Verify SCM Configuration
File: H_FCP_AOC_3001.xls
Author: dsalt-hp

Procedure Summary

Objectives

The procedure verifies if the configuraiton of the ACMS SW and HW is sufficient to execute SCM pointings (single target, rasters or scans). The checks have separated into a dedicated procedure because exactly the same constraints must be satisfied before the execution of any SCM pointings. If any of the conditions explicitly checked by this procedure are not satisfied, the TC will result in an execution failure and a contingency recovery will be necesary in most cases before operations in SCM can be resumed.

Summary of Constraints

The procedure carries out the checks listed below. They are should be regarded as constraints on the calling procedure and not on the verification procedure itself
1. ACMS in SCM and pointing.
2. ACMS configuration allows execution of SCM pointing commands; i.e., the following conditions must be satisfied:
2.1. No SIR
2.2. No CIR
2.3. No critical TC flag raised.
3. Unit configuration is sufficient to carry out an SCM pointing. The procedure accepts any valid unit configuration for SCM and is not limited to the defaults (RWL 1-2-3-4, GYR 1-2-3, STR1),
3.1 One STR in active configuration, powered and healthy. STR mode = AAD, STR submode = ATFAD.
3.2. At least three wheels in active configuration, powered and healthy
3.3. One GYRE selected, powered and healthy.
3.4. Three GYR sensors in active configuration are healthy
4. No autonomous wheel unloading in progress.

Spacecraft Configuration

Start of Procedure

n/a

End of Procedure

n/a

Reference File(s)

Input Command Sequences

Output Command Sequences

Referenced Displays

ANDs	GRDs	SLDs
		(None)

Status   : Version 1 - Unchanged
Last Checkin: 04/08/08

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Configuration Control Information					
DATE	**FOP ISSUE**	**VERSION**	**MODIFICATION DESCRIPTION**	**AUTHOR**	**SPR REF**
04/08/08	1	1	Created	dsalt-hp	

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Procedure Flowchart Overview
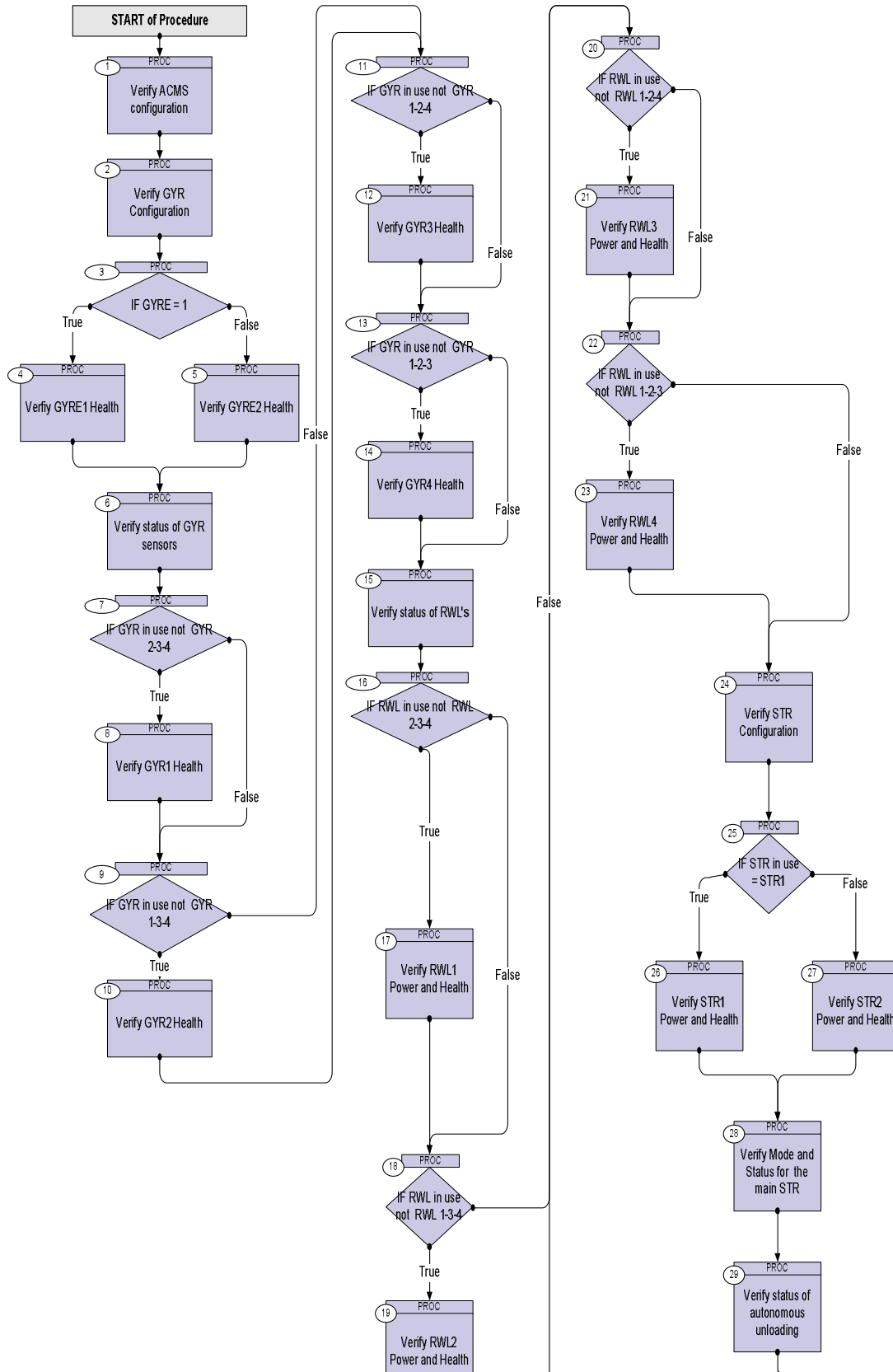
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Procedure Flowchart Overview

