

DPU\_START - Switch ON the nominal SPIRE units  
 File: H\_FCP\_SPI\_NSON.xls  
 Author: L.Lucas-hp



## Procedure Summary

### Objectives

The objective of this procedure is to switch on SPIRE PRIME. LCLs are switched on, the DPU is booted and started.

### Summary of Constraints

**Warning:** The Boot DPU command (step 5.4) MUST be added MANUALLY to the manual stack once this procedure has been loaded. The command must be added in the middle of the sequence

**Note:** Only the Secondary partition can be booted

**INPUT:**

- The SECONDARY partition should be copied to the EEPROM upon DPU switch on: 3.0.B
- Expected ASW version?

### Spacecraft Configuration

**Start of Procedure**

SPIRE is OFF

**End of Procedure**

SPIRE sub-mode is DPU\_ON

### Reference File(s)

**Input Command Sequences**

**Output Command Sequences**

HFSNSON

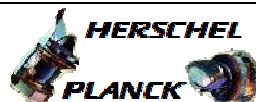
### Referenced Displays

| ANDs     | GRDs | SLDs |
|----------|------|------|
| ZAZ96999 |      |      |
| SA_1_559 |      |      |
| ZAZ90999 |      |      |
| SA_7_559 |      |      |
| SA_6_559 |      |      |

### Configuration Control Information

| DATE     | FOP ISSUE | VERSION | MODIFICATION DESCRIPTION | AUTHOR     | SPR REF |
|----------|-----------|---------|--------------------------|------------|---------|
| 12/11/07 |           | 1       | Created                  | R. Biggins |         |

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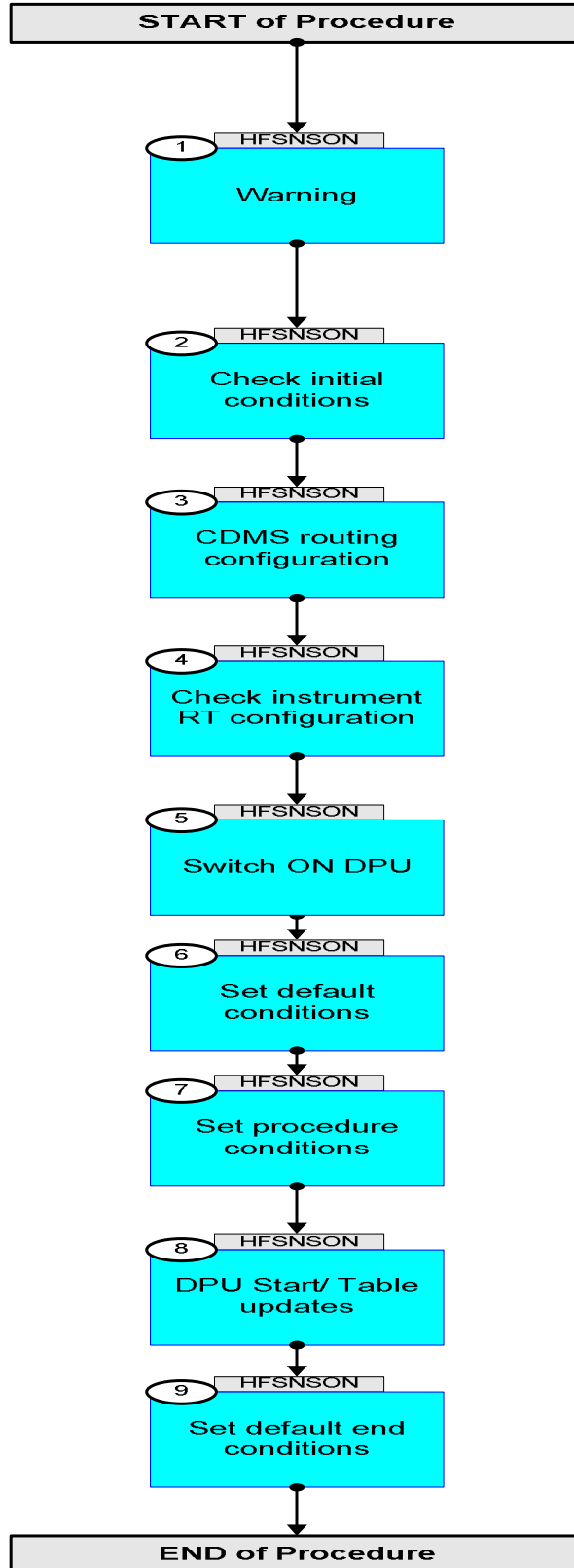


