In-flight Thermal Control Table updates
File: H_CRP_TCS_TCTF.xls
Author: E. Picallo

Procedure Summary

Objectives

The aim of this procedure is to restore the in-flight TCT thresholds in the Thermal Control Table after a transition to Survival Mode occurred i.e. update the TCT default values to in-flight values.

Summary of Constraints

TCT is changed using ASW TC(8,4,114,18), thus the status of the ASW function "Thermal Control" has to be "running".

Spacecraft Configuration

Start of Procedure

TCT default values

End of Procedure

TCT modified to in-flight values

Reference File(s)

Input Command Sequences

Output Command Sequences

HRTTCTF

Referenced Displays

ANDs **GRDs** **SLDs**

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
07/03/2011	3.1	1	Created	E. Picallo	

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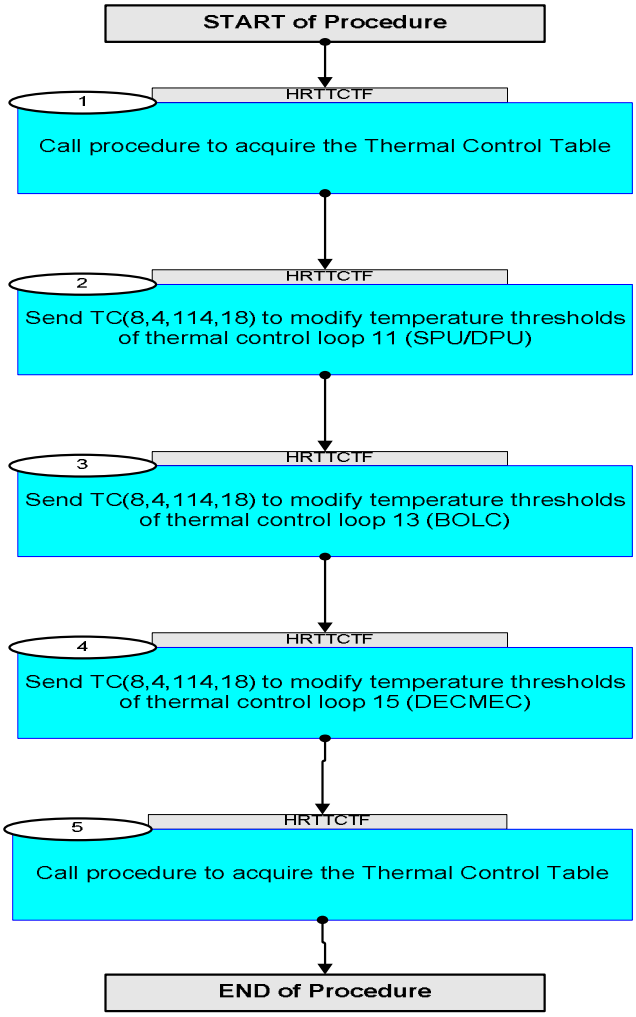
Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Beginning of Procedure		
		TC Seq. Name :HRTTCTF (In-flight TCT) In-flight Thermal Control Table updates *TimeTag Type: N* *Sub Schedule ID:*		
1		*Call procedure to acquire the Thermal Control Table*		Next Step: 2
		Execute Procedure: **H_FCP_TCS_REPO** **Thermal Control Status Report**		
		The default Herschel TCT applicable to CDMU OBSW V4.0 contens the applicable in-flight TCT thresholds except for the thermal control loops related to PACS heater lines. **In detail the changes to be applied are as follows:**		
		From the Default TCT reported values: **Control Loop 11 (SPU/DPU): TCT Tmin_on=-14 / Tmax_on= -11 [℃]** **Control Loop 13 (BOLC): TCT Tmin_on=-14 / Tmax_on= -11 [℃]** **Control Loop 15 (DECMEC) : TCT Tmin_on=-14 / Tmax_on= -11 [℃]**		
		To the In-flight TCT values (to be applied): **Control Loop 11 (SPU/DPU): TCT Tmin_on= 1 / Tmax_on=2 [℃]** **Control Loop 13 (BOLC): TCT Tmin_on=1 / Tmax_on=2 [℃]** **Control Loop 15 (DECMEC) : TCT Tmin_on=-1 / Tmax_on=0 [℃]**		
2		*Send TC(8,4,114,18) to modify temperature thresholds of thermal control loop 11 (SPU/DPU)*		Next Step: 3
		Execute Telecommand **ModifyTctEntry32_Templ** *Command Parameter(s) :* **ThCtrlLoopIndex DH069170** **N_Repet_8bit DH070170** **ThCtrlParam32Id DH082170** **ThCtrlParVal32 DH079170** **ThCtrlParam32Id DH082170** **ThCtrlParVal32 DH079170** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Modify Thermal Control Table 32bit entry TC(8,4,114,18)	**DCT51170** **11 <dec>** **2 <dec>** **ClATmaoClBHiT** **2.0 <dec>** **ClATmionClBLoT** (Def) **1.0 <dec>**	