Power and Health

END of Procedure

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HERSCHEL PLANCK   esa

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
**Beginning of Procedure**				
		PROC Procedure Properties *SSID :*		
1		*Verify ACMS configuration*		Next Step: 2
		Verify Telemetry AcmsMode AESMG002	= SCM	(None)
		Verify Telemetry AcmsSubstate AESMF002	= SCM Pointing	(None)
		Verify Telemetry FdirMode AESMJ002	= AFO rcfg ena	(None)
		Verify Telemetry CirStatus AESML002	= FALSE	(None)
		Verify Telemetry SirStatus AESMM002	= FALSE	(None)
		Verify Telemetry CriticalTcSts AESMN002	= CritCmdFlagOff	(None)
		Verify Telemetry ScmType AESMC002	= Point	(None)
2		*Verify GYR Configuration*		Next Step: 3
		Verify Telemetry GYRE power AE4P7002	= ON	(None)
		Note: Power status cannot be checked separately for GYRE1 and GYRE2		
3		*IF GYRE = 1*		Next Step: True 4 False 5
		Verify Telemetry Curr GYRE use AES20002	= GYRE 1	(None)
4		*Verfiy GYRE1 Health*		Next Step: 6
		Verify Telemetry GYRE1 Hlth Sts AESK3002	= Healthy	(None)
5		*Verify GYRE2 Health*		Next Step: 6
		Verify Telemetry GYRE2 Hlth Sts AESK4002	= Healthy	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
6		*Verify status of GYR sensors*		Next Step: 7
		The logic for checking unit assemblies with multiple configuration options, i.e., GYR and RWL, is to check individual units one by one in order to avoid unnecessary repetion of actions within the procedure. The IF statements below are designed to skip checks for channels excluded from the current configuration in use.		
7		*IF GYR in use not GYR 2-3-4*		Next Step: True 8 False 9
		Verify Telemetry Curr GYRs use AES19002	**<> GYR 2-3-4**	(None)
		The configuration set to GYR 2-3-4 is the one that excludes GYR1		
8		*Verify GYR1 Health*		Next Step: 9
		Verify Telemetry GYR1 Health Sts AES41002	**= Healthy**	(None)
9		*IF GYR in use not GYR 1-3-4*		Next Step: True 10 False 11
		Verify Telemetry Curr GYRs use AES19002	**<> GYR 1-3-4**	(None)
		GYR2 not in configuration		
10		*Verify GYR2 Health*		Next Step: 11
		Verify Telemetry GYR2 Health Sts AES42002	**= Healthy**	(None)
11		*IF GYR in use not GYR 1-2-4*		Next Step: True 12 False 13
		Verify Telemetry Curr GYRs use AES19002	**<> GYR 1-2-4**	(None)
12		*Verify GYR3 Health*		Next Step: 13
		Verify Telemetry GYR3 Health Sts AES43002	**= Healthy**	(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
13		*IF GYR in use not GYR 1-2-3*		Next Step: True 14 False 15
		Verify Telemetry **Curr GYRs use** **AES19002**	**<> GYR 1-2-3**	(None)
14		*Verify GYR4 Health*		Next Step: 15
		Verify Telemetry **GYR4 Health Sts** **AES44002**	**= Healthy**	(None)
15		*Verify status of RWL's*		Next Step: 16
		The logic is the same as for the gyros, but for the wheels the power status has to be checked as well.		
16		*IF RWL in use not RWL 2-3-4*		Next Step: True 17 False 18
		Verify Telemetry **Curr RWLs use** **AES21002**	**<> RWL 2-3-4**	(None)
17		*Verify RWL1 Power and Health*		Next Step: 18
		Verify Telemetry **RWL1 power** **AE4P3002**	**= ON**	(None)
		Verify Telemetry **RWL1 Health Sts** **AES45002**	**= Healthy**	(None)
18		*IF RWL in use not RWL 1-3-4*		Next Step: True 19 False 20
		Verify Telemetry **Curr RWLs use** **AES21002**	**<> RWL 1-3-4**	(None)
19		*Verify RWL2 Power and Health*		Next Step: 20
		Verify Telemetry **RWL2 power** **AE4P4002**	**= ON**	(None)
		Verify Telemetry **RWL2 Health Sts** **AES46002**	**= Healthy**	(None)
20		*IF RWL in use not RWL 1-2-4*		Next Step: True 21 False 22