|          |     |       |  |            |  |
|----------|-----|-------|--|------------|--|
| 21/11/07 |     | 2     | - Variable TCs updated<br>- Time tags added to SVM commands  | R. Biggins |  |
| 11/12/07 |     | 3     | Table Update TCs updated to reduce the number of parameters and reduced the size of the TC to below the maximum allowed TC length  | R. Biggins |  |
| 15/01/08 |     | 4     | Update due to initial testing against simulator:<br>- Bus profile selection TC added   | R. Biggins |  |
| 30/01/08 |     | 5     | Update due to changes in input file (DPU_START: version 4)<br>- BBID/OBSID TM checks added<br>- Table Update TCs added<br>- Table Update parameters updated<br>- Execution times removed   | R. Biggins |  |
| 22/02/08 |     | 6     | Update due to testing against MOC Simulator:<br>- Time Tags updated<br>- BBID/OBSID TM checks added<br>- Editorial updates   | R. Biggins |  |
| 03/03/08 |     | 6.01  | Validation : Update due to comments by S. Sidher:<br>- DPU LCL expected current updated  | R. Biggins |  |
| 19/05/08 | 1   | 7     | Updates due to SVT-1 testing:<br>- TC to start RT interrogations updated (step 4.3)<br>- TC to enable SDB FDIR moved from step 8 to step 4.5<br>- TM to check software version added (step 4.7)<br>- TM parameters added to RESET_DRCU_COUNTERS telecommand (step 6)<br>- Default OBSID value updated to 0x0000 0000<br>- flags updated<br>- comments added/updated<br>- AND updated for all TM parameters | R. Biggins |  |
| 21/01/09 |     | 8     | Dis/Enable FDIR command updated using newer command in light of use for SVT2   | L.Lucas-hp |  |
| 22/01/09 |     | 9     | Update to Disable SDB FDIR after comments from AIT   | L.Lucas-hp |  |
| 23/01/09 | 2   | 9.01  | Validation : Text added to reflect that the Primary partition shall NOT be used.   | L.Lucas-hp |  |
| 02/03/09 | 2.1 | 10    | Procedure updated to reflect SVT2.<br>CDMU latch commands included. Secondary partition highlighted. Excessive table updates removed.  | L.Lucas-hp |  |
| 12/03/09 |     | 11    | Removed Boot Primary command as it will never be used.<br>Added warnings/reminders to insert Boot command Manually   | L.Lucas-hp |  |
| 25/03/09 |     | 11.01 | Validation : Text Update to include APID 1288  | L.Lucas-hp |  |
| 25/03/09 | 2.2 | 11.02 | Validation : Text Update: DPU version  | L.Lucas-hp |  |

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### Procedure Flowchart Overview



