

ACC PM Switchover  
 File: H\_CRP\_SYS\_PMSA.xls  
 Author: F. Keck



## Procedure Summary

### Objectives

Perform ACC PM switchover.

### Summary of Constraints

Each ACC reboot leads to SA(S)M, which means that the LGA must be used and a maximum of 5k TM rate will be available in this case. Therefore the TM rate must be changed to 5k via LGA before each ACC reboot.

The PM switchover must be coordinated with the SGS (e.g. mission planning shall not plan instrument activities during this DTCP). No ACMS commands must be in the MTL for this DTCP.

Expected impact on the nominal DTCP activities:  
 - Complete dump of packet store 3 unlikely

Expected Duration: 1h 30min

### Spacecraft Configuration

#### Start of Procedure

Mode = NOM/SCM  
 Instruments must be in standby/safemode

#### End of Procedure

Mode = NOM/SCM  
 Instruments in standby/safemode

### Reference File(s)

#### Input Command Sequences

#### Output Command Sequences

HCYPMSA

### Referenced Displays

ANDs      GRDs      SLDs  
 (None)

### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
05/03/09	2.1	1	Created	F. Keck	
17/03/09		1.01	Validation : Improvement using H-SVT-3 outcome	F. Keck	
17/03/09		1.02	Validation : Typo and annex correction	F. Keck	
17/03/09		1.03	Validation : Another typo.	F. Keck	
25/03/09		1.04	Validation : Adding EAT adjustment to ignore expected AIR caused by ACC PM switchover.	F. Keck	

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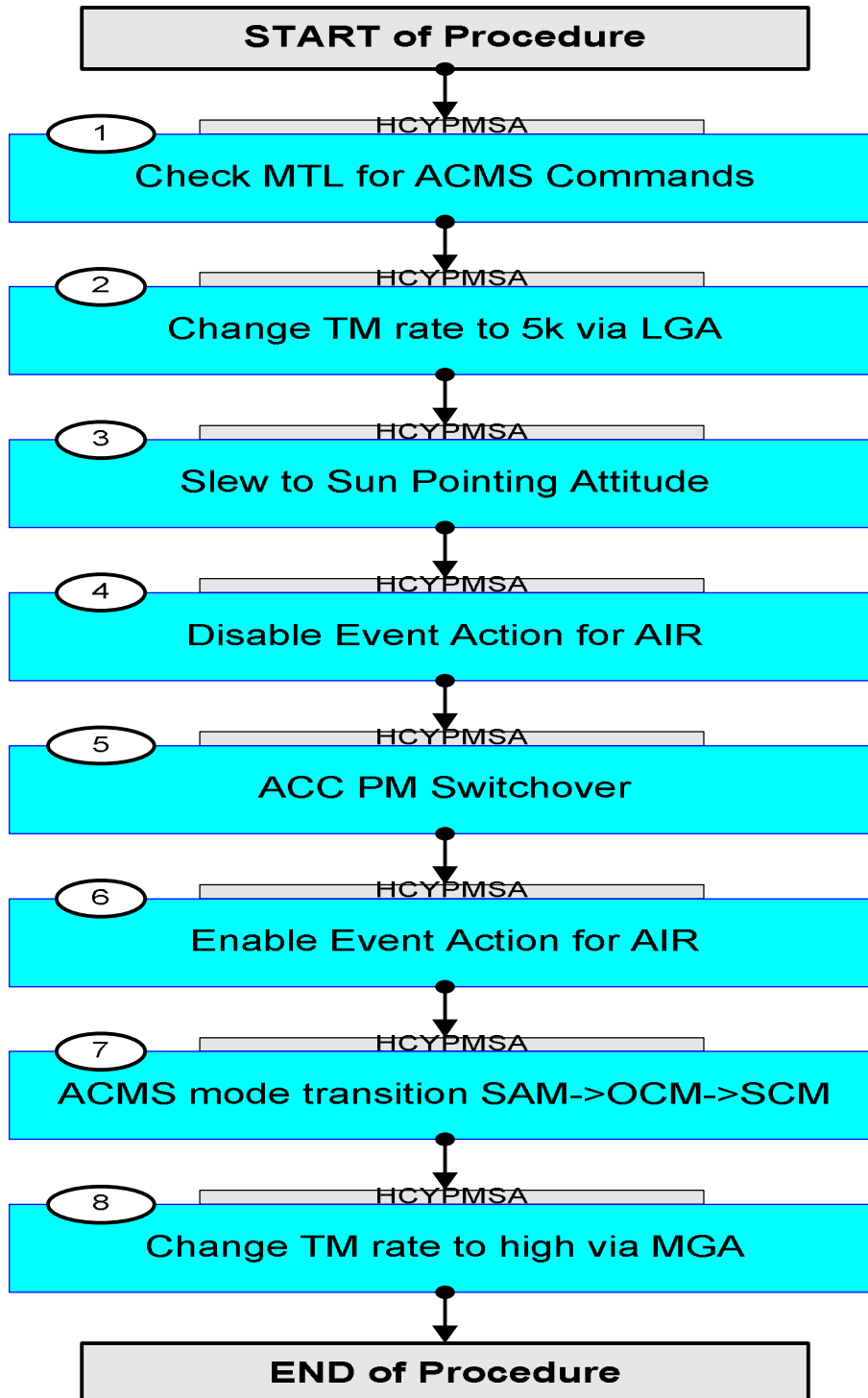


