM073380	= 0 <dec>	AND=ZAZ97999
		Verify Telemetry DP_COM_SPL_NACK PM075380	= 0 <dec>	AND=ZAZ97999
		Verify Telemetry DP_COM_SPS_NACK PM077380	= 0 <dec>	AND=ZAZ97999
<b>End of Procedure</b>				