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| Step No.                                | Time | Activity/Remarks   | TC/TLM | Display/ Branch |
|---|------|--|--------|-----------------|
| <b>Beginning of Procedure</b>           |      |  |        |                 |
| TC Seq. Name :HFSNSON (Switch ON (Nom)) |      |  |        |                 |
| TimeTag Type: N<br>Sub Schedule ID:     |      |  |        |                 |
| □                                       |      |  |        |                 |
| 1                                       |      | Warning  |        | Next Step:<br>2 |
|   |      | <b>Warning:</b> The Boot DPU command (step 5.4) MUST be added <u>MANUALLY</u> to the manual stack once this procedure has been loaded.<br>The command must be added in the middle of the sequence. |        |                 |
|   |      | NOTE: Only the Secondary Partition can be booted   |        |                 |
| 2                                       |      | Check initial conditions   |        | Next Step:<br>3 |
|   |      | Verify: SPIRE has been switched off for at least 4 minutes   |        |                 |
| 2.1                                     |      | SPIRE input  |        | □               |
|   |      | Note: For SPIRE Prime, only the secondary partition can be and will be booted (step 5.4).  |        |                 |
|   |      | Verify that the expected DPU software version number has been supplied by the SPIRE ICC  |        |                 |
| 2.2                                     |      | Bus status   |        | □               |
|   |      | Verify Bus configuration   |        |                 |
|   |      | Verify: Active 1553 bus<br><b>Active_Bus_A_B</b> DEFJ1160                      = BUS_A   |        | AND=ZAZ96999    |
|   |      | Verify: 1553 bus FDIR status<br><b>SDB_FDIR</b> DEFJ4160                      = ENABLED  |        | AND=ZAZ96999    |
|   |      | Verify: SDB handling status<br><b>BSW_SDB_ENAB</b> DEF60160                      = ENABLED   |        | AND=ZAZ96999    |
|   |      | Verify bus health status   |        |                 |
|   |      | Verify: Bus (side A) health status<br><b>BusA_HealthySts</b> DEFJ2160                      = Healthy   |        | AND=ZAZ96999    |
|   |      | Verify: Bus (side B) health status<br><b>BusB_HealthySts</b> DEFJ3160                      = Healthy   |        | AND=ZAZ96999    |

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| Step No. | Time                 | Activity/Remarks  | TC/TLM       | Display/ Branch          |
|----------|----------------------|---|--------------|--------------------------|
| 2.3      |                      | Nominal instrument LCLs   |              | <input type="checkbox"/> |
|          |                      | Verify: DPU LCL status<br><b>SpirHsdN_L11_1S</b> <b>WM32C565</b>  | <b>= OFF</b> | AND=ZAZ96999             |
|          |                      | Verify: FCU LCL status<br><b>SpirHsfN_L51_1S</b> <b>WM42C565</b>  | <b>= OFF</b> | AND=ZAZ96999             |
| 2.4      |                      | Redundant instrument LCLs   |              | <input type="checkbox"/> |
|          |                      | Verify: DPU LCL status<br><b>SpirHsdR_L12_1S</b> <b>WM82C565</b>  | <b>= OFF</b> | AND=ZAZ96999             |
|          |                      | Verify: FCU LCL status<br><b>SpirHsfR_L52_1S</b> <b>WM72C565</b>  | <b>= OFF</b> | AND=ZAZ96999             |
| 2.5      |                      | Temperature   |              | <input type="checkbox"/> |
|          |                      | TBD   |              |                          |
| 3        |                      | CDMS routing configuration  |              | Next Step:<br>4          |
| 3.1      |                      | Verify Packet Routing   |              | <input type="checkbox"/> |
|          | ET=+<br>UT=+00.00.00 | Execute Telecommand<br><b>RepDownlinkTMStorage</b><br><br>Subsch. ID : 10<br>Det. descr. : Report Telemetry Packets Down-linking/<br>Storage Status   | DC141160     |                          |
|          |                      | It should be verified that ALL telemetry packets for the following 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).<br><br>1280 - SpirePri<br>1282 - SpirePriDiagHk<br>1284 - SpirePriSci0<br>1286 - SpirePriSci1<br>1288 - SpirePriSci<br><br>This should be verified on the VPD |              |                          |
|          |                      | Verify Packet Reception<br><b>Telemetry Packets DownLinking-Storage Status Report</b><br>Packet Details:<br><br>APID: 16<br>Type: 14<br>Subtype: 7<br>PI1:<br>PI2:  | (14,7)-1400  |                          |

