FDIR 3&4 Anomaly Checkout
File: H_CRP_SYS_CHECK.xls
Author: F. Keck

Procedure Summary

Objectives

Investigations following the detection of a non-nominal CDMU/ACMS Mode, indicating a level 3 or 4 FDIR.
This procedure shall be run by the On-Call FCT person together with the SPACON on shift.
The results are the baseline for the detailed analysis of the anomaly by the FCT (and defining the recovery strategy) following the DTCP.

Summary of Constraints

If the mode drop caused a drop in TM rate to 500bps, this procedure follows the "No TM Recovery" (to be precise: H_CRP_SYS_NOTM calls H_CRP_SYS_ANOM which calls this procedure as one of the first steps).

Spacecraft Configuration

Start of Procedure

CDMU or ACC reboot detected (AIR, CIR or SIR)
Routine Ops: CDMU/ACMS Mode not NOM/SCM

End of Procedure

If possible (and required) the TM/TC rate was increased.
Dumps were performed to help analysing the problem and planning a recovery.

Reference File(s)

Input Command Sequences

HFD3014
HRA2BRTA
HRA2BRTB
HRA2BRTC
HFA3011A
HFA3011C
HFA3011B
HFA3011D
HFD1030A

Output Command Sequences

HRYCHECK

Referenced Displays

ANDs	GRDs	SLDs
ZAA00999		MIMIC:OVER_H
ZAA01999		MIMIC:EPS_H
		MIMIC:ACC_H
		MIMIC:CDMU_H

Configuration Control Information

Status : Version 14 - Updated
Last Checkin: 11/08/2011

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DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
23/12/2008		1	Created	F. Keck	
13/01/2009		1.01	Validation : Adding ACMS dumps	F. Keck	
14/01/2009		1.02	Validation : Typo correction	F. Keck	
19/01/2009	2	2	Workaround to get ACC Boot Report. Update of CDMU investigation	F. Keck	
04/03/2009	2.1	3	Update after SVT-2	F. Keck	
24/03/2009	2.2	3.01	Validation : Adding SAS1 currents to ACMS sun pointing checkout. Adding workaround to correct wrong FCCT default values loaded from EEPROM in case of DoD.	F. Keck	
31/03/2009		4	Adding some comments and MIMIC references	F. Keck	
03/04/2009		5	Adding LEOP CCU Monitoring	F. Keck	
15/04/2009		6	Correction of LEOP CCU Monitoring	F. Keck	
20/04/2009	2.3	7	After OBSW update the restore of flight thresholds for STR is not required anymore. Typo correction in annex.	F. Keck	
11/05/2009		8	Adding DoD specific step to check if default tables fit to the current S/C situation.	F. Keck	
18/07/2009		9	Updated procedure references	F. Keck	
06/10/2009	2.5	10	Adding the command sequences to speed up the execution of the procedure. Added quick checkout step.	F. Keck	
12/03/2010	3	11	Comments corrected and added	F. Keck	
22/07/2010		12	Improved comments (experience from Keep-Fit-Sim 2)	F. Keck	
02/03/2011		13	Additional comments to obey H_CRP_SYS_ANOM before starting this procedure	F. Keck	
11/08/2011	3.1	14	Added explanation how to use openOffice to analyse the boot report. Partial PS-2 dump around event time added.	F. Keck	