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		For the thermal Control Loop 11 (SPU/DPU) , the TCT Tmin_on / Tmax_on thresholds have been changed from the default values [-14,-11]℃ to [1,2]℃ .		
3		*Send TC(8,4,114,18) to modify temperature thresholds of thermal control loop 13 (BOLC)*		Next Step: 4
		Execute Telecommand **ModifyTctEntry32_Templ** *Command Parameter(s) :* **ThCtrlLoopIndex DH069170** **N_Repet_8bit DH070170** **ThCtrlParam32Id DH082170** **ThCtrlParVal32 DH079170** **ThCtrlParam32Id DH082170** **ThCtrlParVal32 DH079170** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Modify Thermal Control Table 32bit entry TC(8,4,114,18)	**DCT51170** **13 <dec>** **2 <dec>** **ClATmaoClBHiT** **2.0 <dec>** **ClATmionClBLoT** (Def) **1.0 <dec>**	
		For the themal Control Loop 13 (BOLC) , the TCT Tmin_on / Tmax_on thresholds have been changed from the default values [-14,-11]℃ to [1,2]℃ .		
4		*Send TC(8,4,114,18) to modify temperature thresholds of thermal control loop 15 (DECMEC)*		Next Step: 5
		Execute Telecommand **ModifyTctEntry32_Templ** *Command Parameter(s) :* **ThCtrlLoopIndex DH069170** **N_Repet_8bit DH070170** **ThCtrlParam32Id DH082170** **ThCtrlParVal32 DH079170** **ThCtrlParam32Id DH082170** **ThCtrlParVal32 DH079170** *TC Control Flags :* **GBM IL DSE** **--Y -- ---** *Subsch. ID : 10* Det. descr. : TEMPLATE Modify Thermal Control Table 32bit entry TC(8,4,114,18)	**DCT51170** **15 <dec>** **2 <dec>** **ClATmaoClBHiT** **0.0 <dec>** (Def) **ClATmionClBLoT** (Def) **-1.0 <dec>**	
		For the themal Control Loop 15 (DECMEC) , the TCT Tmin_on / Tmax_on thresholds have been changed from the default values [-14,-11]℃ to [-1,0]℃ .		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
5		*Call procedure to acquire the Thermal Control Table*		Next Step: END
		Execute Procedure: **H_FCP_TCS_REPO** **Thermal Control Status Report**		
		Verify that the In-flight TCT values are reported: **Control Loop 11 (SPU/DPU): TCT Tmin_on= 1 / Tmax_on=2 [℃]** **Control Loop 13 (BOLC): TCT Tmin_on=1 / Tmax_on=2 [℃]** **Control Loop 15 (DECMEC) : TCT Tmin_on=-1 / Tmax_on=0 [℃]**		
End of Procedure				