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| Step No. | Time | Activity/Remarks   | TC/TLM     | Display/ Branch          |
|----------|------|--|------------|--------------------------|
| 4        |      | Check instrument RT configuration  |            | Next Step:<br>5          |
| 4.1      |      | Remote Terminal configuration  |            | <input type="checkbox"/> |
|          |      | Verify Telemetry<br>SPIRE_VitalNonV                    DED52161  | = NonVital | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIRE_TmRetry                    DED54161  | = ON       | AND=ZAZ96999             |
| 4.2      |      | Remote Terminal Status   |            | <input type="checkbox"/> |
|          |      | Nominal units  |            |                          |
|          |      | Verify Telemetry<br>SPIREA_OnOff                    DED1G161   | = OFF      | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREA_DeadAliv                    DED1H161  | = Alive    | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREA_WellsiTc                    DED1Z161  | = Well     | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREA_WellsiTm                    DED1J161  | = Well     | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREA_ValidInv                    DED1K161  | = Invalid  | AND=ZAZ96999             |
|          |      | Redundant units  |            |                          |
|          |      | Verify Telemetry<br>SPIREB_OnOff                    DED21161   | = OFF      | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREB_DeadAliv                    DED22161  | = Alive    | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREB_WellsiTc                    DED23161  | = Well     | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREB_WellsiTm                    DED24161  | = Well     | AND=ZAZ96999             |
|          |      | Verify Telemetry<br>SPIREB_ValidInv                    DED25161  | = Invalid  | AND=ZAZ96999             |
| 5        |      | Switch ON DPU  |            | Next Step:<br>6          |
|          |      | <b>Warning:</b> The Boot DPU command MUST be added MANUALLY to the manual stack once this procedure has been loaded.<br>The command must be added in the middle of the sequence. |            |                          |



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| Step No. | Time                 | Activity/Remarks  | TC/TLM                         | Display/ Branch          |
|----------|----------------------|---|--------------------------------|--------------------------|
|          |                      | F9 DH027161<br>F10 DH028161<br>F11 DH029161<br><br>Subsch. ID : 10<br>Det. descr. : Configure SDB FDIR  | Healthy<br>Healthy<br>DISABLED |                          |
|          |                      | Wait up to 1 minute for the generation of the D_H_Hk_P64 packet from the CDMU (APID = 18)   |                                |                          |
|          |                      | Verify Telemetry<br>SPIRE_NomRed DED53161   | = NOMINAL                      | AND=ZAZ96999             |
|          |                      | Verify Telemetry<br>SPIREA_OnOff DED1G161   | = ON                           | AND=ZAZ96999             |
|          |                      | Verify Telemetry<br>SPIREA_ValidInv DED1K161  | = Valid                        | AND=ZAZ96999             |
| 5.3      |                      | Power ON DPU  |                                | <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> [Boot_ROM_Check] packets every 10 seconds.<br><br><b>WARNING:</b> It is vital to send the FORCE_BOOT TC within 210 seconds otherwise the DPU stops sending <b>TM(5,1)</b> packets (after 21 packets) and then the SVM will invalidate the RT |                                |                          |
|          | ET=+<br>UT=+00.00.00 | Execute Telecommand<br>SwOn_SpireHSPDU_N_L11<br><br>Subsch. ID : 10<br>Det. descr. : PCDU: TC(8,4,112,5) SPIRE HSDPU Nom - switch LCL_11 on   | DC11D170                       |                          |
|          |                      | Verify: DPU LCL status<br>SpirHsdN_L11_1S WM32C565  | = ON                           | AND=ZAZ96999             |
|          |                      | Verify: DPU LCL current (+/- 0.5A)<br>SpireHsN_L11_I WM308565   | = 0.425 A                      | AND=ZAZ96999             |
| 5.4      |                      | Boot DPU  |                                | <input type="checkbox"/> |