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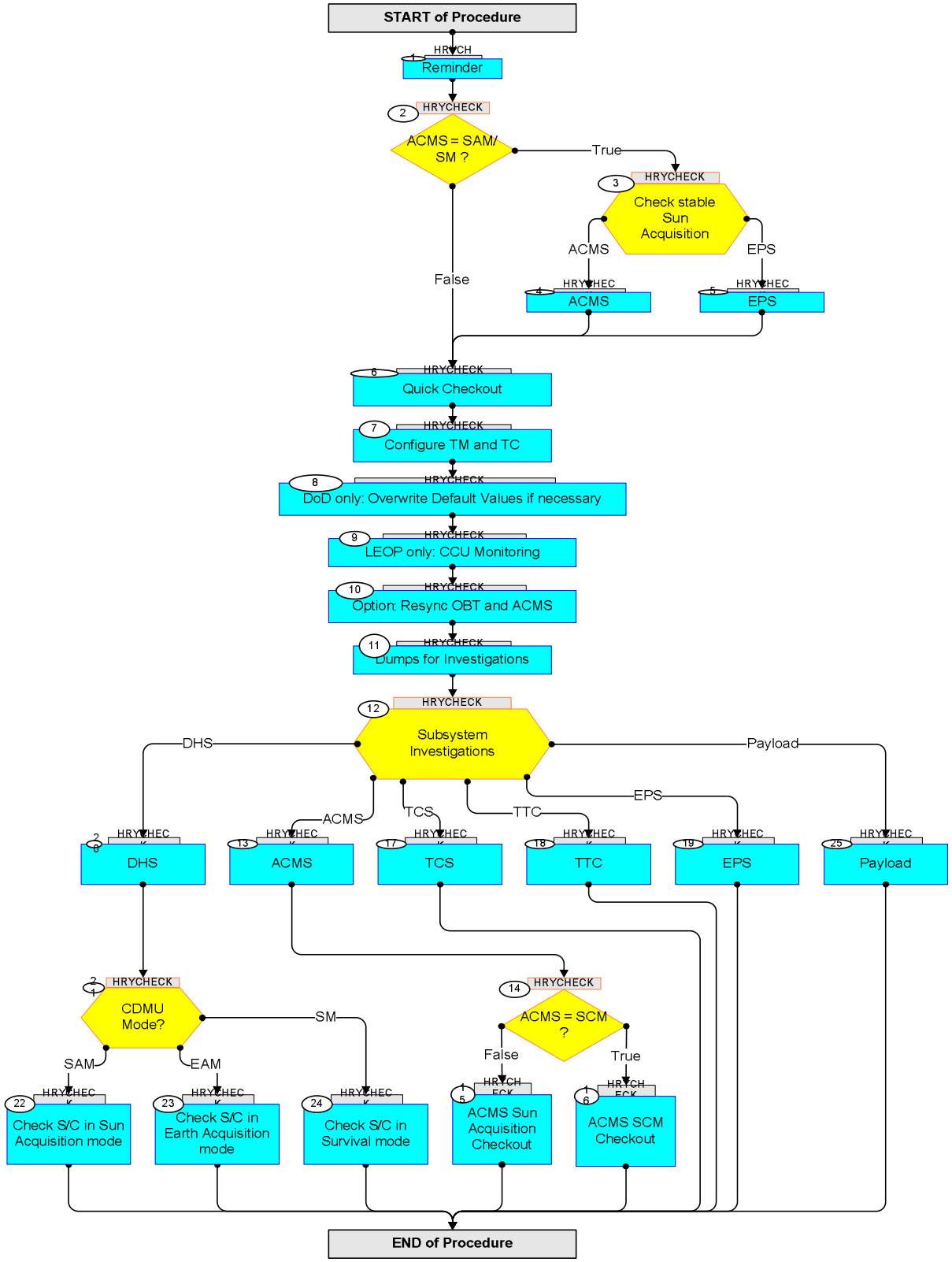
Procedure Flowchart Overview



Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Beginning of Procedure		
		TC Seq. Name :HRYCHECK (FDIR 34 Checkout) *TimeTag Type: B* *Sub Schedule ID:*		
1		*Reminder*		Next Step: 2
		Should you have started with this procedure without H_CRP_SYS_ANOM first: Do not forget to inform all parties as described in H_CRP_SYS_ANOM. E.g. contact SOM...		
2		*ACMS = SAM/SM ?*		Next Step: False 6 True 3
		Check if ACMS is in a Sun Acquisition Mode. There are 2 sun acquitistion modes: - SAM: Sun Acquisition Mode - SASM: Sun Acquisition Survival Mode Comment: SM (Survival Mode) is usually used as the short form of SASM.		
		Verify Telemetry **ACMS mode** **XD009990**	**= SAM** **= SASM**	MIMIC:OVER_H
3		*Check stable Sun Acquisition*		Next Step: ACMS 4 EPS 5
		The confirmation of a stable sun pointing and good power situation has top priority before detailed subsystem reports. LEOP: All activities in these steps shall be immediately performed in parallel by the ACMS and EPS SOE.		
4		*ACMS*		Next Step: 6
		Confirm sun pointing attitude.		
		Verify Telemetry **Sunvector X BRF** **AEUVX001**	**approx. 0**	AND=ZAA00999
		Verify Telemetry **Sunvector Y BRF** **AEUVY001**	**approx. 0**	AND=ZAA00999

