CDMS OBT Stability Measurement
File: H_COP_DHS_0510.xls
Author: cmevi-hp

Procedure Summary

Objectives

This procedure has to be run during Commission to assess OBT Stability

Summary of Constraints

n/a

Spacecraft Configuration

Start of Procedure

Type Pre-condition Here

End of Procedure

Type Post-condition Here

Reference File(s)

Input Command Sequences

Output Command Sequences

Referenced Displays

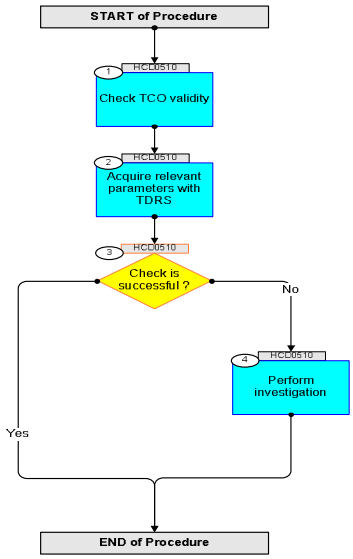
ANDs **GRDs** **SLDs**
(None)

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
24/02/09		1	Created	cmevi-hp	
24/02/09	2.1	2	DB checked.	cmevi-hp	

CDMS OBT Stability Measurement
File: H_COP_DHS_0510.xls
Author: cmevi-hp

Procedure Flowchart Overview



CDMS OBT Stability Measurement
File: H_COP_DHS_0510.xls
Author: cmevi-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Beginning of Procedure			
	HCD0510	*TC Seq. Name :* HCD0510 (OBT Stability Measur) *TimeTag Type:* *Sub Schedule ID:*			
1		Check TCO validity		Next Step: 2	
		Verify TCO status on TM SPACON. TCO should be VALID and ACCURATE.			
2		Acquire relevant parameters with TDRS		Next Step: 3	
		The OBT stability could be assessed checking the set of values the parameters below took over time up to current: XM045998 "OBT COARSE" XM046998 "OBT FINE" XM050998 "ADJ. ERT SECONDS" XM051998 "AJD. ERT SUBSECS" In order to retrieve their value from the archive the TDRS can be used. Their value can then be pasted into an excel file in order to plot in a two axis diagram the OBT on the x-axis and the ADJ ERT on the y-axis. The OBT stability can be assessed according to the stability of the GRADIENT and OFFSET of the best fit line calculated over the last three points. **This is what actually the MCS TCO algorithm does**, so in order to perform a first check we can simply retrieve from the archive the value of the following parameter (calculated for us by the MCS TCO task): **XM064998 "GRADIENT"** **The value of this parameter must stay over time always between 0.999999 and 1.000001.** In case an OBT stability problem is detected, investigation can be done on the values assumed over time by the set of parameters indicated above (input for the MCS TCO algorithm) and keeping into account the relationship with the Oscillator Temperature.			
		Use now the TDRS to retrieve the values taken over time up to current for the following parameter			
		Verify Telemetry **GRADIENT XM064998**	**>= 0.99999890 <dec> <= 1.00000110 <dec>**	(None)	
3		Check is successful ? type: [If]		Next Step: Yes END No 4	

CDMS OBT Stability Measurement
File: H_COP_DHS_0510.xls
Author: cmevi-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
4		Perform investigation		Next Step: END	
		Investigation can be done checking the set of values the parameters below took over time up to current: XM045998 "OBT COARSE" XM046998 "OBT FINE" XM050998 "ADJ. ERT SECONDS" XM051998 "AJD. ERT SUBSECS" XM064998 "GRADIENT" OBT Instability and variations must be assessed considering the relatioship with the Oscillator Temperature DEDN1160 "Oscillat_A_Temp" DEDNG160 "Oscillat_B_Temp"			
		The MCS TCO task should have issued an S2K event to notify TCO transition to INACCURATE or INVALID.			
		End of Sequence			
		End of Procedure			