25/03/09	2.2	1.05	Validation : Leaving MTL fully enabled, because it's required by some subsystem procedures	F. Keck	
15/04/09	2.3	2	Databse update	F. Keck	
07/07/09		3	Added SCM slew to sun pointing before mode transition to SM	F. Keck	
10/07/09	2.5	4	Added step to reboot from image 1 after the ACC switchover	F. Keck	

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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>				
<p><i>TC Seq. Name : HCYPMSA (ACC PM Switchover)</i></p> <p><i>TimeTag Type: N</i>  <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>				
1		Check MTL for ACMS Commands		Next Step: 2
		<p>Ensure that the MTL does not contain ACMS commands in this DTCP.</p> <p>Info: The MTL cannot be disabled, because time tagged TCs are used by some ACMS procedures.</p>		
2		Change TM rate to 5k via LGA		Next Step: 3
		Adjust TM routing/storing to 5k TM rate.		
		<p>Execute Procedure:  <b>H_CRP_DHS_HKCY</b>            Cycle through HK / Periodic / Diag CDMU packets</p>		
		The sequences of following procedures contain MTL commands.		
		<p>For following procedure select "Sun acquisition otherwise (SUN1)"</p> <p>RFDN SWS position BBAB            D/L path: TX1 - TWTA1 - LGA1            U/L path: LGA1 - RX1 (MGA - RX2)</p>		
		<p>Execute Procedure:  <b>H_FCP_TTC_SWX</b>            Configure RFDN switches</p>		
		<p>Execute Procedure:  <b>H_CRP_TTC_TUL2</b>            Tx and TM encoder in use configuration for LR2</p>		
		<p>Execute Procedure:  <b>H_FCP_TTC_TU01</b>            Switch ON TX and TWTA in use</p>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		On the following day(s) the Ranging at the end of the DTCP(s) must be skipped.  Enable Ranging while on 5k and inform ECC to start Ranging. This should provide enough additional Ranging data to cover this situation.		
		Execute Procedure: <b>H_FCP_TTC_TURM</b> <b>Transponder in use Ranging Activation/Deactivation</b>		
3		<i>Slew to Sun Pointing Attitude</i>		Next Step: 4
		To safe fuel and minimise the thruster impact on the orbit by the transition to SAM, the slew to sun pointing will be performed while in SCM.		
		TPFs required from FD to perform this step.		
		Execute Procedure: <b>H_FCP_AOC_3S01</b> <b>Perform SCM Fine Pointing</b>		
4		<i>Disable Event Action for AIR</i>		Next Step: 5
		The ACC PM Switchover will be done via the ACMS RM, which will raise an AIR.  To avoid a CDMU reaction on this AIR, the both action entries in the EAT must be disabled.		
		Execute Procedure: <b>H_FCP_DHS_3049</b> <b>Event-action table maintenance</b>		
5		<i>ACC PM Switchover</i>		Next Step: 6
		Execute Procedure: <b>H_CRP_AOC_XN2S</b> <b>Command ACMS from any nominal mode to SM</b>		
		The sequences of following procedure contain MTL commands.		



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		Execute Telecommand  PM B Reset  <i>TC Control Flags :</i>  GBM IL DSE --Y -- --  Subsch. ID : 20 Det. descr. : TC(2,3) - PM B Reset - Mission Specific	ACY52109	
6		Enable Event Action for AIR  Execute Procedure: <b>H_FCP_DHS_3049</b> <b>Event-action table maintenance</b>		Next Step: 7
7		ACMS mode transition SAM->OCM->SCM  TPFs required from FD to perform this step.  Execute Procedure: <b>H_CRP_AOC_XA2C</b> <b>Recovery from SIR</b>  The SCM slew shall bring the MGA back to DTCP attitude.		Next Step: 8
8		Change TM rate to high via MGA  Inform ECC to stop Ranging.  Execute Procedure: <b>H_FCP_TTC_TURM</b> <b>Transponder in use Ranging Activation/Deactivation</b>  The sequences of following procedures contain MTL commands.  For following procedure select "Nominal/Earth acquisition (NOM1)"  RFDN SWS position ABAB D/L path: TX1 - TWT A1 - MGA U/L path: MGA - RX1 (LGA1 - RX2)		Next Step: END
		Execute Procedure: <b>H_FCP_TTC_SWX</b> <b>Configure RFDN switches</b>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Procedure: H_FCP_TTC_TUHR Tx and TM encoder in use configuration for HR		
		Execute Procedure: H_FCP_TTC_TU01 Switch ON TX and TWTA in use		
		Setting the default TM packet downlink and storage configuration (H_FCP_DHS_1003) is included in the TUHR procedure above.		
<b>End of Procedure</b>				



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**Timeline**