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| Step No. | Time | Activity/Remarks   | TC/TLM             | Display/ Branch          |
|----------|------|--|--------------------|--------------------------|
|          |      | <p><b>Warning:</b> This Boot DPU command MUST be added MANUALLY to the manual stack once this procedure has been loaded. The command must be added in the middle of the sequence.</p> <p>Sending of the FORCE_BOOT TCs will generate a <b>TM(5,1)</b> [TC_ACKNOWLEDGE] packet from the BSW. On ASW startup, three <b>TM(5,1)</b> [No_MCU_Response_Error, No_SCU_Response_Error, No_DCU_Response_Error] packets are expected as the units are not switched on.</p> <p>Only the SECONDARY partition can be booted.</p> |                    |                          |
|          |      | Boot the SECONDARY partition: <b>MANUALLY</b> send the following command:  |                    |                          |
|          |      | <p>Execute Telecommand</p> <p style="text-align: center;"><b>FORCE_BOOT_SECONDARY</b></p> <p><i>Subsch. ID : 370</i><br/> <i>Det. descr. : LOAD OBS FROM SECONDARY PARTITION OF EEPROM AND BOOT</i><br/>           This Telecommand will not be included in the export</p>   | SCD0A505           |                          |
|          |      | The Primary partition shall <b>not</b> be used.  |                    |                          |
| 5.5      |      | Verify Housekeeping  |                    | <input type="checkbox"/> |
|          |      | <p>Verify the TM is being generated.<br/>           Check Packet History:<br/>           Critical 3,25, 1280 (Critical_HK_Parameter_Report)<br/>           Nominal HK 3,25, 1282 (Nominal_HK_Parameter_Report)</p>   |                    |                          |
|          |      | The following version check should ensure that the expected software version is running.   |                    |                          |
|          |      | <p>Verify Telemetry</p> <p style="text-align: center;"><b>OBSVER1                      SM0EN500</b></p>  | <b>Version</b>     | AND=SA_1_559             |
|          |      | <p>Verify Telemetry</p> <p style="text-align: center;"><b>OBSVER2                      SM0FN500</b></p>  | <b>Sub-version</b> | AND=SA_1_559             |
|          |      | <p>Verify Telemetry</p> <p style="text-align: center;"><b>OBSVER3                      SM05F500</b></p>  | <b>Revision</b>    | AND=SA_1_559             |
| 5.6      |      | Re-enable SDB FDIR   |                    | <input type="checkbox"/> |

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| Step No. | Time                 | Activity/Remarks   | TC/TLM                  | Display/ Branch |
|----------|----------------------|--|-------------------------|-----------------|
|          | ET=+<br>UT=+00.00.00 | Execute Telecommand<br><br>ConfigureSDBFDIR<br><br>Command Parameter(s) :<br>RTA DH011161 SPIRE A<br>M0 DH030161 Ignore Flag<br>M1 DH031161 Ignore Flag<br>M2 DH032161 Ignore Flag<br>M3 DH033161 Ignore Flag<br>M4 DH034161 Ignore Flag<br>M5 DH035161 Ignore Flag<br>M6 DH036161 Ignore Flag<br>M7 DH037161 Ignore Flag<br>F0 DH018161 ON<br>F1 DH019161 Alive<br><br>F2 DH020161 Well TC<br>F3 DH021161 Well TM<br>F4 DH022161 Valid<br>F5 DH023161 Non-vital<br>F6 DH024161 NOMINAL<br>F7 DH025161 ON<br>M12 DH051161 Ignore Flag<br>M_C DH043161 Ignore CNT<br>M8 DH038161 Ignore Flag<br>M9 DH039161 Ignore Flag<br>M10 DH040161 Ignore Flag<br>M11 DH041161 Update status<br>F12 DH050161 ENABLED<br>CNT DH042161 LoopCnt1<br>F8 DH026161 Bus A<br><br>F9 DH027161 Healthy<br>F10 DH028161 Healthy<br>F11 DH029161 ENABLED<br><br>Subsch. ID : 10<br>Det. descr. : Configure SDB FDIR | DC005161                |                 |
|          |                      | Verify: 1553 bus FDIR status<br>SDB_FDIR DEFJ4160  | = ENABLED               | AND=ZAZ96999    |
| 6        |                      | Set default conditions   |                         | Next Step:<br>7 |
|          |                      | Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands   |                         |                 |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP  | SC003500<br><br>0 <hex> |                 |