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **Sunvector Z BRF** **AEUVZ001**	**approx. 1**	AND=ZAA00999
		Verify Telemetry **Est ang rate X** **AESR7001**	**~0 rd/s**	AND=ZAA00999
		Verify Telemetry **Est ang rate Y** **AESR8001**	**~0 rd/s**	AND=ZAA00999
		Verify Telemetry **Est ang rate Z** **AESR9001**	**~0 rd/s**	AND=ZAA00999
		Detailed SAS1 Checkout: The following SAS1 currents should show similar values in sun pointing.		
		Verify Telemetry **SAS1 +X nom** **AMUC1044**		AND=ZAA00999
		Verify Telemetry **SAS1 +Y nom** **AMUC2044**		AND=ZAA00999
		Verify Telemetry **SAS1 -X nom** **AMUC5044**		AND=ZAA00999
		Verify Telemetry **SAS1 -Y nom** **AMUC6044**		AND=ZAA00999
		Verify Telemetry **SAS1 +X red** **AMUC9044**		AND=ZAA00999
		Verify Telemetry **SAS1 +Y red** **AMUCA044**		AND=ZAA00999
		Verify Telemetry **SAS1 -X red** **AMUCD044**		AND=ZAA00999
		Verify Telemetry **SAS1 -Y red** **AMUCE044**		AND=ZAA00999
		In case of SASM (ACMS Survival Mode): Quick check LV-A status (e.g. on Overview MIMIC). - Open indicates an FDIR 3b - Closed indicates an FDIR 4		
5		*EPS*		Next Step: 6
		Confirm solar array current and no discharge of batteries.		
		Verify Telemetry **TM_IOUT_BDR1** **WMT08565**	**= 0.0 A**	MIMIC:EPS_H
		Verify Telemetry **TM_IOUT_BDR2** **WMT09565**	**= 0.0 A**	MIMIC:EPS_H
		Verify Telemetry **TM_ISA_S3R_1** **WMT14565**		MIMIC:EPS_H