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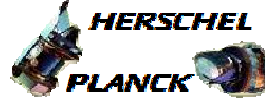
Step No.	Time	Activity/Remarks		TC/TLM	Display/ Branch
		Verify Telemetry			(None)
		Curr RWLs use	AES21002	<> RWL 1-2-4	
21		Verify RWL3 Power and Health			Next Step: 22
		Verify Telemetry			(None)
		RWL3 power	AE4P5002	= ON	
		Verify Telemetry			(None)
		RWL3 Health Sts	AES47002	= Healthy	
22		IF RWL in use not RWL 1-2-3			Next Step: True 23 False 24
		Verify Telemetry			(None)
		Curr RWLs use	AES21002	<> RWL 1-2-3	
23		Verify RWL4 Power and Health			Next Step: 24
		Verify Telemetry			(None)
		RWL4 power	AE4P6002	= ON	
		Verify Telemetry			(None)
		RWL4 Health Sts	AES48002	= Healthy	
24		Verify STR Configuration			Next Step: 25
25		IF STR in use = STR1			Next Step: True 26 False 27
		Verify Telemetry			(None)
		Curr STR in use	AES18002	=	
26		Verify STR1 Power and Health			Next Step: 28
		Verify Telemetry			(None)
		STR1 power	AE4P1002	= ON	
		Verify Telemetry			(None)
		STR1 Health Sts	AES31002	= Healthy	
27		Verify STR2 Power and Health			Next Step: 28
		Verify Telemetry			(None)
		STR2 power	AE4P2002	= ON	

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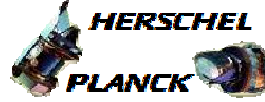
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry **STR2 Health Sts**　　　　**AES32002**	**= Healthy**	(None)
28		*Verify Mode and Status for the main STR*		Next Step: 29
		Verify Telemetry **STRM Mode**　　　　**AEX04001**	**= Auto attdetect**	(None)
		Verify Telemetry **STRM Submode**　　　　**AEX03001**		(None)
		Verify Telemetry **STRM hlth summ**　　　　**AEX18001**	**= No failure**	(None)
29		*Verify status of autonomous unloading*		Next Step: END
		Verify Telemetry **SCMUnldingActve**　　　　**AESM8002**	**= FALSE**	(None)

End of Procedure