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| Step No. | Time                 | Activity/Remarks   | TC/TLM  | Display/ Branch  |              |
|----------|----------------------|--|---|------------------|--------------|
|          | ET=+<br>UT=+00.00.01 | SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID<br><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER | SET_BBID<br><br>SP01N500<br><br>80010001 <hex>  | SC001500         |              |
|          |                      | Verify Telemetry<br><br>BBFULLTYPE   | SM2LN500  | = ClearObs       | AND=ZAZ90999 |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP       | SET_OBS_STEP<br><br>SP03N500<br><br>1 <hex>     | SC003500         |              |
|          | ET=+<br>UT=+00.00.01 | SET_OBSID<br><br>Command Parameter(s) :<br>OBSERVATION_ID<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION IDENTIFIER      | SET_OBSID<br><br>SP00N500<br><br>00000000 <hex> | SC000500         |              |
|          |                      | Verify Telemetry<br><br>OBSID  | SM10N500  | = 00000000 <hex> | AND=ZAZ90999 |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP       | SET_OBS_STEP<br><br>SP03N500<br><br>0 <hex>     | SC003500         |              |
|          | ET=+<br>UT=+00.00.01 | SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID<br><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER | SET_BBID<br><br>SP01N500<br><br>80000000 <hex>  | SC001500         |              |
|          |                      | Verify Telemetry<br><br>BBFULLTYPE   | SM2LN500  | = Null           | AND=ZAZ90999 |

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| Step No. | Time                 | Activity/Remarks  | TC/TLM                         | Display/ Branch |
|----------|----------------------|---|--------------------------------|-----------------|
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP   | SC003500<br><br>0 <hex>        |                 |
|          | ET=+<br>UT=+00.00.01 | SET_BBID<br><br>SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID SP01N500<br><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER | SC001500<br><br>80020001 <hex> |                 |
|          |                      | Verify Telemetry<br><br>BBFULLTYPE SM2LN500   | = StartObs                     | AND=ZAZ90999    |
| 7        |                      | Set procedure conditions  |                                | Next Step:<br>8 |
|          | ET=+<br>UT=+00.00.00 | RESET_DRCU_COUNTERS<br><br>RESET_DRCU_COUNTERS<br><br>Subsch. ID : 370<br>Det. descr. : RESET DRCU COUNTERS   | SCD00505                       |                 |
|          |                      | Verify that the TRESET parameter has the same value as the THSK parameter<br><br>TRESET SM01T500  | same as THSK                   | AND=SA_1_559    |
|          |                      | THSK SM00T500   | any                            | AND=SA_1_559    |
|          |                      | Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands                                      |                                |                 |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP   | SC003500<br><br>1 <hex>        |                 |
|          | ET=+<br>UT=+00.00.01 | SET_OBSID<br><br>SET_OBSID<br><br>Command Parameter(s) :<br>OBSERVATION_ID SP00N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION IDENTIFIER     | SC000500<br><br>OBS_ID         |                 |
|          |                      | Verify Telemetry<br><br>OBSID SM10N500  | OBS_ID                         | AND=ZAZ90999    |