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **TM_ISA_S3R_2** **WMT15565**		MIMIC:EPS_H
		Verify Telemetry **TM_ISA_S3R_3** **WMT16565**		MIMIC:EPS_H
6		*Quick Checkout*		Next Step: 7
		Use table in attachement to do a quick checkout for the kind of FDIR, which has triggered.		
7		*Configure TM and TC*		Next Step: 8
		Execute Procedure: **H_CRP_SYS_TMTC** **Configure TM/TC after Mode Drop**		
8		*DoD only: Overwrite Default Values if necessary*		Next Step: 9
		In case of a DoD the default tables from EEPROM are used. Should these default values not fit to the current situation they must be corrected. E.g. in LEOP: Restoring of ground FCCT values if necessary No procedure references can be provided here, because such a situation must never occur in routine phase, and during LEOP all experts are available to handle such a situation.		
9		*LEOP only: CCU Monitoring*		Next Step: 10
		In H_FCP_CCU_ACQP select Sequence HFKACQP2 (CCU ACQ Recyc/Decont) to set CCU A/B Recycling/Decontamination monitoring (period 8s all sensors)		
		Execute Procedure: **H_FCP_CCU_ACQP** **CCU acquisition period update**		
		Execute Procedure: **H_LEO_CCU_MON1** **Disable CCUA/B monit #1 (512s) packets**		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
10		*Option: Resync OBT and ACMS*		Next Step: 11
		Should the OBT have not re-synced with the CTR, do it here: 1) Resync CTR 2) Resync ACC with CDMU		
		Execute Procedure: **H_FCP_DHS_3021** **Set central time reference synchronization**		
		The instruments resync their times automatically.		
11		*Dumps for Investigations*		Next Step: 12
		The following dumps are required to get all necessary TM for analysing the situation and planning the recovery. Some dumps can be skipped if the situation is clear (e.g. ACC dumps after an obvious CDMU 3a). If in doubt just dump everything, it does not harm.		
11.1		*Dump CELs and get CDMU Boot Report*		□
		This CEL dump can be skipped (but not the search for CDMU boot reports) in case of EAM/SCM, but only if the SPACON runs the DTCP stack (CEL dumps are part of the DTCP stack).		
		The following sequence is maintained by procedure: **H_FCP_DHS_3014** **Dump and interpretation of CEL**		
		The sequence requests a time for the deletion of the CELs. Just enter the current time.		
		Execute Sequence **HFD3014 Dump of CEL v06** Sequence Grouping = - Sequence Parameter(s) **Abs_Time =** Current Time This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
		Check CELs for the event time of boot reports: CDMU boot reports indicate a CIR or SIR		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Reception **CdmuBsw Event 5-4 Boot Report and Reconfiguration Log** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**D_EvRp_534** **16** **5** **4** **134** **134**	
		A description how to analyse the boot report using openOffice is attached. Don't waste valuable pass time now and proceed with the dumps! Do the analysis in parallel or later.		
11.2		*Get ACC Boot Report*		
		The ACC boot report would indicate an AIR, but unfortunately this report is a (5,1) packet, which is only stored in the SEL, not in the CEL. A full dump of the SEL is not possible after an AIR (leading to SAM) in Routine Ops, because the maximum TM rate via the LGA is 5k only. Therefore a workaround must be done using Diagnostics.		
		The following sequences are maintained by procedure: **H_CRP_AOC_2BRT** **Get ACC Boot Report**		
		Execute following sequences:		
		Execute Sequence **HRA2BRTA GetAccBootReport v02** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
		Verify Packet Reception **ACC Boot Report** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**ACCBootRep** **514** **3** **26** **30053**	
		Execute Sequence **HRA2BRTB DiasbleAccBootReport v02** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Sequence **HRA2BRTC ClearAccBootReport v02** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
		NOTE: The ACC boot time in this Diagnostic is based on the RM Log; so the leading byte for a complete OBT is missing and the boot time cannot directly be specified.		
		Workaround to find ACC boot time: The following TM parameter shows the time in seconds since the ACC BSW has started. Subtract the seconds from the current time and use it later for the partial SEL dump.		
		Verify Telemetry **BSW_ObtElapsdIn XM656991**		MIMIC:ACC_H
11.3		*Dump SEL*		□
		This step can be skipped in case of EAM/SCM, but only if the SPACON runs the DTCP stack (which includes the full SEL dump). Comment: SEL = S/C Event Log = Packet Store 1 (129)		
11.3.1		*Option: Specify Start and Stop Times*		□
		A full dump of the SEL is only possible if the TM rate is medium or high (150k or 1.5M). In this case do not set the start/stop times and proceed with the SEL dump.		
		If the TM rate is low1 or low2 (500 or 5k) prepare a partial SEL dump: Take the event time of boot report(s) from the CEL. Dump the SEL (packet store 1 or 129) in the time range of +/- 5 minutes around the boot times. Comment: Even on 5k TM rate, this partial dump should take not more than 5 minutes.		
		The following commands are derived from procedure: **H_FCP_DHS_3015** **Dump and interpretation of SEL**		
		Execute following TC to prepare an SEL dump between two times (this command will not start the dump):		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand **DownlinkTimeP_Between** *Command Parameter(s) :* **Store_Id DH003160** **Storage_Time DH062160** **Storage_Time DH062160** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Downlink Packets between Storage Time1 and Storage Time2 This Telecommand will not be included in the export	**DC164160** **1:MMA, 129:MMB** **Start Time** **End Time**	
11.3.2		*Dump SEL*		
		Ensure that the VC-2 link is connected on the NCTRS. Execute following TC to dump the SEL:		
		Execute Telecommand **DownlinkPktStoreCont_A** *Command Parameter(s) :* **Store_Id DH003160** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Downlink Packet Store Contents - All stored TM packets This Telecommand will not be included in the export	**DC162160** **1:MMA, 129:MMB**	
		VC-2 TM is in datastream 2, so use the P/B TMPH. Search for ACC boot reports, which indicate an AIR.		
		Verify Packet Reception **AccBsw Event 5-1 Boot Report and Reconfiguration Log** *Packet Details:* **APID:** **Type:** **Subtype:** **PI1:** **PI2:**	**A_EvRp_534** **512** **5** **1** **134** **134**	
11.4		*If possible: Dump Packet Store 2*		
		This dump can only be performed if in medium or high TM rate! Skip this step if in Low1 or Low2 TM rate. This step can be skipped in case of EAM/SCM, but only if the SPACON runs the DTCP stack (which includes the full Packet Store 2 dump).		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
11.4.1		*Option: Specify Start and Stop Times*		
		A full dump of Packet Store 2 is only possible if the TM rate is high (1.5M). In this case do not set the start/stop times and proceed with the Packet Store 2 dump.		
		If the TM rate is medium (150k) prepare a partial Packet Store 2 dump: Take the event time of boot report(s) from the CEL. Dump Packet Store 2 in the time range of +5/-30 minutes around the boot times. Comment: Even on medium TM rate, this partial dump should take not more than 6 minutes.		
		Execute following TC to prepare a Packet Store 2 dump between two times (this command will not start the dump):		
		Execute Telecommand **DownlinkTimeP_Between** *Command Parameter(s) :* **Store_Id DH003160** **Storage_Time DH062160** **Storage_Time DH062160** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Downlink Packets between Storage Time1 and Storage Time2 This Telecommand will not be included in the export	**DC164160** **2:MMA, 130:MMB** **Start Time** **End Time**	
11.4.2		*Dump Packet Store 2*		
		Ensure that the VC-2 link is connected on the NCTRS. Execute following TC to dump Packet Store 2:		
		Execute Telecommand **DownlinkPktStoreCont_A** *Command Parameter(s) :* **Store_Id DH003160** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : Downlink Packet Store Contents - All stored TM packets This Telecommand will not be included in the export	**DC162160** **2:MMA, 130:MMB**	

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		No need to wait for the completion of this VC-2 dump. Proceed with this procedure.		
11.5		*Dump ACC Event Buffer*		
		Only required in case of an AIR.		
		The following sequences are maintained by procedure: **H_FCP_AOC_3011** **ERD buffer dump**		
		Verify Telemetry **SgmInUse AESMS002**	**= SGM A** **= SGM A and B** **= SGM B**	AND=ZAA01999
		If SGM A (or A & B) is in use, execute following sequences:		
		Execute Sequence **HFA3011A Active SGMA v01** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
		Execute Sequence **HFA3011C Passive SGMB v01** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
		If SGM B is in use, execute following sequences:		
		Execute Sequence **HFA3011B Active SGMB v01** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
		Execute Sequence **HFA3011D Passive SGMA v01** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
11.6		*Table Dumps*		
		Contains dumps of MOT, EAT etc. ACC RM Logs as well.		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The following sequence is maintained by procedure: **H_FCP_DHS_1030** **CDMU OBSW data acquisition**		
		Some dumps may fail, because the related unit is failed. Don't care, continue with the next dump.		
		Execute Sequence **HFD1030A CDMU OBSW data acq v10** Sequence Grouping = - This Sequence Reference is not included in the generated sequence *SSID : 0*		**SEQ**
11.7		*Dump CDMU Reconfiguration Log*		
		This step can be skipped if the CDMU boot reports are available (see CEL dump above).		
		Execute Procedure: **H_FCP_DHS_3012** **Dump and interpretation of Reconfiguration Log**		
		Check Reconfiguration Log to get information on which RM has triggered.		
12		*Subsystem Investigations*		Next Step: DHS 20 ACMS 13 TCS 17 TTC 18 EPS 19 Payload 25
		LEOP: All activities in these steps shall be performed in parallel by all SOEs. In case of first AOS after Separation use the dedicated checkout procedures instead of the ones mentioned below. In routine operations they must be performed by the On-Call FCT member and the SPACON on a best effort basis. The other SOEs can do offline more detailed checkouts when called in. Should these procedures include any dumps that have already been performed, skip the dumps (but not the following checks on the dumps).		
13		*ACMS*		Next Step: 14