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| Step No. | Time                 | Activity/Remarks  | TC/TLM   | Display/ Branch |
|----------|----------------------|---|--|-----------------|
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP                    SP03N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP  | SET_OBS_STEP<br><br>SC003500<br><br>0 <hex>          |                 |
|          | ET=+<br>UT=+00.00.01 | SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID                    SP01N500<br><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER  | SET_BBID<br><br>SC001500<br><br>80000000 <hex>       |                 |
|          |                      | Verify Telemetry<br><br>BBFULLTYPE                    SM2LN500  | = Null   | AND=ZAZ90999    |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_MODE<br><br>Command Parameter(s) :<br>OBSERVING_MODE                    SP02N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVING MODE  | SET_OBS_MODE<br><br>SC002500<br><br>0 <hex>          |                 |
|          |                      | Verify Telemetry<br><br>MODE                    SM00M500  | = DPU_ON   | AND=ZAZ96999    |
| 8        |                      | DPU Start/ Table updates  |  | Next Step:<br>9 |
|          | ET=+<br>UT=+00.00.03 | SET_TABLE<br><br>Command Parameter(s) :<br>TABLEID_SETTAB                    SPB0N500<br>TABLESIZE_SETTAB                    SPB1N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>--Y -- --<br><br>Subsch. ID : 370<br>Det. descr. : SET SPACE FOR A TABLE | SET_TABLE<br><br>SCB00500<br><br>36 <hex><br>5 <hex> |                 |

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| Step No. | Time                 | Activity/Remarks  | TC/TLM  | Display/ Branch |
|----------|----------------------|---|---|-----------------|
|          | ET=+<br>UT=+00.00.01 | UPDATE_TABLE<br><br>UPDATE_TABLE<br><br>Command Parameter(s) :<br>TABLEID_UPDTAB           SPB5N500<br>INDEX_UPDTAB            SPB6N500<br>N_UPDTAB                SPB7N500<br>DATA_UPDTAB            SPB8N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>--- -- ---<br><br>Subsch. ID : 370<br>Det. descr. : UPDATE CONTENTS OF A TABLE  | SCB02500<br><br>36 <hex><br>0 <hex><br>5 <hex><br>986b9270 <hex>          |                 |
|          | ET=+<br>UT=+00.00.02 | CLEAR_HK_REPORT<br><br>CLEAR_HK_REPORT<br><br>Command Parameter(s) :<br>PKCTID_CLEARHK            SPR6N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>--- -- ---<br><br>Subsch. ID : 370<br>Det. descr. : CLEAR HOUSEKEEPING PARAMETER REPORT DEFINITION  | SCR01500<br><br>301 <hex>   |                 |
|          | ET=+<br>UT=+00.00.04 | UPDATE_TABLE<br><br>UPDATE_TABLE<br><br>Command Parameter(s) :<br>TABLEID_UPDTAB           SPB5N500<br>INDEX_UPDTAB            SPB6N500<br>N_UPDTAB                SPB7N500<br>DATA_UPDTAB            SPB8N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>--- -- ---<br><br>Subsch. ID : 370<br>Det. descr. : UPDATE CONTENTS OF A TABLE  | SCB02500<br><br>1 <hex><br>d5 <hex><br>4 <hex><br>40070000 <hex>          |                 |
|          | ET=+<br>UT=+00.00.04 | DEFINE_NEW_HK_REPORT<br><br>DEFINE_NEW_HK_REPORT<br><br>Command Parameter(s) :<br>HKPCKTID_DEFINENEWHK        SPR0N500<br>HKSID_DEFINENEWHK            SPR1N500<br>HKINTERVAL_DEFINENEWHK       SPR2N500<br>HKREPEAT_DEFINENEWHK        SPR3N500<br>TABLEID_DEFINENEWHK        SPR4N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>--- -- ---<br><br>Subsch. ID : 370<br>Det. descr. : DEFINE NEW HOUSEKEEPING PARAMETER REPORT | SCR00500<br><br>301 <hex><br>301 <hex><br>3e8 <hex><br>1 <hex><br>1 <hex> |                 |