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The ACMS SOE shall report - The configuration of the ACMS units - Consistency with UIU In detail: ACMS Mode, Active PM, PM synchronisation with CDMU PM, SAS status, etc.		
		Execute Procedure: **H_FCP_AOC_5012** **ACC Health Check**		
14		*ACMS = SCM ?*		Next Step: False 15 True 16
		Verify Telemetry **ACMS mode** **XD009990**	**= SCM**	MIMIC:OVER_H
15		*ACMS Sun Acquisition Checkout*		Next Step: END
		Execute Procedure: **H_FCP_AOC_5011** **RCS Health Check**		
		Execute Procedure: **H_FCP_AOC_5009** **SAS health check**		
16		*ACMS SCM Checkout*		Next Step: END
		Execute Procedure: **H_FCP_AOC_5013** **GYR health check**		
		Execute Procedure: **H_FCP_AOC_5007** **STR health check**		
		Execute Procedure: **H_FCP_AOC_5014** **RWL health check**		

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
17		*TCS*		Next Step: END
		The TCS SOE shall report - The status of the thermal subsystem - Consistency with UIU In detail: Active heater branch CCU/Cryostat Status		
		Execute Procedure: **H_FCP_TCS_CHECK** **TCS Subsystem Checkout**		
		Execute Procedure: **H_FCP_CCU_CHECK** **CCU subsystem checkout**		
		Execute Procedure: **H_FCP_CCU_MONS** **CCU Sensors monitoring**		
18		*TTC*		Next Step: END
		The TTC SOE shall report - The configuration of the TTC subsystem - The current TM & TC rates - Consistency with UIU		
		Execute Procedure: **H_FCP_TTC_CHECK** **TTC Subsystem Checkout**		
19		*EPS*		Next Step: END
		The EPS SOE shall report - The configuration of the EPS subsystem - Consistency with UIU		
		Execute Procedure: **H_FCP_EPS_CHECK** **PCS Subsystem Checkout**		
20		*DHS*		Next Step: 21

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The DHS SOE shall report - The configuration of the DHS subsystem - Consistency with UIU		
		Verify Telemetry **Active_PM_Board** **DEDM1160**		MIMIC:OVER_H
		Verify Telemetry **CurrentMode** **DEL34170**		MIMIC:OVER_H
		Verify Telemetry **PrevMode** **DEL35170**		MIMIC:OVER_H
		Verify Telemetry **FdirMode** **DE81D170**		MIMIC:OVER_H
20.1		*Check PM Relays*		□
		Check PM Relay 0 (Nominal or Survival)		
		Verify Telemetry **PMA_R0_TTR-RM_A** **DEEX1160**		MIMIC:CDMU_H
		Verify Telemetry **PMB_R0_TTR-RM_B** **DEEX3160**		MIMIC:CDMU_H
		Check PM Relay 1 (Image)		
		Verify Telemetry **PMA_R1_TTR-RM_A** **DEEX2160**		MIMIC:CDMU_H
		Verify Telemetry **PMB_R1_TTR-RM_B** **DEEX4160**		MIMIC:CDMU_H
20.2		*Check CDMU Health Table*		□
		Check Health Table MIMIC for unhealthy units.		
20.3		*Check DID_STARTUP_CFG*		□
		DID_STARTUP_CFG shows the situation at BSW startup:		
		Verify Telemetry **ActiveTM-OBT** **DEK8G160**		MIMIC:CDMU_H
		Verify Telemetry **PwrOnResetRegA** **DEK8H160**		MIMIC:CDMU_H
		Verify Telemetry **PwrOnResetRegB** **DEK8J160**		MIMIC:CDMU_H
		Verify Telemetry **PM_relay_0** **DEK8K160**		MIMIC:CDMU_H

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **StartupSurvNom DEK8L160**		MIMIC:CDMU_H
21		*CDMU Mode?*		Next Step: SAM 22 EAM 23 SM 24
		Verify Telemetry **CurrentMode DEL34170**		MIMIC:CDMU_H
22		*Check S/C in Sun Acquisition mode*		Next Step: END
		Execute Procedure: **H_FCP_DHS_SACK** **CDMU checks in sun acquisition mode after launch**		
23		*Check S/C in Earth Acquisition mode*		Next Step: END
		Execute Procedure: **H_FCP_DHS_EACK** **CDMU checks in earth acquisition mode**		
24		*Check S/C in Survival mode*		Next Step: END
		Execute Procedure: **H_FCP_DHS_SRCK** **CDMU checks in Survival Mode**		
25		*Payload*		Next Step: END
		The Payload SOE shall check that all instruments are in standby/safemode (or switched off in case of S/C survival mode).		
		Inform the SGS about the anomaly.		
		End of Procedure		

Quick Checkout

Current Modes	Previous Modes	Reason	Attitude and TTC Situation	Impact on TM
SAM/SCM	SAM/OCM or SAM/SCM	CIR Level 3a or 3b (and 3+ RWLs)	Earth pointing, TTC 500/125 via LGA	Adjust Ground Station to 500/125
EAM/SCM	NOM/OCM or NON/SCM		Earth pointing, TTC 150k/4k via MGA	None
EAM/SAM	NOM/SAM	CIR Level 3a/b	Sun pointing, TTC 150k/4k via MGA	If MGA attitude constraints are not met in sun pointing: Loss of TM !!
SAM/SAM	NOM/OCM	CIR Level 3a or 3b (and < 3 RWLs)	Sun pointing, TTC 500/125 via LGA	Adjust Ground Station to 500/125
	SAM/OCM	CIR Level 3a or 3b		
	SAM/SAM	AIR Level 3a		
	Any (not SMs)			
SM/SAM	Any (not SAM/SM)	SIR Level 4		
SAM/SM	Any (not SM/SAM)	AIR Level 3b or 4		
SM/SM	SAM/SM	SIR Level 4		
	SM/SAM	AIR Level 3b or 4		

Level 3a or 3b ?

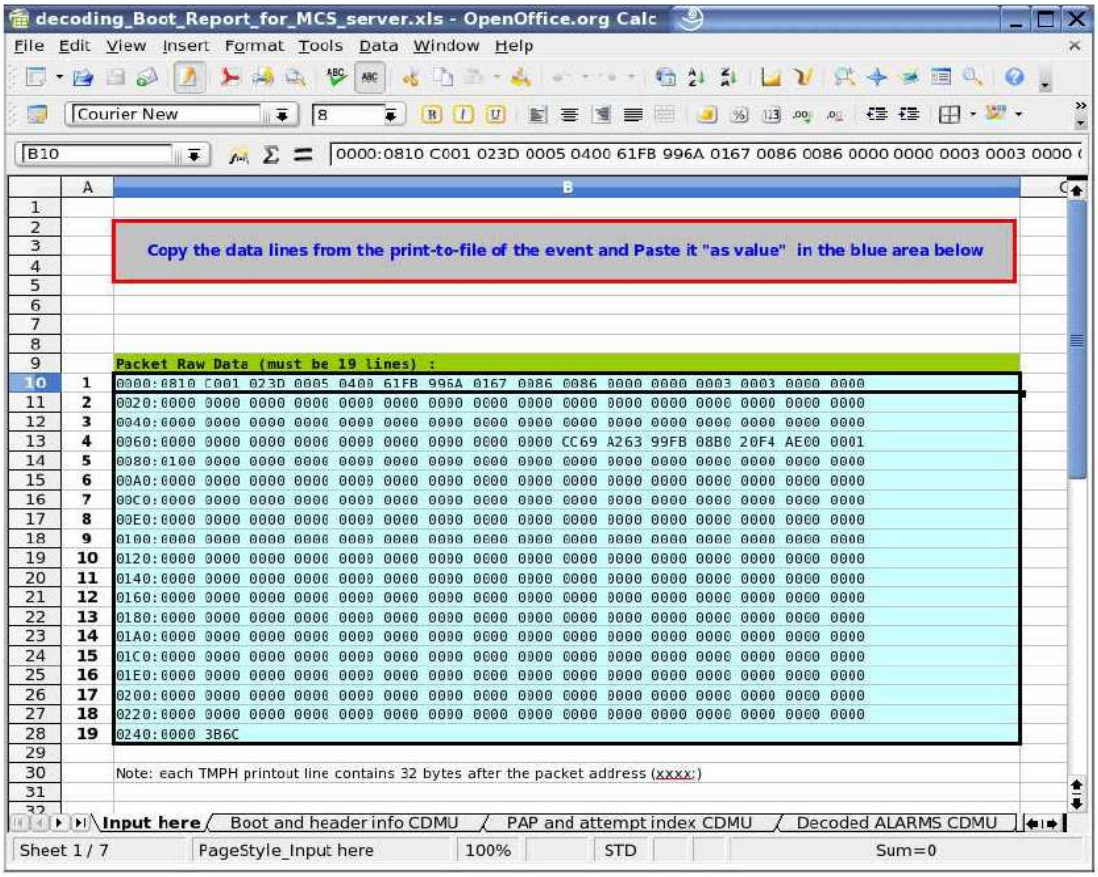
- PM-A still in use -> Level 3a
- PM-B in use -> Level 3b