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| Step No. | Time                 | Activity/Remarks   | TC/TLM   | Display/ Branch   |
|----------|----------------------|--|--|-------------------|
|          |                      | Verify Telemetry is refreshing once per second<br><b>TM2N</b> <b>SMT1N500</b>  | <b>Incrementing</b>                                | AND=SA_7_559      |
|          |                      | Verify Telemetry is refreshing once per second<br><b>THSK</b> <b>SM00T500</b>  | <b>Incrementing</b>                                | AND=SA_7_559      |
|          |                      | Verify Telemetry<br><b>MODE</b> <b>SM00M500</b>  | <b>= DPU_ON</b>                                    | AND=SA_6_559      |
| 9        |                      | <i>Set default end conditions</i>  |  | Next Step:<br>END |
|          |                      | Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands   |  |                   |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><b>SET_OBS_STEP</b><br>Command Parameter(s) :<br><b>OBSERVATION_STEP</b> <b>SP03N500</b><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP   | <b>SC003500</b><br><br><b>0 &lt;hex&gt;</b>        |                   |
|          | ET=+<br>UT=+00.00.01 | SET_BBID<br><b>SET_BBID</b><br>Command Parameter(s) :<br><b>BUILDING_BLOCK_ID</b> <b>SP01N500</b><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER | <b>SC001500</b><br><br><b>80000000 &lt;hex&gt;</b> |                   |
|          |                      | Verify Telemetry<br><b>BBFULLTYPE</b> <b>SM2LN500</b>  | <b>= Null</b>                                      | AND=ZAZ90999      |
|          | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><b>SET_OBS_STEP</b><br>Command Parameter(s) :<br><b>OBSERVATION_STEP</b> <b>SP03N500</b><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP   | <b>SC003500</b><br><br><b>0 &lt;hex&gt;</b>        |                   |
|          | ET=+<br>UT=+00.00.01 | SET_BBID<br><b>SET_BBID</b><br>Command Parameter(s) :<br><b>BUILDING_BLOCK_ID</b> <b>SP01N500</b><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER | <b>SC001500</b><br><br><b>80030001 &lt;hex&gt;</b> |                   |
|          |                      | Verify Telemetry<br><b>BBFULLTYPE</b> <b>SM2LN500</b>  | <b>= EndObs</b>                                    | AND=ZAZ90999      |

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| Step No.                | Time                 | Activity/Remarks  | TC/TLM                         | Display/ Branch |
|-------------------------|----------------------|---|--------------------------------|-----------------|
|                         | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP   | SC003500<br><br>1 <hex>        |                 |
|                         | ET=+<br>UT=+00.00.01 | SET_OBSID<br><br>SET_OBSID<br><br>Command Parameter(s) :<br>OBSERVATION_ID SP00N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION IDENTIFIER     | SC000500<br><br>00000000 <hex> |                 |
|                         |                      | Verify Telemetry<br><br>OBSID SM10N500  | = 00000000 <hex>               | AND=ZAZ90999    |
|                         | ET=+<br>UT=+00.00.00 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>Subsch. ID : 370<br>Det. descr. : SET OBSERVATION STEP   | SC003500<br><br>0 <hex>        |                 |
|                         | ET=+<br>UT=+00.00.01 | SET_BBID<br><br>SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID SP01N500<br><br>Subsch. ID : 370<br>Det. descr. : SET BUILDING BLOCK IDENTIFIER | SC001500<br><br>80000000 <hex> |                 |
|                         |                      | Verify Telemetry<br><br>BBFULLTYPE SM2LN500   | = Null                         | AND=ZAZ90999    |
|                         |                      | Verify Telemetry<br><br>SPIRE_NomRed DED53161   | = NOMINAL                      | AND=ZAZ96999    |
|                         |                      | Verify Telemetry<br><br>SPIREA_OnOff DED1G161   | = ON                           | AND=ZAZ96999    |
|                         |                      | Verify Telemetry<br><br>SPIREA_ValidInv DED1K161  | = Valid                        | AND=ZAZ96999    |
| <b>End of Procedure</b> |                      |   |                                |                 |