ACMS mode = SM. Level 3b or 4 ?

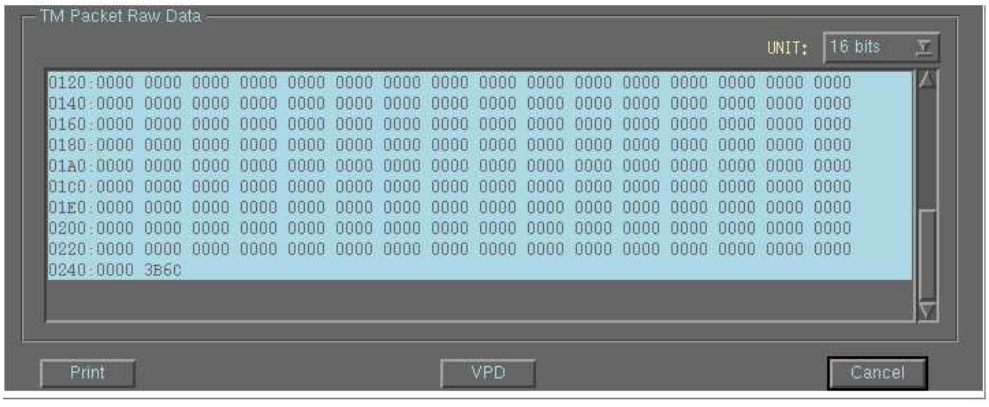
- LV-A open -> Level 3b (PM problem)
- LV-A closed -> Level 4 (bigger problem, e.g. RCS)

Boot Report Analysis with openOffice

1) Open a terminal
2) > start_openoffice
3) openOffice: Select File – Open
4) openOffice: Check for directory "/home/hmcsops/Documents/"
5) openOffice: Load file named "decoding_Boot_Report…" (or similar)
6) openOffice: Select the sheet/tab "Input here"
7) TMPH: Double click on boot report packet to open TM Packet Query Display
8) TMPH: Mark with pressed left mouse button the raw data under "Packet Raw Data" (see screenshot on next page)
9) openOffice: Select (left click) first row of the input field
10) openOffice: Press middle button to insert the marked raw data into the sheet
    a. Popup-window "Text Input" appears; just click OK



11) Double check that the correct raw data was copied over (i.e. compare the TM Packet Query Display with the openOffice "input field"
12) openOffice: Save the file under a new name
13) openOffice: Click through the other tabs of the sheet to analyse the boot report

Mark the Raw Data of the Boot Report

Scroll down...